Craniosacral Therapy and Myofascial Release in Entry-level Physical Therapy Curricula

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The purposes of this study were 1) to discover the extent to which craniosacral therapy (CST) and myofascial release (MFR) instruction are included in entry-level physical therapy curricula; 2) to determine the amount of faculty and program director interest in such instruction; and 3) to determine what educational materials, if any, are desired. A one-page questionnaire was distributed to the program directors of 109 accredited entry-level physical therapy programs in the United States. Of the 95 respondents, 1 (1%) included a unit on CST only, 14 (15%) included a unit on MFR only, 14 (15%) included units on both CST and MFR, and 66 (69%) included neither. The highest percentages of programs with CST and MFR units were entry-level masters' degree programs and programs located in the Pacific Coast and Middle Atlantic regions. All of the units were presented within required courses, usually during the second year; most were taught by physical therapists. The greatest amount of instructional time was allotted for CST laboratory sessions ($\bar{x} = 5.8$ hours), and the least amount of time was allotted for MFR lectures ($\bar{x} = 1.7$ hours). The most frequently cited reason for noninclusion of CST or MFR instruction was inadequate room in the current curricula. The most frequently requested materials were bibliographies and laboratory guides on CST and MFR. Implications of these findings are addressed, and suggestions for further research are given.

Key Words: Education: physical therapist, professional; Physical therapy.

According to the osteopathic literature, craniosacral therapy (CST) is based on five physiological premises: 1) motility of the central nervous system, 2) rhythmic fluctuation of the cerebrospinal fluid, 3) mobility of the 22 bones of the skull, 4) mobility and continuity of the meninges between the cranium and sacrum, and 5) continuity of the meninges with the connective tissues (fasciae) of the rest of the body. Myofascial release (MFR) is a kind of extension of CST that concentrates more on peripheral fascial problems. The fundamental premise of MFR is that the true source of dysfunction is often located away from the area of symptom manifestation. The goal of both CST and MFR is to effect somatic and visceral bodily changes by using these cranial bone-meningeal-fascial connections, viewing the patient as an "integrated totality." Proponents of these two manual techniques state that either CST or MFR, or some combination of the two, could be effective in the treatment of various cranial nerve entrapment dysfunctions; headache; temporomandibular joint dysfunctions, bruxism, and malocclusions; cranial and facial asymmetries; scoliosis and other orthopedic problems; allergies; neonatal problems; learning disabilities and behavioral problems; and psychiatric disorders.

Research on CST and MFR has been published primarily in the osteopathic and dental literature, with no known scientific data that affect clinical care yet available in the physical therapy literature. Despite this paucity of "hard" data, many physical therapists appear to be interested in the concepts of CST and MFR and to have strong opinions about the role of the techniques in physical therapy, based on the number and variety of pertinent articles and letters to the editor in selected physical therapy literature.

Currently, instruction in CST and MFR techniques is available through continuing education courses and seminars. Little, however, is known about the prevalence of such instruction in entry-level physical therapy education programs. Because physical therapy practice and education must be linked if the profession is to grow, it is important to know whether apparent shifts in clinical interest are reflected in entry-level curricula. The purpose of this article is to report the results of a survey investigating 1) the current state of CST and MFR instruction in entry-level physical therapy curricula; 2) the degree of faculty and program director interest in including such instruction; and 3) the kinds of materials, if any, desired by faculty members for the development or expansion of CST or MFR instruction in program curricula.

METHOD

A one-page mailed questionnaire, consisting of one filter and a combination of closed and open questions, was used for data collection (Appendix). Items were chosen to assess program demographics and curriculum offerings and to determine respondent interest in the areas of CST and...
MFR instruction in accredited physical therapy education programs.

I distributed the questionnaires in February 1986 to the 109 accredited physical therapy programs in the United States listed in the October 1985 issue of Physical Therapy.25 Program directors or their designated faculty members completed the questionnaire. Four weeks after the initial mailing, I sent a follow-up letter and questionnaire to those program directors who had not responded. One additional month was allowed for the return of questionnaires before analyzing the data.

