

THE EFFICACY OF GUIDED IMAGERY AND MUSIC (GIM) IN THE
TREATMENT OF RHEUMATOID ARTHRITIS

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ABSTRACT: The purpose of this study was to evaluate the effectiveness of the *Benny Method of Guided Imagery and Music (GIM)* on biological and functional articular measures, pain, depression and psychological symptoms in 27 persons with rheumatoid arthritis. Biological and functional markers of disease status were C-Reactive Protein, Rheumatoid Factor, Erythrocyte Sedimentation Rate, 50-foot walking speed, morning stiffness, and joint count. The Symptom Checklist-90-R (SCL-90-R), the Long-Form McGill Pain Questionnaire (MPQ), and Center for Epidemiological Studies-Depression Scale were used to assess psychological status. All measurements were collected at the initial interview session, at the 6th GIM treatment session, 2 weeks after the last GIM treatment session, and 8 weeks after the last GIM treatment session. Results from the study showed significant decrease in the level of psychological distress as measured by the SCL-90-R and the subjective experience of pain as measured by the Long-Form of the MPQ. Significant improvement in physical measures as assessed by the 50-foot walking speed and joint count were recorded despite no change in disease activity as assessed by biochemical indicators. As a treatment approach, integrating health, mental imagery and music with emotional expression, GIM appears to be effective in reducing pain and psychological symptoms, improving physical functioning, and, ultimately, in improving the quality of life for those with rheumatoid arthritis.

Key words: Guided Imagery and Music; GIM; Rheumatoid Arthritis

According to Aristotle, the emotional system cannot function in the absence of imagery, and imagery affects biological and physiological functions (Achterberg, 1985). While Aristotle's approach did not deal with

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medicophysiological effects, it recognized the relationship between body and mind as a holistic and philosophical concept and provided the foundation for the understanding of health and disease. In our present age, we are experiencing a blending of eastern philosophy and western psychology in embracing a treatment care program that respects the mind-body connection. Health, disease and the course of disease are affected by "conceptual and affective systems. These conceptual systems are composed of the patient's (1) values, beliefs, and goals regarding health, disease, and illness; (2) information about the disease and sense of perceived competence; and (3) role of expectations and sets of action plans for responding to situational demands." (Turk et al., 1983, p. 26).

Imagery held in the mind through any of the sensory modalities is an internal experience that affects mood, feelings, thoughts, and ideas. It need not be manifest in the outer world to be experienced, as both memories and imagination images emerge from the unconscious. The first use of images in treatment date back to Dr. Joseph Breuer (Sarnath & Sarnath, 1988). "Both Freud and Breuer felt that a patient, in describing such images and giving vent to the emotions they aroused, experienced a catharsis" (p. 182).

During his work with patients in deeply relaxed or hypnotized states, Freud found that they could recall images of childhood events that were long forgotten. Bringing certain emotionally-charged images to awareness seemed to relieve neurotic symptoms and made a person's inner world more whole (Sarnath & Sarnath, 1988). When Jung was in a deeply relaxed state, he experienced images of caves, wise men, and serpents. He developed the technique of "active imagination" which differed from Freud's earlier analytic techniques by bringing forth imagination rather than images from memory (Sarnath & Sarnath, 1988).

According to Sarnath and Sarnath (1988) an image that is released from the unconscious and brought into awareness "seems to be a basic growth process in the inner world" (p. 182). The person is somehow changed by the experience. It appears that subsequent views on emotion in psychotherapy traditions "all depart, to some extent, from Freud's direct linkage of emotion to the discharge of instinctual energy" (Greenberg & Saffran, 1987, p.14).

