REVIEW OF LITERATURE
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Empirical research on the effect of music therapy on normal subject and clinical groups is very limited. Specifically there are very few studies on the effect of music therapy on schizophrenia. Attempt has been made in this chapter on the bases of available literature to present a brief review of information regarding the effect of music therapy on clinical symptoms*. The information is presented under the following convenient subheads:

a) The effect of music therapy on neurotic symptoms
b) The effect of music therapy on psychotic symptoms
c) Music therapy and schizophrenia
d) Music therapy in India

Music Therapy and Neurotic Symptoms

A number of the neurotic symptoms are observed in schizophrenia. Hysterical dissociates or even conversion symptoms. Every schizophrenic breakdown is preceded by a period of marked tension and anxiety, which may last only a few days or many extend over many months.

*It may be mentioned here that number of studies are available in psychological literature on the effect of music or music therapy on different psychological functions among normal subjects. That information, however, has not been incorporated in the review as the essential focus of the present study was on the clinical group of schizophrenia.
During the acute and subacute stages of schizophrenic attack, anxiety, and depression may color the clinical picture. Significantly, obsessive symptoms are also common in schizophrenia (Kaplan and Sadock, 1996). Poque and Harrow (1984) reported a relation between depression and negative symptoms in schizophrenia. Norma and Malla (1991) found the reliability related between depression, anxiety and positive symptoms.

With neurotic clients in individual or group, music therapy goals include awareness of and feelings about one's musical expression, extension and integration of music expression, and spontaneous musicality and interaction. The awareness of inner sensations and freedom to respond to these is essential.

Greenberg and Fisher (1971) explored for women the impact of exciting versus calm music upon psychological measures. They found that exciting and calm music is experienced as having different perceptual properties. There was also evidence that exciting music affected response to unstructured tests e.g. TAT, more than structured ones, e.g. Buss and Durkee's Hostility Scale.

Biller et al. (1974) found that subjects exposed to sad music showed greater decrements in state-anxiety than those exposed to happy music.

Peretti (1975) tested hypotheses that (a) music can influence anxiety; (b) differences in response to music may be found between males and females; and (c) differences in response may be found between music and nonmusic majors. Subjects included 100 music majors, and 100 nonmusic majors, randomly selected from students at North Park College, Chicago, Illinois. Test instruments included a pencil-maze, blindfold goggles, GSR apparatus, and a musical recording. All three hypotheses were substantiated in terms of levels of significance ranging from .01 to .02.
Peresson (1976) examined the use of music therapy and fantasy in the treatment of depressive states, giving examples of musical works and instructions to subjects to facilitate their mental imagery within the treatment. Results included the following: (a) these musical “motifs” appear to constitute an effective antidote when they were automatically recalled at the beginning of a major depression. (b) several subjects reduced their psychotropic medication considerably and were more willing to face their everyday problems. (c) psychomotor agitation was less evident and more controllable. (d) greater resolution and expansivity were almost always noted.

Smith and Moriss (1976) reported that simulative music significantly increased both worry and emotionality while sedative music had no effect on anxiety.

Boucharlat et al. (1978) studied the diagnostic and therapeutic possibilities of music. Six musical selections of varied emotional tonality were played to mental patients of different clinical backgrounds. Subjects orally reported their listening experiences to the psychotherapist immediately after the session. Analyses of subject reaction revealed that the affective power of music tapped considerable emotional resources and encouraged fantasizing and the sharing of inner experience. Three types of images dominated: oral (narcissism, auto-eroticism), anal (sadism, masochist auto-eroticism), and phallic (castration, oedipal feelings). Peaceful pieces evoked memories, images related to birth, aspirations, and expression of the need for affection. Aggressive pieces evoked stress and reactivated subjects’ ability to cope with anxiety.

Candler (1979) made a comparison of externally controlled pacing and self-controlled pacing procedures in relaxation training of anxiety
neurotics. Self-paced instruction, experimenter-paced instruction, semi-classical music, and a no-treatment control were compared for their effects as muscle relaxation training. In the treatment sessions, all three groups experienced a significant reduction in tension level and heart rate during the instruction phase. However, it cannot be concluded that the effect could not have occurred simply as a function of the passage of time, because of the absence of contrast with a control. Significant group differences appear to be a result of group differences, which existed at the start and remained stable throughout the program. In the pre test post test data none of the physiological measures showed a significant difference. On the State Anxiety measure, the music and self-paced instruction groups were found to have greater reductions than the control group. Trait Anxiety did not show a significant difference. These results are in accord with the majority of findings from other settings.