RESULTS

The program directors of 95 (87%) of the 109 programs returned completed questionnaires. Of the 95 programs represented, 80 (84%) were baccalaureate degree programs only; 4 (4%) were certificate programs only; 7 (7%) were entry-level masters’ degree programs only; 2 (2%) had both baccalaureate degree and certificate curricula, but the program directors responded in reference to the baccalaureate degree curriculum only; and 2 (2%) had both baccalaureate degree and entry-level masters’ degree curricula, and the program directors responded in reference to both.

Level of Program

Of the 95 respondents, 1 (1%) included a unit on CST only in the program’s entry-level curriculum, 14 (15%) indicated inclusion of an MFR unit only, 14 (15%) included units on both CST and MFR, and 66 (69%) stated that they included neither CST nor MFR. Table 1 depicts the percentage of each of the three kinds of entry-level programs that included CST or MFR in their curricula. The entry-level masters’ degree programs had the greatest percentage of CST units, followed by certificate and baccalaureate degree programs, respectively. The baccalaureate degree programs had the most units on MFR, and the certificate programs had the highest percentage with neither CST nor MFR.

Geographic Distribution

Entry-level programs were categorized geographically according to the regions of the United States described in the World Book Encyclopedia.26 Table 2 indicates the number of programs respondents by region, and the percentage of those respondents who reported having a unit on CST or MFR in their curriculum. The two regions that had the highest percentages of programs with CST units, the Pacific Coast (25%) and Middle Atlantic (25%) areas, also had the highest percentages of programs with units on MFR (38% and 44%, respectively). The Pacific Coast region, however, also had one of the lowest response rates. The areas that had the lowest percentages of programs with CST were the Rocky Mountain and New England regions (each with 0%), and the areas that had the lowest percentages of programs with units on MFR were the New England (0%) and Southwestern (20%) regions. Fifty percent to 100% of the programs in each of the regions offered neither CST nor MFR.

Level of Units

All of the programs with CST or MFR units in their curricula included the units in required courses, such as massage, modalities, senior seminar, therapeutic exercise, kinesiology, or comprehensive back care. None of the respondents indicated a separate MFR or CST course. Of the 15 programs having CST units, 3 (20%) presented the material to first-year students and 12 (80%) presented it to second-year students. Twelve (43%) of the 28 programs with MFR units included the material in a first-year course, and 16 (57%) included it in a second-year course.

Clock Hours Allotted

Table 3 indicates the range, standard deviation, and average number of clock hours allotted for lecture and laboratory instruction for CST, MFR, and combined units of CST and MFR. The number of hours allotted for the units varied greatly among programs, ranging from 0 to 25 hours. For either CST or MFR, or for the two combined, more time was allotted for laboratory instruction (X = 4.6 hours) than for lecture (X = 3.5 hours), with the greatest amount of time (X = 5.8 hours) allotted for CST laboratory instruction and the least amount of time (X = 1.7 hours) allotted for MFR lecture.
Unit Instructors

Thirteen (87%) of the 15 programs with CST units and 22 (79%) of the 28 programs with MFR units had instructors who were both physical therapists and faculty members. Five (33%) of the programs with CST units and 9 (32%) of the programs with MFR units had instructors who were physical therapists but not faculty members. One program (4%) reported that their unit on MFR was taught by an osteopathic physician, but no programs with CST indicated use of such an instructor.

Initiation of Units

Before 1983, only 2 entry-level programs included a unit on CST and only 1 had a unit on MFR. Between 1983 and the spring of 1986, units were added by 13 of the 15 responding programs with CST instruction and 27 of the 28 responding programs with MFR instruction.

Plans to Add Units

Of the 80 programs that did not include a unit on CST, 3 (4%) reported plans to add such a unit during the 1986 to 1987 academic year, including one entry-level masters' degree program. Two others (3%) mentioned plans to add a unit when their entry-level masters' degree programs are developed in the next two to three years. Sixty-four (80%) did not expect to add a unit, 6 (8%) were undecided, and 5 (6%) did not respond.