From this emerged a modern therapeutic view of emotions in psychotherapy conceptualized by the experiential theorists. In his work, Rogers emphasized becoming increasingly aware of one's emotions and being guided by them in psychotherapy (Greenberg & Saffran, 1987). Awareness of one's "felt sense" as a way of accessing information toward adaptive action became the emphasis of the work of Gendlin (1962). Feeling is the bodily felt dimension of meaning and the elaboration of the "felt sense" takes place when a

set of emotional schemata are accessed, accurately represented and then reflected upon at the conscious level (Gendlin, 1981). The affective change process, the role of emotion in human functioning, and the experience of affect through evaluation, perception, sensation, and feeling are at the core of the Guided Imagery and Music (GIM) experience.

Guided Imagery and Music is a music-assisted integrative therapy that facilitates explorations of consciousness that can lead to transformation and wholeness. It evolved as a method through the research and practice of Helen L. Bonny, Ph.D. In its one-on-one application it is known as The Bonny Method of Guided Imagery and Music. (The Association for Music and Imagery, n.d.)

Bonny and Savary (1973) stated that "in a state of heightened awareness, music is able to generate greater levels of emotional intensity, depth and comprehensiveness. Melodies, harmonies, and rhythms reveal meanings; insights into self are a common occurrence; one sees new ways to look at a problem, an idea, a person" (p. 17).

The idea that the structure of music can mirror the structure and dynamics of human emotions can be found in the theoretical views of Langer (1953) and Winner (1982). Zwerling (1979) noted that through music and other creative arts, the emotional component of behaviors, thoughts, and memories could be accessed to elicit emotional reactions as powerful therapeutic stimuli to facilitate emotional processing. Goldberg (1992) advanced a theory of emotions in GIM that

music may generate conscious or unconscious emotion through direct physiological stimulation of the autonomic nervous system; emotion, in turn, may evoke the image. Subsequent images may flow from the first as long as emotion connected with that sequence of images remains. Then the affective influence of the music may return and a new series of images ensue. (p. 9)

Rheumatoid arthritis (RA) is a chronic, systemic inflammatory disorder with functioning variability in intensity of joint pain, swelling, and stiffness, accompanied by progressive destruction and deformity of the joints. In a special report, Yelin and Fells (1990) summarized the economic and social impact of musculoskeletal conditions in the United States. The economic costs alone were estimated to exceed 1% of the gross national product each year with an expected increase due to the rise in the aging population and the decrease in

mortality. Work disability was reported as the most important sociomedical impact of RA, with earnings reduced by 50% (Mcenna, Yelin, Nevitt, & Epstein, 1981).

Data from a recent report indicated "persons with arthritis experience a disproportionate amount of disability even relative to those with other chronic conditions and that by most definitions, the prevalence of arthritis-related disability is rising" (Yelin, 1992, p. 490). The report further documented the importance of arthritis as a public health problem among adults of working ages (18-64 years) and how disproportionately women and the elderly are affected.

The Combined Clinical Staff Conference of the National Institute of Health reported that "perturbations in the communication between the immune system and the brain could theoretically produce disease states that include not only inflammatory diseases, such as RA, but also affective disorders, such as major depression. The concept suggests that disease states characterized by both inflammatory and emotional disturbances may derive from coherent alterations in specific central nervous system pathways and may also respond to the same therapeutic agents" (Sternberg, 1992, p. 854).

RA is a primary autoimmune disease, affecting millions of individuals and the number keeps increasing as the aging population lives longer. The Arthritis Foundation (2002) recently reported that "arthritis results in 39 million physician visits each year; arthritis results in \$60,000 hospitalizations a year; arthritis costs the U.S. economy \$42 billion a year; and arthritis is second only to heart disease as a cause of work disability." (p. 2).

Moos and Solomon (1965) reported that a significant proportion of patients with RA were self-sacrificing, stoic, detached, long-suffering, and calm in the face of daily pain, progressive disability, and their frequently unhappy personal situations which antedated the onset of the disease. In a recent study of the role of personality in the stress process relative to disease, Smith and Zautra (2002) reported that

stress has been linked to psychological distress and disease activity in arthritis patients (but) not everyone experiences the same level of stress or may have the same emotional or physical response to stress. There is increasing evidence that personality may play a role in exposure and reactivity to stress. (pp. 81-82)

They found that excessive sensitivity to the behavior and feelings of others increased the level of joint inflammation.