Fontana and Loschi (1979) described the findings of 20 yrs of research on the use of sound stimulation as an auxiliary technique in psychotherapy. Results suggested that music serves as an affective unblocking agent and as a vehicle of emotions and feelings that enriches the communication between patient and therapist. The technique was based on human psychobiological development and the role of external and internal rhythmic phenomena beginning in the intrauterine period. Findings from studies with 150 subjects (42% male, 58% female; average age 31 yrs; age range 18-78 yrs) were presented. The combined stimulation of musical sequences with the sound of heartbeats and respiratory rhythms produced sedation, relaxation, and sleep induction without side effects. In the projective tests, subjects showed lessening anxiety and a smaller differentiation in the limits of the corporeal scheme. Clinical examination showed a lowering of arterial pressure, particularly
the maximal; marked muscle relaxation; and a greater capacity for daily activities. It was suggested that heart beat rhythms were the equivalent of contact and of being rocked a sensation that soothes basic anxiety.

Formann (1980) studied the responses of 100 alcoholics and 100 patients with neurotic personality disturbances to music therapy. Results indicated that music made a substantial contribution in reinforcing subjects basic ethical concepts. It also served as a medium of free communication by breaking the barrier of expression and enriching the pool of potential vocabulary. The study found some deviations from traditional therapy that can be used by music therapists to reduce anxiety in-patients and prevent further deterioration in traditional values, thus strengthening the ethical concept.

Delle Chiale, Roberto, Guerani and Massimo tested the effects of EMG biofeedback treatment administered along with music to 9 patients with anxiety neurosis in 1981. Nine other subjects with anxiety neurosis received regular EMG- big feedback with simple acoustic feedback. The experimental subjects were presented with constant music as a positive reinforcement until they succeeded in maintaining a certain threshold of muscular tension. EMG, state anxiety scores, and MMPI scores for both groups of subjects were compared. While there was a little difference in the EMG scores, the subjects who had been presented with music showed more significant improvement than controls in their MMPI scores and state anxiety profiles.

Pearce (1981) studied the effects of different type of music on physical strength and found that sedative music decreased strength relative to silence, while simulative music had no effect on grip strength.

Reinhardt and Lang (1982) studied the effects of various forms of depressed persons. Subjects reacted in a uniform manner to the
performance of Vienna waltzes and slow piano concerto by Mozart. Their depression was noticeably decreased, and they exhibited an increase in efficiency. Other forms of music produced contrary reactions. Subjects with depressive schizophrenia with reduced drive showed positive effects after waltz music and folk songs. Results suggested that positive treatment of depression could be achieved with suitable music under group therapeutic conditions in a complex psychiatric therapy rehabilitation strategy.

Fishman and Marcus (1982) examined the spontaneous musical behavior and 6 emotionally disturbed 7-10 yrs old to determine whether there were difference between them and where such differences existed. Five categories of musical behavior and interaction style. Each subject participated in an individual 30-min music session once weekly for 7 weeks, and data on each of the 5 categories were recorded in each session. Results showed differences between subjects’ rhythmic behavior and verbal behavior, emotionally disturbed subjects demonstrated a higher incidence of disordered beating, with frequent stops and starts, irregular patterns, and inconsistent tempo. With regard to verbal and vocal behavior, emotionally disturbed subjects made significantly more irrelevant comments and more tonal responses. It was concluded that musical differences between normal and emotionally disturbed children could lead to the use of music as a diagnostic indicator and assessment tool in the psychotherapeutic and psychoeducational treatment of children.

Reinhardt and Ficker (1983) examined the effectiveness of including regulative music therapy in the treatment of patients with depressive reactions stemming from a variety of causes. Results suggest that regulative music therapy can be beneficial during the readaptation
phase in the course of rehabilitation of such patients. Orientation to conscious perception seems to be initiated by regulative music therapy among depressive patients during the first phase of training. This conscious perception leads the patients to a more rational from of confrontation with themselves and their surroundings and opens the way to a constructive approach to overcoming the conflicts experienced in the past.

Bailey (1983) studied the effect of live music on anxiety of 50 hospitalized cancer patients. Subjects were randomly placed in to the live or taped music categories and listened to 25 min of music. Pre- and post music mood states were recorded on the profile of Mood states. Findings showed that subjects listening to live music reported significantly less tension-anxiety and more vigor than did subjects listening to taped music. In addition, subjects listening to live music reported significantly more changes in physical discomfort and in mood and recommended music sessions for others. Also results indicated the particular effectiveness of using live music to assist in relieving tension and promoting vigor.

Stratton et al. (1984) reported the positive effect of soothing music on verbal interaction in a controlled setting.

Novitskaya in 1984 compared the effects of 5-7 minute of exposure to rock, disco, and classical music on the emotional-motivational components of the human mental state. The criteria used to determine changes in functional relationships of the brain hemispheres were the dynamics of associative activity and the positive emotional component of the listener’s mental state; short term memory of numerical and pictorial material; and perception of mono and achromatic colors, shades and color combinations. The after effect of listening to rock and disco music was linked with the functional dominance of the right hemisphere. The
different types of music were associated with different moods, motivations for associative and motor activity, degrees of visual attentiveness, and features of color perception and self-awareness.