Of the 67 programs that did not include a unit on MFR, 3 (4%) were planning to add a unit during the 1986 to 1987 academic year, including one entry-level masters' degree program. Two others (3%) reported plans to add a unit after the development of entry-level masters' degree programs within the next few years. Fifty-seven (85%) did not plan to add a unit, 2 (2%) were undecided, and 3 (5%) did not respond. One program had no plans for adding a unit, but indicated plans to gradually expand on the concept of MFR within the context of a therapeutic exercise course during the 1986 to 1987 academic year.

Materials Desired for Expansion or Development of Units

All 29 of those programs with units on CST or MFR responded to the question, "Which of the following would be of help to you in the expansion of your unit?" The results are presented in Table 4. A bibliography on CST or MFR and a laboratory guide of introductory CST or MFR techniques were the most frequently requested materials, followed by lecture notes or slides for classroom use and slides or cassette tapes for audiotutorial use. Materials mentioned under the category "other" were case studies of clinical outcomes of MFR and CST and any new materials or texts on the subjects. Responses of those programs that did not have units on CST or MFR to the question, "Which of the following would be of help to you in the development of such a unit?" followed the same order of frequency as those programs considering expansion (Tab. 4).

Reasons Given for Noninclusion of Units

Eighty (84%) of the 95 entry-level programs did not include a unit on CST in their curricula, and 67 (70%) did not include a unit on MFR. The data in Table 5 summarize the reasons for noninclusion cited by program respondents.
TABLE 5
Reasons Cited for Noninclusion of Craniosacral Therapy (CST) or Myofascial Release (MFR) Units*

<table>
<thead>
<tr>
<th>Reason</th>
<th>Programs Not Including CST (n = 80) (%)</th>
<th>Programs Not Including MFR (n = 67) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have no room in current curriculum</td>
<td>51.2</td>
<td>55.2</td>
</tr>
<tr>
<td>Do not believe it is an entry-level skill</td>
<td>38.8</td>
<td>40.3</td>
</tr>
<tr>
<td>Do not believe it is a proven mode of evaluation and treatment</td>
<td>31.2</td>
<td>34.3</td>
</tr>
<tr>
<td>Have not had time to develop such a unit</td>
<td>23.8</td>
<td>20.9</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No faculty with expertise</td>
<td>11.2</td>
<td>9.0</td>
</tr>
<tr>
<td>Concepts mentioned in other courses</td>
<td>5.0</td>
<td>11.9</td>
</tr>
<tr>
<td>Believe it would duplicate the services of other professions</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>No response</td>
<td>7.5</td>
<td>6.2</td>
</tr>
</tbody>
</table>

* Columns add up to more than 100% because of instruction to "circle all that apply."

Noninclusion of craniosacral therapy units. Of the 80 programs that did not have a unit on CST, the largest number of respondents indicated that a lack of room in the current curriculum was the major factor limiting inclusion of such a unit. Two respondents stated that they briefly mention the concept of CST and provide a small demonstration, but currently have no space in their curricula for a full teaching unit.

Several of the respondents citing the response “do not believe it [CST] is an entry-level skill” indicated that CST should be mentioned to expose students to the idea, but stated that an actual unit would be more appropriate at the postgraduate level. One respondent commented that “CST requires more manual therapy experience than entry-level students have,” and another stated that “an extensive review of the skull would need to be presented before introducing CST techniques,” thus making such a unit impractical for an entry-level program.

The response “do not believe it [CST] is a proven mode of evaluation and treatment” drew the most additional comments. Three respondents stated that they would consider teaching a basic introduction to CST if they could be convinced of its scientific validity, two stated that they believed CST had clinical merit and reported that they mention the idea but do not teach the technique, and two others stated that “CST has absolutely no scientific validity.” One of the latter two respondents believed that “any reduction in pain that the patient reports is secondary to relaxing while recumbent and to the inhibitory effect of oscillation on afferent receptors... similar to the effect of [Maitland’s] Grades I and II joint mobilization.” The same respondent also commented, “If we clinicians are to use CST on our patients, it is our responsibility to prove the efficacy of it through legitimate clinical research. Otherwise, the use of such techniques and others... will severely hamper our progress toward becoming a legitimate scientific profession.” Other comments in this section were similar to that of another respondent who stated, “I have no philosophical conviction that all material presented to students must be scientifically proven (indeed much of PT [physical therapy] is not so); however, I do believe in being healthfully skeptical about new ideas... Research efforts must be published and presented for further scholarly critique rather than to continue to be disseminated solely through clinical, anecdotal (and high-cost) workshops.”