McFarlane, Kalczy, and Brooks (1987) found that 32% of the variance in disease activity and outcome was attributable to psychological variables. Some of the disabling themes that emerged were fear of becoming crippled, fear of being perceived as old and nonproductive, fear of being misunderstood by loved ones, and fear of being unable to obtain empathy from significant others. Beutler, Engle, Oro-Beutler, Daitzup, and Meredith (1986) have studied the correlation between depressive symptoms and pain. They found that in patients with certain dispositions, pain becomes an interchangeable equivalent of depression. In the studies of Moskofsky and Chester (1970) the relationship of biologic components of illness and the broader parameters of psychosocial and environment were compared, giving evidence to the association between mood and pain as an indication of disease activity in RA.

The impact of the disease extends to all facets of a person's life, triggering "psychological changes ranging from independence to dependence, denial to resignation, overcompensation to acceptance; and physical changes encompassing limitation of function, loss of attractiveness, and potentially severe crippling" (Lidelman & Lidelman, 1981, p. 577). In terms of self-concept and body image, a number of factors are relevant, such as the role, status, goals and values systems accompanying the observable physiological changes of the disease.

Discussion of emotions and rheumatologic disorders dates back in the medical literature to the investigations of Johnson, Shapiro, and Alexander in the late 1940s (Lidelman & Lidelman, 1981). These remain, however, the emotional issues of coping with chronic illness. Since GIM may directly affect suppressed expression of feelings relative to RA, it would appear that through creative expression, the issues of self-concept and body image might be reshaped to accommodate successful coping and adaptation.

According to Young (1992) the literature relevant to the psychological assessment of RA patients has clustered around three major areas of development which he describes as (a) pain and pain behavior, (b) patients' attributions, beliefs, and expectations regarding their disease, its treatment and their own abilities to manage effectively, and (c) coping process. The uncertainty of disease pathogenesis often increases stress and feelings of depressed mood leading to behavioral patterns known as "learned helplessness."

The cumulative effect of losses may lead to powerlessness and ultimately, hopelessness. Careful resolution, the reshaping of early maladaptive schemas, along with the release of emotional symptoms of distress, can lead to

healthier, creative self-stimulation. Hope is seen by many to be a coping task of people with chronic illness (Miller, 1992). Miller further states that "the concomitants to the coping task are those emotions and cognitions present when hope is alive and include faith, trust, love, courage, patience, uncertainty, peace, joy, humor, involvement, and well-being" (p. 418). By inspiring hope as maintaining the moment, a never-ending possibility of improving well-being exists. Through GIM a new way of experiencing the self emerges into awareness.

The effect of imagery and music on immunological measures is of particular interest in the treatment approach of R.A. Schaller and Rodriguez (1989) reported increasing evidence that stress has a direct effect upon immunity. Rider and Weilin (1990) and Tsao, Gordon, Marano, Lerman, and Morosko (1991) reported that salivary IgA levels were increased significantly under both music and imagery conditions. Imagery itself has been associated with progress or remission of disease (Acherberg & Lawlis, 1984); changes in activity of lymphocytes (Hall, 1982-83); and function of neutrophils (Schneider, Smith, Wisner, & Manning, 1991). Bartlett, Kaufman, and Smethekop (1993) studied the relationships between music listening and biochemical reactions associated with bodily systems mediating the immunostress response. The results demonstrated an increase in interleukin 1 in one experimental group. As Rider and Weilin (1990) suggest, more research is needed, particularly in the area of the effects of imagery and music on immune function.