Gettel (1985) investigated the effect of music as a transitional object on behavioral measures of anxiety and the need for additional sedative medication during cardiac catheterization on thirteen children aged nine month to fifteen years. Both groups met with the music therapist the evening prior to the catheterization procedure to participate in a music activity. Children three years and older wrote a song about a favorite animal who goes to the hospital. Younger children sang familiar songs with family members. The music therapist accompanied the experimental group to the catheterization lab the following morning. Taped music from the previous evening and other familiar songs were played for them throughout the procedure. Multiple measures for the experimental and control groups were recorded throughout the procedure on a behavioral scale devised by this researcher which measured both passive and active expressions of sound/ speech, movement, facial expression and environmental coping. A test was used to determine differences between groups on the pretest, behaviors during the procedure, and the need for additional medication. Two age-matched groups of four subjects each were also analyzed for differences. No significant differences between groups were found; however trends were noted. Experimental subjects were less anxious during the period in the hallway prior to the procedure, and were more passively anxious during the procedure than subjects in the control group. This study implies that familiar music and the presence of a substitute mother may cause children to cope in a more passive manner, which, in turn, is more of an aid to the doctors during the procedure.
Mazza and Price (1985) investigated the effectiveness of poetry, music, and time used as therapeutic agents in short-term (7-session) group treatment conducted with six 18-36 yr. old depressed college students. Findings showed that these techniques provided a means to reduce dependency and establish boundaries compatible with agency limitations. Specific poetic techniques used include sharing a preexisting poem or song and inviting reactions and construction of a group of collaborative poems. Particular attention of this study is given to the use of time, poetry, and music to motivate and activate subjects group developmental stages within a brief time frame are also examined.

Haines (1986) examined the effects of music therapy on the self-esteem of emotionally disturbed adolescents. 10 subjects received 6 weeks of music therapy that focused on creative expressive activities within a group context. All subject were pre and post tested with he Cooper Smith Self-esteem Inventories. No significant differences were found between the groups.

Updike and Charles (1987) investigated the physiological and emotional responses of patients awaiting an elective plastic surgery procedure to a 30-minute taped music program. Values for the physiological variables of systolic blood pressure, diastolic blood pressure, pulse rate, mean arterial pressure, and double product index were obtained before and after the music listening. These data were analyzed via a repeated measure t-test using each subject as her or his own control. Emotional responses were evaluated by means of an open-ended, non directive questionnaire developed around 5 categories of depression, sadness, and despair; psychological isolation and defensiveness; anxiety; difficulty of medical management; and preoccupation with pain. Process recordings and documented verbal and
body language were used before and after the music to identify themes and mood states expressed by patients. Analyses of subject reaction revealed that every physiological variable decreased in value at less than .001 level of significance. The most significant emotional effect appeared to be an experienced shift in patients’ awareness toward a more relaxed, calm state. The most critical conclusion is that music listening appeared to effect desirable pattern shifts in physiological and emotional states in the presurgical setting for those patients studied.

Redinbough and Ellen (1988) presented a case study to illustrate the use of music therapy as a means of increasing verbal and nonverbal communication in a withdrawn, depressed 91-yr-old female. Once the subject had developed a system of communicating through music, she exhibited an increase in participation in social activity groups, which led to the formation of a social support system for her.

Pignatiello et al. (1989) studied the psychophysiological comparison of the velten and musical mood induction techniques. 36 subjects were given either of the mood induction techniques, during which time heart rate, systolic and diastolic blood pressure, finger pulse amplitude, and respiration rate were recorded simultaneously. Mood states included elated, neutral and depressed groups. Results suggested that, regardless of the technique, elated subjects had significantly lower scores than the neutral and depressed subjects on the depression-adjective checklist. Analyses revealed significant differences for both heart rate and blood pressure in which participants had increased levels compared to participants in the depressed groups. For these measures, percent change from baseline analyses revealed that bi-directional responding was due primarily to the music conditions and not the velten conditions. No
significant differences in diastolic blood pressure or finger pulse amplitude were found for either technique.

Trivedi; and Gupta (1989) described the different functions of music and painting in treatment of a 50-yr female depressed. The subject, who had lost interest in her art and her personal relationships, underwent music therapy. The musical score of a favorite motion picture, adding the visual impact of remembered images to that of the music itself, triggered anew the subject's fantasy activity. She resumed her artistic production and her social life. Music had enabled the healing process to occur in her preconscious.