Noninclusion of myofascial release units. The reasons cited by respondents of the 67 programs that did not include a MFR unit followed the same order of frequency as those cited by respondents whose programs did not include CST. Four of the respondents who chose the response “do not believe it [MFR] is an entry-level skill” stated that they believe MFR to be an important concept that should be mentioned but not taught in-depth. As with the CST unit, several of the respondents who chose “do not believe it [MFR] is a proven mode of evaluation and treatment” stated that they would consider teaching a basic introduction to MFR if they could be convinced of the scientific validity of the technique. Three respondents expressed concern that therapists’ credibility will be weakened by “jumping on the bandwagon” of MFR too fast, and one wanted to see research “sorting out the scientific basis of MFR and CST from the powerful ‘laying-on-of-the-hands’ effects.” Other comments in this section ranged from “we must be intellectually skeptical of people who speak of ‘releasing past experiences’ through MFR” to “certainly there is room for greater appreciation of the existence/function and dysfunction of fascia... We just need to know more.” Six of the 13 respondents who indicated “other” mentioned that they had no faculty members with expertise in the MFR technique. Two of these six respondents, however, stated that they had faculty members currently taking courses and indicated they would add an MFR unit after completion of the courses. Eight of the 13 respondents stated that MFR is mentioned briefly in other courses, with one of those commenting that physical therapists “today are afraid to use the term ‘massage’ based on its often dubious social connotations, hence the popularity of ‘myofascial release,’ which sounds very impressive.”

DISCUSSION

One objective of this research was to determine the current state of CST and MFR instruction in entry-level physical therapy curricula. Of the 95 programs responding, those with entry-level master’s degree curricula had the highest percentage of units on CST and the highest percentage of units on MFR. The majority of those programs that were planning to add units on CST or MFR in the near future were also entry-level master’s degree programs. These findings may indicate a greater acceptance of nontraditional physical therapy concepts at this level, a desire to give students in entry-level master’s degree programs exposure to a wider variety of therapeutic approaches, or a greater availability of time and space for such units at this level.

Geographically, the highest percentages of CST and MFR units were found in the programs of the Pacific Coast and Middle Atlantic regions. Although the Pacific Coast was one of the regions with the highest percentages of CST and MFR units and the only region with a program that had a unit in CST only, it also had one of the lowest responses rates, a finding that may suggest selective mortality. That is, possibly only those program directors who included CST or MFR instruction in their curricula were interested enough in the subject to respond to the questionnaire. I was unable to
itly, particularly because the New England region showed the opposite finding—a low response rate and no programs having CST or MFR units. Another interesting finding was that, although the Midwestern region had one of the highest percentages of programs with neither CST nor MFR units, program respondents from this region had the greatest percentage of comments supporting further investigation into the two concepts.

As with other therapeutic modalities, no consensus exists regarding the basic principles of both CST and MFR. Because no truly universal definitions exist, I made no attempt to define the two concepts in the cover letter or questionnaire. Three respondents criticized this approach, stating that a formal definition of both should have been included to validate the findings. I chose not to do so because the intent of this study was not to determine each school’s particular philosophical approach to the concepts, but rather to determine the number and general characteristics of entry-level programs having instructional units under the broad categories of CST and MFR. Because of the recent increase in the number of continuing education courses on CST and MFR and the growing controversy over the two concepts, I assumed that most program directors would be familiar enough with the basic principles of both treatment modalities to complete the questionnaire reliably. One weakness of the study was an inability to determine accurately the number of respondents who were unfamiliar with the CST and MFR concepts. Based on the respondents’ comments, however, this limitation did not appear to be a problem. Only two respondents indicated obvious misconceptions about CST and MFR techniques. Suggestions for further study include examining the prevalence of specific theories about the basic principles of both CST and MFR among entry-level or postgraduate education programs and examining the amount of time devoted to particular content areas within each unit.