Several articles in the GIM literature suggest the efficacy of GIM to improve mood, health, and health-related physiological measures. In a case study of a man with ankylosing spondylitis, Merrin (1993) found that through the release of repressed memories, emotions, and powerful imagery, chronic pain and stiffness were decreased. These findings suggest that GIM may impact illness at a cellular level through the mind-body connection by altering thought processes and consciousness. Wrangsjö and Körtin (1995) reported significant improvement for 14 participants in psychological symptoms as measured by the Hoeksma Symptom Check List following a series of GIM sessions. They found significant decreases in depression, obsessive-compulsion, hostility, anxiety, interpersonal sensitivity, and psychosocialism. In addition, participants reported an increased sense of meaningfulness and manageability of life situations. In a study examining the effects of GIM on mood and cortisol in healthy adults McKinney et al. (1997) reported significant decreases in depression, fatigue, and total mood disturbance in 28 healthy adults after a 13-week intervention period of 6 biweekly sessions and after a 6-week

follow-up. In addition, they found significant decreases in cortisol by follow-up.

The purpose of this study was to examine the effects of GIM on the biological, psychological, and social variables relative to disease activity in RA. It was hypothesized that participants would demonstrate significant decreases in depression and pain, and improvements in health status after experiencing a series of GIM sessions.

Method

Participants

The participants were 27 adults between the ages of 36-78, who were being served by an outpatient program in the department of rheumatology of a major metropolitan teaching hospital. Each participant's rheumatologist verified the diagnosis of RA following the American College of Rheumatology criteria for RA. Participants were volunteers recruited by posters and/or physician referrals and who met study criteria of more than seven years of formal education, literacy, no history of organic brain syndrome, no history of major psychotic disorder, no presence of other uncontrolled medical disorders, no presence of a major communicative disorder, no objection to classical music, and no use of a hearing device. Consistent with the fact that women with RA outnumber men (The Arthritis Foundation, 1993), participants included 2 males and 25 females. Marital status was as follows: 2 were single, 19 were married, 3 were divorced, and 3 were widowed. All patients contained receiving standard medical treatment and monitoring for their disease as prescribed by the sponsoring physician, a board certified rheumatologist.

Procedure

All patients received 10 weekly individual 90-minute GIM sessions conducted by the investigator. GIM sessions took place in a room with a recliner in the professional treatment facility of the sponsoring physician. During the preliminary discussion the participant shared current concerns, feelings, goals and biographical information. The investigator then assisted the participant to enter an altered state of consciousness by providing verbal suggestions to relax the body and focus the mind. The music program choices supported the therapeutic process. The investigator verbally interacted with the participant to support and enhance the imagery during the active music experience. At the end of the music program, the investigator assisted the participant's return to a waking state of consciousness and the session was integrated with reflective discussion of the experience.

Dependent Variables

A blood sample was collected, psychological status and pain were assessed, and functional markers of disease status (joint count, 50 foot walking speed, and morning stiffness) were measured by a rheumatology research nurse clinician at the initial interview session (Entry), at the 6th GIM treatment session (Week 6), 2 weeks after the last GIM treatment session (Week 12), and again 8 weeks after the last GIM treatment session (Week 18). General psychological status was measured using The Center for Epidemiological Studies-Depressed Mood Scale (CES-D), the Symptom Checklist-90-Revised Scale (SCL-90-R) and pain was assessed using the McGill Pain Questionnaire (LP-MPQ).

The Long-Form McGill Pain Questionnaire (LF-MPQ). The LF-MPQ (Melzack & Torgerson, 1971) is a 20-item list of pain descriptors that fall into four major groups: sensory, affective, evaluative, and miscellaneous. The pain rating index (PRI) is the sum of the rank values. The present pain index (PPI), is an indicator of overall pain intensity at the time of administration of the questionnaire and is recorded as a number from 1 to 5, in which each number is associated with the following words: 1, mild; 2, discomforting; 3, distressing; 4, torturous; 5, excruciating.

The Center for Epidemiological Studies-Depressed Mood Scale (CES-D.) The CES-D (Radford, 1977) is a 20 item checklist with a 0-60 range, 16 or over indicating depressive symptoms.