Mayfield et al. (1989) studied the effect of rock music and heart beat condition. He found that subjects in the rock condition had a significantly higher perceived level of distraction by the music.

Benes et al. (1990) reported the positive effect of mellow music on reported cognition resulting from auditory subliminal message as compared to frenetic music.

Hooper (1990) reported the effects of music on the anxiety and agitation of four women with moderate and mild mental handicap. Music therapy and recorded music were compared with controlled case studies. Two measures of anxiety were recorded pulse rate and a behavioral rating. No improvement was found under the control group, while both music conditions produced some improvements.

Hanser (1990) developed a music therapy strategy for depressed older adults that involved 8 music-listening programs facilitated by a music therapist for use in the home environment. Body relaxation, imagery, stimulation, and sleep enhancement were included along with music included to cue relaxation and positive thinking. Four subjects
aged 65-74 yrs with major or minor depressive disorder were administered the Brief Symptom Inventory, Beck Depression Inventory, Geriatric Depression Scale, and a Self-esteem Inventory before and after participating in music therapy. Subjects responded differently to imagery Vs body relaxation, but all subjects demonstrated gains on the above measures over 8 weeks. The music therapy, stress-reduction strategy showed potential as a low-cost, home-based treatment for depressed elders.

Washington (1990) investigated the effects of music on the reduction of anxiety levels in terminally ill cancer patients. Twelve subjects were used, all with a diagnosis of cancer considered untreatable and therefore terminal. Subjects ranged from 50 to 80 years of age and were referred by the social service division of an in-home hospice program affiliated with a large city hospital. The measurement tool used in this study was the State-Trait Anxiety Inventory. As only degrees of state anxiety were to be measured, the state scale alone was used. The State-Trait Anxiety Inventory was administered prior to the music intervention, and was again administered after the music intervention. An altered form of Bonny’s Guided Imagery and Music (GIM) technique was used as the music therapy intervention. No statistically significant results were obtained. Only in limited cases were post-test scores slightly reduced from pre-test scores. Subjects’ verbal reports and responses to the intervention were favorable, and suggest that the music intervention did promote increased relaxation and comfort and a reduction in feelings of anxiety and stress.

Mikhailova et al. (1990) compared emotional reactivity of patients with endogenous depression and healthy test subjects towards classic and rock music. According to the questionnaire data and EEG
recording, it was established that in depressed patients, analyses and estimation of the emotionally significant information differ from those in healthy persons in contrast to normals. The classic music exerted an activation effect on the patients whereas rock music evokes negative emotions. Analyses of the time-course of changes in the EEG pointed to alterations in the system of nonspecific activation in depressions.

Edgerton (1990) described creative group songwriting in group of emotionally impaired adolescents which were given opportunities not only to write lyrics, but also to compose their own music. An overview of the characteristics and needs of emotionally impaired adolescents was followed by a review of research and literature in therapeutic songwriting techniques and song composition in sessions with groups of 12 male emotionally impaired adolescents. Creative group songwriting was divided into 6 steps. Result noted that creative group songwriting seemed to be especially effective in developing group cohesiveness, increasing self-expression.

Chan (1990) studied the effects of preferred music, nonpreferred music, and silence on measures of state anxiety, relaxation, and muscle tension. 9 subjects were selected from a pool of ninety students after passing criteria for trait anxiety and musical experience. Each of the 9 subjects was tested individually for a total of three testing sessions, using one condition (preferred music, non-preferred music, or silence) per session. Pretests-posttests of state anxiety and relaxation were administered during each condition, and muscle tension was measured using an electromyogram. A main effect was discovered between subjects in the measure of state anxiety, as well as a difference between conditions on the measure of relaxation. Analyses revealed state anxiety and relaxation were correlated significantly under silence. State
anxiety and EMG muscle tension were related inversely under preferred music, while other EMG correlation were associated with low correlation coefficients. Lastly, a trend appeared for preferred music to induce lesser anxiety and greater relaxation than non-preferred music.

Giles and Cogan (1991) tested three styles of music for effectiveness in altering mood in children. These styles of music included classical, Walt Disney film’s music, and electronically generated “New age” music. Freestyle drawings of 255 first and second graders, made while they listened to music, were analyzed for indications of aggression, depression and organic ailment. Results of the music styles’ effectiveness showed that “New” age and Disney music were significantly more effective than classical music in altering mood. Analyses of the drawings indicated that 41% of the children were suffering from depression, aggression or organic ailment and often masked their actual feelings. The conclusion showed that a music program could effectively promote emotional health using drawings to assess emotional growth.

