A Survey of Hanna Somatic Education® Clients

By Gabriel Posner, PhD

Hanna Somatic Education (HSE) is a method of neuromuscular education designed to address musculoskeletal conditions. There is no research to date into its clinical effectiveness. Because non-specific musculoskeletal conditions are a global health problem, and non-pharmacological treatments that are inexpensive and lasting are elusive, it is important that Hanna Somatic Education (HSE) is a sensory-motor practice that, once learned, can be done anywhere, anytime, without external guidance. This survey provides foundational, descriptive information about a sample of HSE clients, how they utilized HSE, and what they experienced.

This retrospective observational study surveyed people who sought out and practiced HSE. A statistical analysis compared the number of sessions and frequency of home practice with changes in symptom severity. A description of the principles of HSE and the method and findings of this study are presented below.

Hanna Somatic Education (HSE) is a method of neuromuscular reeducation developed in the 1980s by Thomas Hanna (1990). Somatics refers to "the field of study dealing with somatic phenomena, i.e., the human being as experienced by himself (or herself) from the inside" (Hanna,1986, section one, para. 16) and *soma* refers to the 'body, experienced from within by first-person perception' (Hanna, 1986, para. 1). While the field of somatics broadly deals with enhancing one's experience within one's body, HSE specifically was developed to address chronic musculoskeletal pain (Hanna, 1990, 2004).

HSE requires that the practitioner shift perspective from working on a *body* to working with a *soma*, along with a shift of purpose from therapy to education. The learning portion of this education is primarily sensory-motor. Clients are taught to voluntarily control their movements and invited to observe the affective and proprioceptive experiences as they move into and out of habitual tension patterns (Hanna, 1990).

Sensory motor amnesia (SMA) is the phrase Hanna used to describe a phenomenon whereby a person becomes unable to feel and voluntarily control skeletal muscles (Hanna, 2004, 1990). This phenomenon, in Hanna's view, leads to many chronic dysfunctions typically associated with aging. Using HSE techniques, practitioners work to reverse SMA and thereby alleviate musculoskeletal pain and other chronic functional issues.

Hanna's method shares a theoretical basis and employs techniques found in other disciplines of somatic education. *Means whereby* (MW), a technique Hanna adapted from the Alexander Technique (Hanna, 1990), places conscious attention on the affective experience of movement rather than the range of movement. The practitioner passively moves the client so that the person experiences contrast between areas of SMA and areas of freedom. The client can also actively employ MW to increase awareness of how muscles contract and relax while moving through space.

Kinetic Mirroring (KM) is Hanna's description (1990) for a Feldenkrais Method® (FM) technique whereby the client's body is passively brought further into a position of tension in order to lower the muscular tonus of the muscles maintaining that position (Rywerant, 2003). The intended effects of KM are that the practitioner takes over the work of maintaining a client's particular bodily organization so that the client's muscles can rest.

Hanna also developed unique protocols and techniques that, along with MW and KM, encompass HSE. Among the

techniques is an active, guided pandiculation. To pandiculate, a person actively moves into a hypertonic pattern and then inhibits the contraction of muscles in that pattern towards complete rest. Pandiculation is designed to activate the motor cortex and increase feedback to the sensory cortex (Hanna, 1990). The person sends a volley of impulses from the motor cortex to synapse on the interneurons, inhibiting the alpha motor neurons and thereby reducing the contraction in the muscle.

The amount of contraction is variable and relative to the resting tone of the targeted muscles. Once the muscles are contracted, the person then slowly releases out of the movement towards complete rest. The focus on returning to complete rest is designed to lower the resting tone with each subsequent repetition until the chronic tension in the pattern fully resolves. The movements are also whole-person, integrating actions of the periphery with actions of the core. Some of the movements are similar to movements found in FM and rely on the theory that improving movement improves overall functioning.

Feldenkrais (1990) discussed the whole-body effects of a habituated startle response. Hanna (2004) developed a protocol specifically to address habituation of the startle reflex and also developed protocols to address habituation of the Landau response and the withdrawal reflex. Hanna theorized that a person's unique posture and chronic pain experiences result from habituation of tension in these three reflexive patterns.