The Symptom Checklist-90-R (SCL-90-R). The SCL-90-R (Derogatis & Spencer, 1982) is a 90-item checklist with 9 subscales and 3 summary scores that measure the presence of psychological symptoms. The subscales are interpersonal sensitivity, phobic anxiety, paranoid ideation, obsessive-compulsive, psychoticism, depression, anxiety, hostility, and somatization.

Serum Assays. Serum fractions were analyzed for three standard medical measures of disease status. These included C-Reactive Protein (CRP), Rheumatoid Factor (RF), and Erythrocyte Sedimentation Rate (ESD RATE).

Results

The purpose of this study was to examine the effects of GIM on biological and psychological variables related to disease activity in RA. It was hypothesized that significant decreases in depression and pain, and improvements in health status would occur after experiencing GIM.

Systemic/Articular Measures

Means and standard deviations for the systemic and articular indices are shown in Table 1. A series of repeated measures univariate analyses of variance

Table 1
Means and Standard Deviations for Systemic/Muscular Indices (*n* = 24)

	Entry		Week 6		Week 12		Week 18	
	M	SD	M	SD	M	SD	M	SD
50-Foot Walking Speed ^a	14.8	5.4	14.2	4.2	13.3	3.7	13.1	3.1
Morning Swollen Joints	77.3	99.8	89.4	140.0	72.3	107.1	55.3	66.0
Joint Count ^b	36.4	26.2	48.0	31.8	39.1	34.3	35.3	28.0

^a $p < 0.05$ ^b $R, p < 0.01$

(RMANOVAs) were computed on these measures. Two were statistically significant: 50-foot walk, $F(3, 69) = 3.35$, $p < .024$; and the joint count, $F(3, 69) = 4.75$, $p < .005$. For both these measures, pattern scores decreased over the period from entry into treatment to the 2nd follow-up session.

McGill Pain Questionnaire

Means and standard deviations for 22 subjects who completed the McGill Pain Questionnaire at all four measurement periods are shown in Table 2. RMANOVAs computed for differences associated with time were significant for scores on five of the six scales: the sensory pain scale, $F(3, 63) = 4.70$, $p < .005$; the affective pain scale, $F(3, 63) = 6.60$, $p < .001$; the evaluative pain scale, $F(3, 63) = 3.18$, $p < .030$; the miscellaneous scale, $F(3, 63) = 6.38$, $p < .001$; and the PRI scale score $F(3, 63) = 6.86$, $p < .000$. Examination of the table of group means shows that from entry to Week 18, scores on the pain

Table 2
Means and Standard Deviations for McGill Pain Questionnaire Scores (*n* = 22)

Pain Questionnaire Scales	Entry		Week 6		Week 12		Week 18	
	M	SD	M	SD	M	SD	M	SD
Sensory Pain ^a	15.3	8.8	11.3	8.6	11.0	8.9	7.5	6.0
Affective Pain ^a	3.2	3.1	1.4	1.6	1.9	2.4	0.8	1.3
Evaluative Pain ^a	1.7	1.3	1.2	0.9	1.5	1.3	0.8	0.9
Miscellaneous ^a	5.0	3.4	3.0	2.8	2.5	2.8	1.7	2.2
PRI Score ^b	25.7	14.6	17.0	13.0	16.9	14.1	10.8	8.8
PPI Score	2.1	1.1	1.6	0.8	1.9	1.0	1.6	1.0

Note. McGill Pain Questionnaire (Melzack & Torgerson, 1971). PRI = Pain Rating Index; PPI = Present Pain Index.

^a $p < 0.05$ ^b $p < 0.01$

^c $p < 0.000$

scores decreased, although the affective pain and evaluative pain increased slightly from Week 6 to Week 12.

Center for Psychoneurological Studies Depressed Mood Scale

Means and standard deviations for 23 subjects who completed the CES-D are shown in Table 3. A RMANOVA computed for differences associated with time was statistically significant $F(3, 63) = 3.64, p < .017$. The mean scores on the CES-D decreased over time from entry to Week 18.