Liebman and Maclaren (1991) examined the effects of music and relaxation intervention on anxiety levels within a population of pregnant adolescents. Nineteen girls provided data for the experimental group, while twenty girls provided data for the control group. All subjects were administered Spielberger’s Trait Anxiety Inventory at the beginning of the seventh, eighth, and ninth months of pregnancy. All subjects were administered the Spielberger’s State Anxiety Inventory beginning at approximately the 28th week and extending through the 37th week. The repeated measures analysis of variance revealed a statistically significant main effect difference between the two experimental and control groups on the trait anxiety scores. Furthermore, the repeated measures analysis of
variance revealed a statistically significant main effect difference between
the groups with regard to state anxiety.

Russell (1992) investigated the effectiveness of imagery, music,
and cognitive therapeutic techniques in the reduction of anxiety among
265 university students. Students were administered the State-Trait
Anxiety Inventory and 78 subjects aged 19-43 yrs participated in the
study. Results indicated that highly anxious subjects using music and
imagery techniques might have an effective and alternate method for
reducing state anxiety. Findings suggested that music plus imagery
treatment could assist in teaching subjects to reduce trait anxiety.

Davies (1992) discussed music therapy with a depressed 42 year man
that much of whose life had been circumscribed by a phobia. The result
according to the psychodynamic theory showed the effect of the music as
dynamic transference space in reduction of his depression.

Chen (1992) examined the active music therapy in depression
patients. 68 cases with depression were divided randomly into two
groups-test group and control group. Patients of both groups received
same antidepressive drugs while for the patients in the test group active
music therapy was provided everyday in 8 weeks. Patients in the test
group showed improvement of their symptoms at the end of first week
while most patients in the control group were getting somewhat better at
the 3rd-4th week. The effectiveness of combined treatment in the test
group was better than that in the control group. Patients in the test group
became calm and active and the atmosphere on the ward appeared to be
somewhat harmonized so that it was beneficial to the nursing care.

White (1992) examined the effects of relaxing music on elevated
state anxiety inpatients with a confirmed medical diagnosis of acute
myocardial infarction. In addition, the relationship between trait anxiety
and state anxiety was analyzed. A purposive sample of 40 myocardial infarction patients was randomly assigned to an experimental or control group. Statistically significant reduction in heart rate, respiratory rate, and state anxiety scores were found in the group that listened to relaxing music. A statistically significant positive correlation was found between trait anxiety scores and baseline state anxiety scores. Significant negative correlation were found between trait anxiety scores and the degree of change in post treatment state anxiety scores when examined as a net change, as well as a percent change. Results suggested that music therapy might be an effective intervention to reduce state anxiety levels in the acute myocardial infarction patient.

Jochims (1992) in a study found that the function of music therapy help older adults to come to terms with the realities of old age and some time to explore new possibilities for living. Two different music therapy strategies, singing familiar folk songs and instrumental improvisation contributed to a remission of depressive and functional symptoms.

Davis in 1992 investigated the effects of music and relaxation techniques on pain and anxiety in 22 women. Control subjects received the usual medical procedure without music and experimental subjects received their choice of music through headphones after having been given basic relaxation instructions. Dependent variables were pulse rate, respiratory rate, behavioral observation of overt pain, and self report of pain and anxiety. Control subjects demonstrated higher pulse rates, behavioral indices of pain, and anxiety reports throughout the procedure; however, these scores did not differ significantly from those of experimental subjects.
Rosling (1992) studied music and drawing with institutionalized elderly. A 14 week music therapy program with 12 residents of a long term care to facilitate the exploration of feelings and memories. The program included a variety of recorded music selections, relaxation, writing and discussion. The depth of emotional engagement offered by this method and its usefulness in working with depressed elderly persons is emphasized. The study suggested this type of program may be a valid therapeutic activity for long term care residents who are depressed, withdrawn, or experience anxiety.

Wigram (1993) studied the effect of music and low frequency sound in reducing anxiety and challenging behavior in clients with learning difficulties. He found that the low frequency sound and music reduce anxiety.

Davis and Thaut (1993) studied the influence of preferred relaxing music on measures of state anxiety, relaxation and physiological responses. 18 subjects, 9 females and 9 males, ranging in age from 18 to 43 were randomly selected for participation in the study. All music was provided by the subjects, who were tested individually on three separate occasions. Physiological data collected included: (a) vascular constriction, (b) heart rate, (c) muscle tension, and (d) skin finger temperature. Subjects were assessed with the Spielberger State Anxiety Inventory and a Seven-point Likert Type Scale for Self-rated Relaxation. Results indicated that state anxiety decreased and relaxation increased from pre to posttest conditions consistently across trials. The change, however, was significant only for state anxiety (p.< 05). Physiological data showed that the music aroused and excited rather than soothed autonomic and muscular activity. Significant subject, time interaction
effects for muscle tension and vascular constriction and significant differences between subjects for skin finger temperature were found.