To this point, HSE has not been verified with peer-reviewed research. The results are theoretical and anecdotal. The purpose of this study was to understand and describe the people who participate in HSE and identify trends in their experience. The survey gathered basic demographic information about HSE clients, how they utilized HSE clinical sessions, and whether or not they benefited. The results of the survey are an important part of building a foundation of research into this practice.

Methods

The design of this study was a retrospective observational survey. The structured survey was sent digitally to all Certified Hanna Somatic Educators with instructions for sharing the survey with their clients. Practitioners and clients were invited to respond. It was sent in digital and print formats. People who had directly experienced HSE were the respondents of the survey. This included the practitioners and their clients. Data collection occurred between October 30, 2014 and June 30, 2015. Meridian University's Institutional Review Board approved the study to be conducted with human subjects.

Participants

In October 2014 an email was sent out to all 121 Certified Hanna Somatic Educators (CHSEs) who graduated from the Novato Institute. The email included a client survey and instructions for how to distribute this survey to clients who had experienced HSE. The inclusion criterion was anyone who had experienced HSE (and only HSE) as practiced by a CHSE. Many practitioners are trained in additional modalities; therefore exclusion criteria included clients who had been exposed to multiple modalities during their sessions.

The survey was sent within an email using Constant Contact (CC) to all certified practitioners. The CC email contained a link to the digital version of the survey, a printable version of the same survey, and a letter practitioners were instructed to attach to the survey when contacting their clients. Informed consent was sought and obtained on the first page of the survey as a prerequisite for continuing with the survey.

The Survey

The survey was based upon a similar survey Hanna employed while he was still practicing FM (Hanna, 1980). Survey Gizmo, a web-based survey platform, was used to transpose the survey into a digital format. Respondents were also permitted and encouraged to make physical copies of the survey and submit them to NI for collection.

Participants were asked basic demographic questions such as their age and gender. Then, they were questioned about their experience with HSE. Next, they were asked to report their reasons for seeking HSE and the number of sessions they experienced. Using a five-point scale for evaluating pain severity, ranging from extreme to absent, participants indicated how they felt at the start of sessions, at the completion of sessions, and at the present moment. Participants were also asked whether they were shown self-care movements and, if so, how frequently they completed those movements on their own. Responses were provided using a Likert scale where '1' indicated they did not practice any movements on their own, '4' indicated they practiced some of the movement when they needed to, and '7' indicated they practiced all movements shown to them every day or almost every day.

Statistical Methods

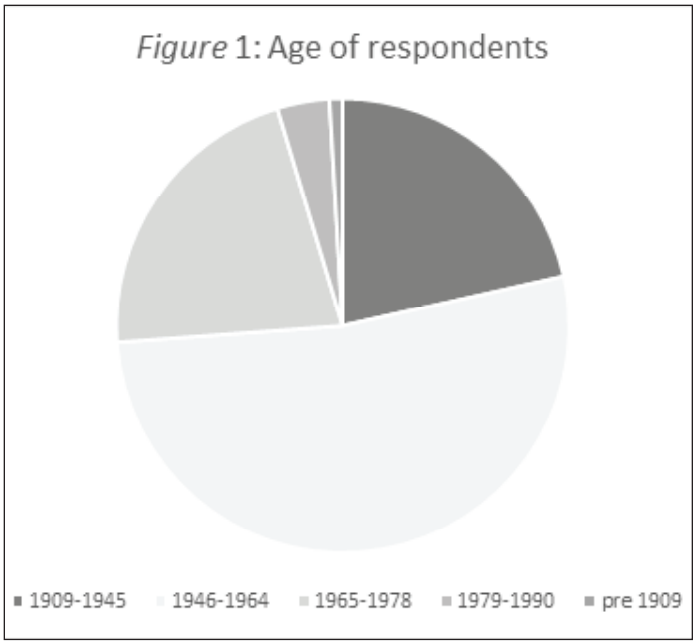
Descriptive statistics were calculated for the demographic questions as well as the questions about number of sessions. A paired sample *t*-test was used to determine if there was a significant difference in symptom severity before starting HSE compared with after completing sessions. Additionally, a Pearson correlation was used to assess whether *t*-test results are related to the number of sessions or frequency of home practice.