Symptom Checklist-90-R

Means and standard deviations for 22 subjects who completed the SCL-90-R at all four measurement periods are shown in Table 3. RMANOVA computed differences associated with time were statistically significant for nine of twelve scales: somatization, $F(3, 63) = 9.24, p < .000$; obsessive-compulsive, $F(3, 63)$

Table 3
Means and Standard Deviations for Psychological Measures

Variable	Entry		Week 6		Week 12		Week 18	
	M	SD	M	SD	M	SD	M	SD
CES-Depression Score ^a (n = 23)								
	16.4	11.1	13.9	7.6	12.2	9.3	10.8	8.8
SCL-90-R Scale (n = 22)								
Somatization ^a	62.1	7.1	56.4	9.4	56.5	10.5	55.3	7.4
Obsessive Compulsive ^a	62.7	8.9	59.6	9.5	58.4	9.9	60.0	7.8
Interpersonal Sensitivity	58.3	11.0	56.5	11.2	56.3	10.8	54.4	9.8
Depression ^a	63.2	10.0	59.8	10.6	59.3	10.2	57.2	11.6
Anxiety ^a	58.6	9.7	53.0	12.2	55.7	12.8	54.0	11.0
Hysteria ^a	57.2	11.4	51.0	10.0	52.7	13.8	51.4	9.8
Phobic Anxiety ^a	55.1	11.1	52.9	9.7	50.7	10.0	50.2	10.4
Paranoid Ideation	57.1	11.5	56.9	12.7	54.1	11.4	54.5	11.8
Psychoticism ^a	63.4	9.8	58.5	9.2	57.4	9.5	56.5	9.0
Global Severity Index ^a	62.8	9.2	58.5	10.9	57.7	11.2	57.3	9.2
PSDI	57.5	9.6	54.7	8.5	55.1	8.8	53.9	7.6
Positive Symptom Total ^a	62.3	8.4	58.5	10.5	57.3	10.5	57.5	9.6

Note. CES-Depression Scale (Radloff, 1977); SCL-90-R = Symptom Checklist - 90 Revised

(Derogatis & Spencer, 1982); PSDI = Positive Symptom Distress Index.

^a $p < 0.05$ ^b $p < 0.01$ ^c $p < 0.001$

$= 5.26, p < .003$; depression, $F(3, 63) = 5.53, p < .002$; anxiety, $F(3, 63) = 4.07, p < .010$; hostility, $F(3, 63) = 3.87, p < .013$; phobic anxiety, $F(3, 63) = 3.53, p < .020$; psychosomatic, $F(3, 63) = 6.12, p < .001$; global severity index, $F(3, 63) = 8.51, p < .000$; and the positive symptom total, $F(3, 63) = 8.02, p < .000$. Examination of the group means shows that although there was some fluctuation over time, scores on the SCL-90-R scales decreased from entry to Week 18.

Imagery Findings

The imagery findings demonstrate examples of healing imagery that were elicited during the music programs. The participants' symbolic experiences facilitated release of feelings and contributed toward cognitive and behavioral insights affecting life-style changes. Participants often experienced themselves beyond the limitations of their disease as they moved easily, joyously, and without pain in their imagery. Imagery sequences reflected issues of negative self-worth, relationships, harmful memories, creativity, and catharsis. A sampling follows with the accompanying GIM music program noted at the end of each example. [Editor's note: For a complete listing of music selections found on each of the indicated programs, the reader is referred to Grescoe, 2002 and Marden, 2002].