Cohen et al. (1993) examined the effects of singing instruction and rhythmic instruction on the rate of speech and verbal intelligibility of neurological impaired persons and ascertained the influence of age, premorbid musical experience, and type of neurological impairment on the subject's speech production. 32 patients aged 26+ yrs, with neurogenic communication disorders, which were residents of a chronic care facility were randomly assigned to the rhythm instruction group, the singing instruction group, or the control group. After 9 wks. the singing group made the most progress. While premorbid musical experience was not a significant factor. The treatment subjects’ age range and type of neurological impairment were significant predictors of speech performance.

Peden (1993) designed music program to increase socialization and relaxation of homeless persons using . The use of music provides the psychiatric nurse an entry into therapeutic relationships and an opportunity to establish relationships with persons who often do not initiate contact with others. Music promotes relaxation and interaction with others. Listening to music decreases loneliness and isolation. The music program was effective in fostering a sense of well - being and allowing the participants to join together in a meaningful activity

Hanser et al. (1994) in a study examined the effect of music listening, stress- reduction strategy, offered through home visits with a therapist compared to self-administered techniques with moderate and indirect therapist contact. 30 subject aged 61- 86 yrs. diagnosed with major or minor depressive disorder were randomly assigned to a home-based music therapy, self-administered music therapy and a wait-list
control group. Subjects in both music conditions performed significantly better than controls on measures of depression, distress, self-esteem and mood.

Mohlenkamp (1995) compared Guided Imagery and Music (GIM) with the method of Musikalisch Katathyme Bilderleben (mkB), and finds that GIM understand the inner imagery not only as a reflection of the unconscious, but also as a creative product and expression of an “intersubjective symbolism”. The experiment was conducted with patients suffering from somatoform disturbances. 20 female and 11 male subjects age between 20-29 or 30-59 were treated for two days. In active music therapy idiophones with definite pitches were used. In receptive music therapy Bach’s double concert for violin, oboe and strings and Drove’s Symphony nr. 9, 2nd movements were used. Introductory interview - placing of test measure instruments (measuring heartbeat rate, muscle tension, muscle activity) relaxation procedure, pause, filling out the BSF inventory (Berliner Stimmungsfragebogen)- collection of spit - receptive or active music therapy (21 minutes) - collection of spit + BSF - filling out a self developed experience inventory - closing dialogue.

Results showed receptive music therapy evokes and allows for the elaboration of cognitions and emotions. In active music therapy free improvisation as a challenge, leading to modification of moods and decrease of anxious depression and fatigue. In comparison receptive music therapy encourages introspection, especially by patients who meet verbal communication with strong defenses.

Bouhuys Bloem et al (1995) studied the faced facial expressions of 24 healthy subjects in response to depressing or elating music. The faces were subdivided in six ‘ambiguous’ faces (i.e. expressing similar amounts of positive and negative emotions) and six ‘clear’ faces (i.e.,
faces showing a preponderance of positive or negative emotions). In addition, these two types of faces were distinguished with respect to the intensity of emotions they express. 11 subjects who showed substantial differences in experienced depression after listening to the music were selected for further analysis. It was found that, when feeling more depressed, the subjects perceived more rejection/sadness in ambiguous faces (displaying less intensive emotions) and less invitation/happiness in dear faces. In addition, subjects saw more fear in clear faces that express less intensive emotions. Hence, results show a depression-related negative bias in the perception of facial displays.

Iwanage et al. (1996) examined the effect of repetitive exposure to music on subjective and physiological responses. Subjects were 12 undergraduate and graduate behavioral science majors. The pieces used in this study were Stravinsky’s “Sacrifice dance” from the rite of spring as the excitative selection and the orchestral version of Satie’s Gymnopedie No. 1 as the sedative selection. Both pieces were presented a total of four times at 5-minute intervals. Musical activity was perceived as consistently higher for the excitative selection than for the sedative one. Subjects reported consistently high levels of relaxation and low tension while listening to the sedative music while they reported contrasting feelings during the excitative piece. Subjects also reported that relaxation increased with repeated listening. Heart rate and respiration rate did not change during the excitative music, while they gradually decreased during the sedative music. Results indicate that the sedative effect of music was more apparent in the second half of the pieces.

Webre (1996) investigated the effects of relaxation exercises with soft music on anxiety levels in an inpatient general psychiatric unit with
39 subjects. Anxiety levels were measured prior to and post interventions with the state portion of the state-Trait Anxiety Inventory. Progressive muscle relaxation, meditative breathing, guided imagery, and soft music were employed to promote relaxation. A significant reduction in anxiety level was obtained on the post-test.