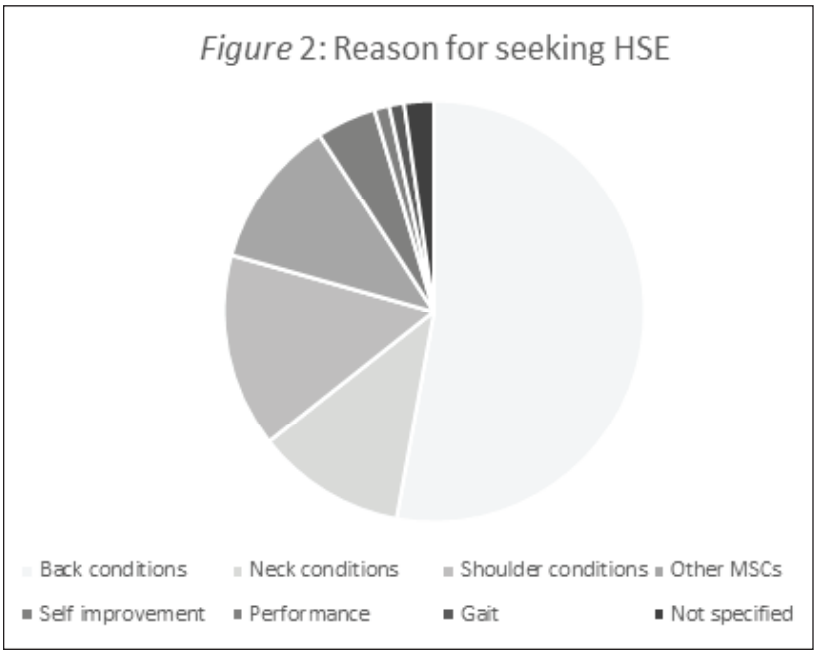
Results

Of the 122 emails sent to practitioners, 108 were successfully delivered and 73 were opened. Seventeen people clicked through the links within the email. The survey was completed 136 times digitally and once in printed format. Ninety-six of the surveys were completed fully and were used for the statistical analysis. Twenty-nine surveys were started but not completed beyond the initial consent question. Partial surveys were not included in the primary statistical analysis but were included in the descriptive data.

Descriptive Data

Of the 107 respondents, 68 (64%) respondents identified as female and 37 (35%) as male. Two respondents did not identify as either male or female. Age was not collected numerically. Instead, age was classified by birthdate range and grouped generationally. Twenty-one percent (n = 23) of the respondents were born between 1909-1945, 52% (n = 56) were born 1946-1964, 2% (n = 23) were born 1965-1978, and 4% (n = 4) were born 1979-1990. One respondent was born before 1909. No respondents were born after 1990 (Figure 1).





In an open-ended short-form, respondents were asked about their main reason for seeking out HSE (Figure 2).

Including the results of partial responses, four respondents stated that "self-improvement" was their main reason. One person stated "performance," one "gait improvement," one "misc.," one "something," and one person attended out of curiosity. The remaining 98 responses (92%) referred to some type of pain, injury, trauma, or pathology. Back issues, including pain and spasm, were mentioned 46 times (53%), shoulder issues 13 times (15%), and neck issues 10 times (11%). Ten responses (11%) referenced herniated discs, joint injuries, stiffness, scoliosis, neuroma, sciatica, and tremor. The word "pain" was used in responses 64 times in total.

The median number of sessions for clients was five and mode was four. Fourteen percent of respondents had only received one session. At the other extreme, two respondents had received over 100 sessions, although one of those respondents was a practitioner who stated that the sessions were self-led.

Respondents were also asked how long they had been experiencing symptoms before seeking a CHSE (Figure 3). The results were as follows: < 1 month, n = 7 (7%); 1-3 months, n = 7 (7%); 3-6 months, n = 10 (9%); 6-12 months, n = 5 (14%); 1-2 years, n = 12 (11%); 2-3 years, n = 7 (7%); 3-5 years, n = 13 (12%); 5-10 years, n = 16 (15%); 10-20 years, n = 14 (13%); > 20 years, n = 5 (5%).