A second objective of this study was to determine the approximate amount of program director or faculty interest in developing or expanding a unit on CST or MFR. Although the questionnaire was not designed specifically to assess attitudes, I asked questions about dates of initiation of units, plans to add MFR or CST units, and reasons for noninclusion of units and tabulated the respondents’ comments to determine the general level of interest.

The prevalence of a high level of interest in the concepts of CST and MFR is indicated by the large number of questionnaire returns and the spectrum of opinions expressed regarding the importance of the two techniques in physical therapy. The respondents’ opinions were strong at both extremes, emphasizing the controversial nature of the two treatment modalities. The majority of the comments, however, indicated an apparent open-minded interest in the part of respondents, even those respondents from programs that did not include CST or MFR units and had no immediate plans to implement them.

Concerning respondent interest in actual CST and MFR instruction, several findings deserve comment. Although the percentages of entry-level programs that contained a unit on CST (1%), MFR (15%), or both (15%) were small when compared with the percentage of programs that included neither (69%), the growth in the number of programs adding such instructional units over the past few years seems to indicate increasing interest within the academic community in these two nontraditional methods of manual therapy. Before 1983, only 2 entry-level programs had a unit on CST, but between 1983 and the spring of 1986, 13 more programs added such a unit and 3 others indicated plans to do so during the 1986 to 1987 academic year. A similar trend was found for MFR instruction. Only two programs had a unit on MFR before 1983, but 27 others added such a unit between 1983 and the spring of 1986 and 3 more had plans to add one during the 1986 to 1987 academic year. Whether this trend is an indication of “jumping on the bandwagon of fads,” as one respondent commented, or evidence of an actual long-term increase in teaching nontraditional physical therapy remains to be determined.

A second indication that CST and MFR might be gaining acceptance slowly within the academic community was the response to the question “Why is CST or MFR not included in your curriculum?” The reason most frequently given was “have no room in current curriculum” which seems to imply that the majority of respondents desire to add a CST or MFR unit, but that the capacity to do so is logistically difficult. The second-highest percentage of program respondents believed that CST and MFR are not entry-level skills, but several respondents indicated that entry-level students should receive instruction in the two concepts in preparation for later study. The respondents’ comments associated with this question, combined with other findings about the level of program most likely to have or add units on CST or MFR, suggest that the respondents perhaps are more accepting of this type of instruction in an entry-level master’s degree curriculum.

Although one purpose of the survey was to determine the extent of respondent interest in CST and MFR instruction, many respondents expressed an interest in research that would substantiate the efficacy of the two techniques. This finding was not particularly surprising when considering the relative absence of published physical therapy literature in the areas of CST and MFR. The apparent trend toward the introduction of these concepts in entry-level curricula found in this study may indicate a possible solution to the problem of lack of research into CST and MFR. Regardless of whether the students who receive an introduction to these concepts eventually go on to learn more specific CST or MFR techniques, an awareness of these controversial concepts could increase their understanding of the current state of physical therapy and simultaneously stimulate their interest in further research. The small amount of objective research on CST and MFR techniques to date has been conducted in the field of osteopathy. Additional research is necessary if the value of such techniques for physical therapy is to be determined. First, a critical review of the existing CST and MFR literature is needed. Second, in addition to clinical efficacy studies, educational-attitudinal studies that might prove useful include 1) a comparison between therapists’ level of knowledge about CST and MFR and their attitudes toward the two techniques; 2) a comparison between the attitudes of students who have had an introductory unit on CST, MFR, or another nontraditional concept and students who have not had such a unit; or 3) an assessment of attitudes toward and level of use of CST or MFR techniques by therapists who have taken continuing education courses on the subjects.