Tsenova (1996) investigated the effect of regulative music therapy and training as a means for overcoming fatigue and stress and for enhancing adaptive potentials. Findings showed that regulative music therapy help to cope with mental and physical overstrain, resulting in variety of disorders regarding sleep and cardiovascular system; stomach and muscle pains, irritability and lack of balance, anxiety. Regulative music therapy was based on the learning of specific perception form-efficient observation on: one’s personality, body, functions, thoughts, emotions, and not reasoning. In this way the pathogenic attention narrowing was overwhelmed and the behavior changes which reflect on the general well being and self-tolerance. Regulative music therapy used not only in the case of neurosis therapy, it was successfully applied in the preventive medicine as a training method to cope with over-tension and as means to prevent emotional alienation in every day life.

Hamer (1996) investigated the effects of Guided Imagery through Music (GIM) and relaxation techniques on state and trait anxiety levels. Individuals selected for music therapy treatment consisted of volunteers from the Bridgeway Chemical Dependency/Alcoholism Unit. The study took place at the rehabilitation facility with 16 subjects and involved an experimental group that participated in 10 treatment sessions and a control group that received no treatment, the purpose was to determine whether or not the GIM training would have an effect on perceived stress levels. The dependent measures consisted of the state-Trait Anxiety
Inventory as well as individual self-reports and evaluations. Results showed that the experimental group experienced a decrease in perceived situational stress. Analyses of data indicated that the differences in state scores between groups were statistically significant. Verbal reports and observations from experimental subjects also indicated that the experimental group expressed a marked reduction in perceived stress and anxiety following treatment. Results also suggested that Guided Imagery through Music may be of some benefit to persons dealing with chronic stress and anxiety.

Chlan (1997) tested the effectiveness of music therapy on mechanically ventilated patients (MVPs) and to explore the influence of the absorption personality trait (disposition for experiencing altered states of awareness) as one variable that may explain differential responses to the intervention. A total of 54 subjects were randomized to either an experimental music listening condition or to a control rest condition. Heart rate and respiratory rate were measured at baseline and at 5-minute intervals for 35 minutes. State anxiety was measured at baseline and posttest. Absorption was measured at baseline only. Mean pretest anxiety was 17.7 (control) and 17.3 (experimental); posttest anxiety scores were 16.2 and 10.1 respectively. Independent t-test indicated significant posttest state-anxiety scores between groups. Repeated measures ANOVA were significant for heard rate and respiratory rate over time between groups. Heart rate and respiratory rate decreased over time differentially for those subjects in the experimental group. Hierarchical multiple regression was significant for the regression of posttest state anxiety on absorption + treatment. A single music listening period was found to be effective for decreasing anxiety and promoting relaxation via non-pharmacological means. Absorption was not found to significantly
influence the posttest dependent measures, which requires further exploration in nursing intervention research.

Cruse et al. (1997) evaluated the effect of music in 121 elderly outpatients undergoing elective cataract surgery with retrobulbar block and monitored anaesthetic care using fentanyl or alfentanil and midazolam. Subjects were prospectively and randomly assigned to hear; relaxing suggestions, with noise, and operation room noise or relaxing music via audiocassette headphones. Vital signs were documented before and after retrobulbar block and every 15-min thereafter. Anxiety was assessed using the state-Trait Anxiety Inventory (STAI) before and after surgery. Visual Analogue Scales (VAS) were used to assess anxiety and patient satisfaction postoperatively with a standardized questionnaire. Results showed that there were no differences between groups in STAI or anxiety VAS scores at any time. Differences were noted in systolic blood pressure, but not in other vital signs. Patients’ ratings of the whole operative experience, satisfaction with the tape played, general level of relaxation and preference for the chosen tape for subsequent surgery were different. Conclusions indicated elderly patients undergoing cataract surgery under retrobulbar block were more satisfied with their experience if they heard relaxing music, rather than relaxing suggestions or with noise or operation room noise. The type of auditory stimuli to which the patients were exposed did not influence the level of anxiety.

Bampton and Draper (1997) tried to determine whether the use of relaxation music could improve patient tolerance of gastrointestinal endoscopic procedures. Fifty-nine patients undergoing gastrointestinal endoscopic procedures were randomly assigned to receive either relaxation music (n=28) or no music (n=31) using headphones and a portable compact disc player. Patient anxiety before the procedure,
tolerance of the procedure, and willingness to undergo a repeated procedure were self-assessed using a visual analog scale. The assisting nurse also assessed patient tolerance. There was no significant difference in the overall tolerance score between the two groups. However, a significantly higher proportion of described the experience of a gastrointestinal endoscopic procedure as being at least moderately unpleasant in the no-music group. Patient acceptance of the relaxation music was high: 92% in the group stated they would have music again if they required another procedure. The study concluded, even in-patients, who have sedation, relaxation music could reduce the number who find the experience of gastrointestinal endoscopic procedures unpleasant. The study suggested that music has a role as an adjunct to sedation in gastrointestinal endoscopic procedures.