Statistical Analysis Results

To test the hypothesis that HSE had no effect on symptoms, a paired samples t-test was performed. The pre-sessions severity (M = 3.53, SD = .82) compared with post-sessions severity (M = 1.96, SD = .86) showed a 44% improvement (p < .000). Additionally, HSE had a strong effect on the outcome (n 2 = .759). Therefore the null hypothesis was rejected.

A Pearson correlation was performed to analyze the relationship between the number of sessions, the amount of home practice, and the effects from pretest to posttest. Frequency of home practice was not correlated with pretest to posttest changes (r = .119, p = .123). The number of sessions was also not correlated with pretest to posttest results (r = .013, p = .449). A Durbin-Watson test resulted in 2.021, indicating that assumptions for regression were met and the assumptions were independent.

(See Tables 1 through 6 on pp. 39 and 40.)

Discussion

This study collected general information about who was seeking HSE, whether or not they benefited from their sessions and, if they benefited, how they utilized what they learned. The potential relevance of this is that musculoskeletal conditions and musculoskeletal pain are a major health problem not just in the U.S. but around the world (Briggs et al., 2018). Finding a treatment that provides long-term effective resolution of pain and dysfunction has so far been elusive (Foster et al., 2018). Therefore, developing successful treatment methods, particularly methods that people can and do employ on their own with low financial investment, is important, as is understanding who that population might include.

The survey results showed that respondents significantly decreased their symptoms from the start of sessions to the end of sessions. This is particularly significant given that approximately 75% of the respondents had been suffering from pain for at least six months, which meets the National Institutes of Health's definition for chronic pain (Nahin, 2012), and over half of the respondents had been suffering for over three years when they sought out HSE.

The responses also showed that these results were independent of the number of sessions the respondents had experienced and the frequency of their home practice. While most people participated in four sessions, they weren't necessarily experiencing different effects than a person who had participated in one or one hundred sessions. Similarly, while some people practiced somatic movements daily, others only practiced some of the movements when they needed to. Either way, they achieved similar results.

One way to interpret this is that people learn at different rates. For some, one or two sessions taught them enough that

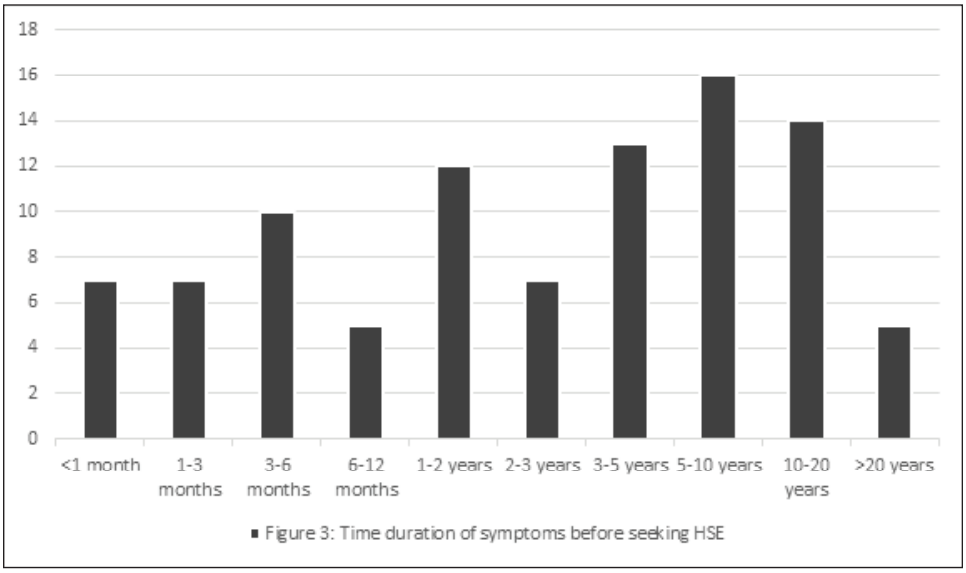


Figure 3: Time duration of symptoms before seeking HSE

they could continue benefiting from their home practice, without requiring additional sessions. People had as many sessions and practiced frequently enough to get about the same level of benefit. For some people this meant daily practice. For others, practicing infrequently was sufficient. Similarly, some people came in for dozens of hands-on private sessions while most had just a few.