Wounded Self

- I grieve my lost self that looks like scars of dark black tar on the inside of the well. (Grieving)
- My emptiness is as caverns and wounds and feels awful. (Grieving)
- The figure coming toward me is dark, sad, somber and unknown. It might be the darkness of myself. It moves with caution in a shroud. Maybe this is my emptiness. (Relationships)
- I feel a mass of darkness like a wall with no light. (Relationships)

Emotional Abuse

- [Tearfully] I recall how my father had wished me dead instead of my sister. I never felt wanted, born an accident. I always said I was adopted. (Grieving)

- As I cross this bridge, I dump my stress and losses off the bridge. Pain appears heavy and large like a trunk that I let sit there as I move across above. It feels better to have distance from it. (Grieving)
- But I feel trapped. I see flowers along the way—weeds growing wild. Here is an impulse that holds me back. There is no one around so I've got to scale down the rock alone. (Mostly Bach)

Heating and Empowerment

- The dolphin swims freely, quietly and peacefully, moving in any direction. Maybe he has all he needs. (Creativity III)
- I only see the ring, golden and brilliant with a diamond. Everyone asks if they can have it but I know it is special only for me and it feels good. (Positive Affect)
- The shaft of sunlight through the dark pines in the forest illuminates the meadow and reveals a path that takes away the fear and helps me find my way through the forest. It feels like there is light at the end of the tunnel. (Mostly Bach)
- It is a surprise to walk into the unknown garden and find true beauty. I want to march up the hill and get to the peak. (Positive Affect)
- I feel like I'm wrapping myself in a ribbon of love that feels soft and non-constricting. It energizes me. (Emotional Expression)
- I am free and feel it all over my body. Free as can be, no pain! (Quiet Music)
- Everything leaves my body. The white pain flows out as new energy moves through my whole body. The energy is going where it needs to go and I feel like a new person. Now it moves throughout my body and I ascend in a hot air balloon, all the way up. I feel the lightness of my body. (Imagery)
- I'm learning to fly, as I rise to the sky, amongst eagles and hawks, feeling free. When I'm tired, I rest on large fluffy clouds. I know I can fly because I have the freedom. (Nurturing)
- With this music I feel like I could fight the world. The white-robed man with the cane gave me the strength, saying nothing. His presence made me feel like I'm not alone. (Peak Experience)
- A pearl rises from the bottom of the sea and dances on the water. Spinning around, it shimmers and sparkles from the moon reflection, capturing the attention of other creatures of the sea. It shoots up from the

water, suspended in the sky. As I reach out to touch it with my hand, it flows. I study it. (Creativity II)

- I float on a cloud chair that takes me to new places. It a carefree feeling. (Transitions)
- The black tight skin is no longer comfortable and neither is the jacket. I feel restricted and now I finally realize I don't have to wear it any more. (Cervix)

Discussion

This study was conducted as a pilot investigation to explore the effectiveness of GIM as experiential therapy in the primary care of RA. No prior investigations exist. GIM was found to improve functional articular measures, decrease depression and other psychological symptoms, and decrease pain. No change was found in systemic measures.

An important finding was the significant decrease experienced in the level of psychological distress as measured by the SCL-90-R, especially in light of the fact that the music elicited imagery around negative self worth, relationships, harmful memories, and envious Penneshaker, Weinberg, Sheder, Luborsky, and Mayman (1992) reported that the repression of feelings of subjective distress might be detrimental to health from perspectives of psychological well-being and physiological functioning. Expression of repressed feelings may be one mechanism through which GIM improves health.

The present findings that participants reported decreases in psychological distress are consistent with the findings of Wangsgj and Kottin (1995) who reported significant decreases in depression, hostility, and anxiety in 14 participants of a GIM study in addition to increased meaningfulness and manageability of life. Similarly, McKinney et al., (1997) reported significant decreases in depression, fatigue, total mood disturbance in healthy adults following a series of 6 GIM sessions.

A significant decrease was found in the subjective experience of pain as measured by the long-form of the McGill Pain Questionnaire. That GIM may reduce chronic pain in RA is a new finding in the GIM research literature. However, this finding is consistent with anecdotal evidence offered by Merritt (1993) that two series of GIM sessions resulted in reduced pain in a man with another autoimmune disorder, ankylosing spondylitis. Future research is needed to examine the effects of GIM in individuals with chronic pain.