The third objective of this study was to determine what educational materials, if any, are most needed for the development or expansion of CST or MFR units. The desire for substantiating research was emphasized by the fact that the most frequently requested material, both by respondents from
programs with a unit on CST or MFR and by those from programs without an instructional unit in either technique, was "a bibliography on CST or MFR." "A laboratory guide of introductory CST or MFR techniques" was another frequent response, and other respondents indicated an interest in case studies, clinical evidence, and text books. Numerous respondents commented that faculty members with expertise in CST or MFR techniques is what they need most. The results of this aspect of the study may be of particular interest to proponents of the CST and MFR concepts.

CONCLUSION

Although this study found that only a small percentage of entry-level physical therapy education programs had units on CST (16%) or MFR (29%), the growth in the number of such programs since 1983 and the spectrum and number of comments about these concepts indicated a high level of respondent interest. The majority of respondents did not believe that entry-level students should be taught the specific techniques of CST and MFR, but many, particularly those in the Pacific Coast and Middle Atlantic regions and those from entry-level master's degree programs, believed that students should receive an introduction to the ideas. Further research is necessary to investigate and clarify the clinical value of the CST and MFR techniques to determine their value in entry-level physical therapy education programs.

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APPENDIX

Craniosacral Therapy (CST)-Myofascial Release (MFR) Questionnaire

Q-1 What is the level of your physical therapy program? (Please circle number.)
   1 Bachelor's degree
   2 Master's degree (entry-level)
   3 Certificate (_______ months)

Q-2 In what state is your school located? (Please fill in state.)
   ______________________ (state)

Q-3 Which of the following are included as units in your curriculum?
   1 CST and MFR (Please answer questions Y-4 through Y-10.)
   2 CST but not MFR (Please answer questions Y-4 through Y-10 regarding CST and N-4 through N-7 regarding MFR.)
   3 MFR but not CST (Please answer questions Y-4 through Y-10 regarding MFR and N-4 through N-7 regarding CST.)
   4 Neither CST nor MFR (Please answer questions N-4 through N-7.)

Y-4 When was the unit added to your curriculum? (semester-year)
   ________________

Y-5 Is the unit: (Please circle all that apply.)
   1 Included in a required course?
   2 Included in an elective course?
   3 Offered as a specific MFR or CST elective?
   4 Other (Please explain on reverse.)

Y-6 How many clock hours are allotted:
   For lecture? (hours)
   For laboratory? (hours)

Y-7 At what level are students who take this unit?
   1 First-year (junior)
   2 Second-year (senior)
   3 Certificate (_______ months into program)

Y-8 Who teaches the unit? (Circle all that apply.)
   1 Physical therapist-faculty member
   2 Physical therapist-nonfaculty member
   3 Osteopathic physician
   4 Other (Please specify ________).

Y-9 Which of the following would be of help to you in the expansion of your unit? (Circle all that apply.)
   1 Lecture notes or slides for classroom use as an introduction to CST or MFR
   2 Laboratory guide of introductory CST or MFR techniques
   3 Slides or cassette tapes for audiotutorial use as an introduction to CST or MFR
   4 Bibliography on CST or MFR
   5 Other (Please specify on reverse.)
   6 None of the above would be of help

Y-10 Please write any additional comments on the reverse.

N-4 Why is CST or MFR not included in your curriculum? (Please circle all that apply.)
   1 Have no room in current curriculum
   2 Have not had time to develop such a unit
   3 Do not believe it is an entry-level skill
   4 Believe it would duplicate the services of other professions
   5 Do not believe it is a proven modality of evaluation and treatment
   6 Other (Please specify on reverse.)

N-5 Are you planning to add a unit on CST or MFR within the next school year?
   1 Yes
   2 No

N-6 Which of the following would be of help to you in the development of such a unit? (Please circle all that apply.)
   1 Lecture notes or slides for classroom use as an introduction to CST or MFR
   2 Laboratory guide of introductory CST or MFR techniques
   3 Slides or cassette tapes for audiotutorial use as an introduction to CST or MFR
   4 Bibliography on CST or MFR
   5 Other (Please specify on reverse.)
   6 None of the above would be of help

N-7 Please write any additional comments on the reverse.
REFERENCES

Craniosacral Therapy and Myofascial Release in Entry-level Physical Therapy Curricula
Sandra L Ehrett