Another consideration is that some people stopped working with an HSE practitioner not when they felt optimally better but when they could no longer justify additional sessions due to external considerations. This was a global study, sent to all 122 certified HSE practitioners. With this small number of practitioners, geographic proximity to a practitioner is going to be a limiting issue for many clients and an obstacle to mainstream adoption of this method.

Cost may also be a factor. HSE practitioners are not licensed in any states and, although some practitioners might integrate this work into existing medical, physical therapy, or chiropractic practices, most clients will be paying for HSE out of pocket. So, the client who had six or seven sessions might have been significantly better after the third but came in for a few more because they could afford it. Meanwhile, clients who came in for one session may have stopped there because they could not afford additional sessions, or they lived too far away.

Any conclusions drawn from these results need to be tempered with the methodological issues and unanswered questions about sampling. For example, although the study is based upon one conducted by Hanna, neither study has been validated for internal or external validity. The sampling issues are numerous and lead to many alternate conclusions. The investigators were blind to how many clients were aware of the survey and therefore do not know what percentage of total clients responded.

The available information tells us 17 practitioners clicked through the links, which was a necessary step for sending the survey to their clients. Practitioners who had previously been HSE clients were allowed to respond to the survey themselves. So, it's possible that 17 of these responses were actually practitioners. As practitioners, not only is it plausible that they would have a much deeper understanding of HSE and therefore benefit more from this work but also, they may have been biased towards overstating the positive effects received. It is also possible that only a few practitioners took the survey themselves and the remainder sent it to their clients.

It is unknown how many clients this survey was sent to. Despite requests to send the survey to all applicable clients, practitioners may have self-selected those clients who, in their view, had

Table 1. Paired Samples Statistics

		Mean	*N*	Std. Deviation	Std. Error Mean
Pair 1	Symptoms Pre-HSE	3.5313	96	.82018	.08371
	Severity Post- HSE	1.9583	96	.85737	.08751

Table 2. Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Symptom Severity Pre-HSE & Post-HSE	96	.436	.000

Table 3. Paired Samples Test (Lower)

	Paired Differences			
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference
				Lower
Pair 1 Pre-HSE – Post-HSE	1.57292	.89142	.09098	1.39230

Table 4. Paired Samples Test (Upper)

	Paired Differences			
	95% Confidence Interval of the Difference			
	Upper	*t*	*df*	Sig. (2-tailed)
Pair 1 Pre-HSE – Post-HSE	1.75353	17.289	95	.000

Table 5. Correlations				
		Delta	Sessions	Practice
Pearson Correlation	Delta	1.000	.013	.119
	# of Sessions	.013	1.000	.115
	Practice Frequency	.119	.115	1.000
Sig. (1-tailed)	Delta	.	.449	.123
	# of Sessions	.449	.	.132
	Practice Frequency	.123	.132	.
N	Delta	96	96	96
	# of Sessions	96	96	96
	Practice Frequency	96	96	96

Table 6. Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.119[a]	.014	-.007	.89451	2.021
a. Predictors: (Constant), Practice, Sessions					
b. Dependent Variable: Delta					

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the most positive response. The clients themselves may have been less likely to respond or even open the email from their practitioners if they had had a negative experience with either HSE as a modality or their specific practitioner. There is no way to know if the survey respondents are a representative sample of HSE clients.

The positive results from this study offer hope that HSE might be an effective way to manage musculoskeletal pain. More research needs to be conducted to understand the effect size with a representative sample, ideally, comparing the effects of this work with a control group. Positive results from controlled studies with representative samples could help incentivize more people to become certified practitioners, encourage current practitioners to continue practicing, and bring more awareness of this method to sufferers of pain who might benefit.

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