Significant differences in physical measures as observed by the 50-foot walking speed and joint count were observed. These improvements were

accompanied by statistically significant improvements that, in general, correspond to improved psychological well-being. The fact that the study demonstrated no significant changes in laboratory measurements of disease status may reflect our inability to accurately measure early or subtle improvement. It may be that follow-up measures were needed to measure the physiological changes. Two previous studies of GIM have shown that physiological change continues to occur after a series of sessions has been completed (McDonald cited in McKimney, 1997; McKimney, 1997).

The present results beg the question of whether the improvement in the psychological parameters was the cause or the effect of the improvement noted in function. Numerous investigators have established the connection between neurological, endocrinological, and psychological systems and it seems reasonable that psychological manipulations may have impact on other systems which were previously considered "disconnected" from stress release or management. Further studies might include the measurements of more sensitive laboratory parameters such as specific interleukins.

Faced with daily challenges and adjustments in living necessitated by the unpredictable course of this chronic, disabling disease, patients with RA experience shifts in personal satisfaction relative to employment, social, family, and recreational functioning. In their imagery, participants often experienced themselves beyond the limitations of their disease as they moved easily, joyously, and without pain and reported being pain-free for up to 3-4 days afterwards. This post treatment improvement may be related to certain homeostatic changes in cortisol, adrenal hormones or other inflammatory mediators.

The physiological response to negatively held thoughts and emotions are experienced in the body and can, for example, lower resistance to disease. In a panel symposium of the American Psychological Association's 100th annual convention, Pennebaker, Weisberg, Sheffer, Libersky, and Mayman, (1992) reported that the repression of feelings of subjective distress can be detrimental to health. The work of Dr. Pennebaker, begun in 1986, demonstrated general health benefits through enhanced immune function when subjects wrote about emotions related to traumatic experiences (Pennebaker, Kiecolt-Glaser, & Glaser, 1988). In the present study, GIM facilitated release of emotions and exploration of past wounds. These facets of the GIM experience may have contributed to the observed improvements in functional measures of disease status. These clinical results may be applicable to other chronic pain conditions such as fibromyalgia and osteoarthritis. The effects of GIM have yet to be studied in these populations.

The internal process of restructuring perspectives and developing new outlooks may be enhanced by experiential psychotherapy that creates in its musical metaphor the activation of the unconscious, thereby unblocking the energy bound in emotional and psychosomatic symptoms, and ultimately encouraging the full experience and expression of the energy flow. Self-control and self-efficacy include beliefs, available coping resources, degree of activity or passivity, and level of motivation. These elements are the focus of the clinical care of medical patients in order to improve coping through cognitive, affective, and behavioral change. The investigators feel that GIM can be a most effective and explicit therapeutic intervention and can add to the existing body of clinical interventions such as relaxation, biofeedback, and cognitive restructuring. Through the understanding of the biopsychosocial model of medicine, new ways of healing and partnerships in primary care are unfolding that use the inner power and resources of the mind and body to restore, maintain, and foster health and well-being.

At this point in time, therapy for RA remains incomplete and frequently disappointing, despite the increasing usage of potentially toxic drugs. Regardless of the rate of disease progression, it appears from this study that GIM as a creative, experiential treatment integrating health, mental imagery and music with emotional expression, can be effective in reducing pain and psychological symptomatology, improving physical function, and, ultimately, the quality of life. To have a benign adjunct in the treatment regimen, which utilizes neural influences represents a significant step forward in the multidisciplinary approach to this disease.

This study underscores the role of GIM facilitators in health care settings as collaborators with rheumatologists and supports the use of GIM to reduce pain and disability associated with RA as well as encourage fuller participation in life beyond the perceived boundaries of illness. It may be an effective treatment at the onset of disease to reduce stress and feelings of depressed mood, which potentially lead to behavioral patterns of learned helplessness. As a treatment approach, these results suggest that GIM can be effective not only in reducing pain and psychological symptomatology but in the prevention and amelioration of socioeconomic problems related to the disease. Ultimately, GIM may profoundly improve the quality of life for those with RA.

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