Covington (1997) explained music therapy as a nursing intervention. Music a universal language with many purposes, can be used in the healthcare setting to aid in stress reduction and anxiety. When used in the psychiatric setting, music can elicit emotion and affect behavior change. The psychiatric setting can include music in a group session that evokes thoughts, feelings, and memories for the clients.

Stratton and Zaloanowski (1997) investigated relationship between characteristic moods and most commonly listened to types of music. In this study three samples of participants were surveyed to determine their characteristic moods and the types of music they typically listened to. The samples included college students. College faculty and staff, and a random sample of non-college related adults. Participants were asked to report how many hours per week, on average, they listened to various styles of music. They also responded to a standardized mood questionnaire in terms of how they typically feel. Correlation was
calculated between mood and hours of listening to the various styles of music. Among the college students, listening to rock was positively correlated with anxiety depression, and sensation seeking, and negatively correlated with positive affect. Among the faculty staff, classical music listening was positively correlated with depression, anxiety, and hostility, while total music listening was positively correlated with depression and negatively correlated with positive affect. Among the non college adults, only a small correlation between classical music and positive affect was found. Results suggested that music listening was more related to mood among younger and more educated individuals. The most likely interpretation of the relationship was that negative moods lead to music listening rather than music listening causing negative moods.

Heiser et al. (1997) evaluated the effect of music on pain and anxiety levels and selected physiologic parameters of two groups of patients who were emerging and recovering from anesthesia. Patients in the treatment group listened to music through headphones during the last 30 minutes of their surgical procedures and during the first hour in the post anesthesia care unit. Patients in the control group had identical surgical procedures, received the same preoperative medications, and were managed with the same anesthesia protocol but did not listen to music in the operation room or post anesthesia care unit. No differences existed between the two patient groups in the variables measured; however, patients in the treatment group stated that music helped them relax and functioned as a distractor.

Chlan (1998) tested the effects of music therapy on relaxation and anxiety reduction for patients receiving ventilatory assistance. Subjects randomized to either a 30-minute music condition or a rest period. Four urban midwestern intensive care units. Subjects concluded
fifty-four alert, non-sedated patients receiving mechanical ventilation. State anxiety (pretest and posttest), heart rate and respiratory rate obtained every 5 minutes for 30 minutes.

Analysis of data indicated that subjects who received music therapy reported significantly less anxiety posttest than those subjects in the control group. Heart rate and respiratory rate decreased over time for those subjects in the music group as compared with the control group subjects. Conclusions showed single music therapy session was found to be effective for decreasing anxiety and promoting relaxation, as indicated by decreases in heart rate and respiratory rate over the intervention period with this sample of patients receiving ventilatory assistance.

Gerra et al. (1998) investigated the possible combination of emotional and endocrine changes in response to techno-music and to define personality variables as predictors of respective changes. Sixteen psychosomatically healthy subjects aged 18 to 19 yrs included 8 males and 8 females, were exposed, in random order, to techno-music or to classical music (30 min each). Plasma norepinephrine (NE), epinephrine (EPI), growth hormone (GH), prolactin (PRL), adrenocorticotropic hormone (ACTH) cortisol (CORT), beta-endorphin (beta-EP) concentrations and changes of emotional state were measured in basal conditions and after the experimental trials with two different types of music. Techno-music was associated with a significant increase in heart rate, systolic blood pressure and significant changes in self-rated emotional states. A significant increase was observed in beta-EP, ACTH, NE, GH and CORT after listening to techno-music. Classical music induced an improvement in emotional state, but no significant changes in hormonal concentrations. No differences between male and female subjects’ responses to music have been found. Plasma levels of PRL and
EPI were unaffected by techno-and classical music. Changes in emotional state and NE, beta-EP and GH responses to techno-music correlated negatively with harm avoidance scores and positively with the novelty-seeking temperament score on the cloninger scale. Listening to techno-music induces changes in neurotransmitters, peptides and hormonal reactions, related to mental state and emotional involvement: personality traits and temperament may influence the wide inter-individual variability in response to music.

Field *et al.* (1998) investigated the effects of music on mood state and right frontal EEG activation associated with chronic depression. Fourteen chronically depressed female adolescents listened to rock music for a 23-minute session. These adolescents were compared with a control sample of chronically depressed female adolescents who were simply asked to sit and relax their minds and their muscles for the same time period. EEG was recorded during baseline, music, and post music for three minutes each, and saliva samples were collected before and after the session to determine the effects of the music on stress hormone (cortisol) levels. No group differences or changes were noted for observed or reported mood state. However, cortisol levels decreased and relative right frontal activation was significantly attenuated during and after the music procedure. It was concluded that music had positive effects on the physiological and biochemical measures even though observed and self-reported mood did not change.

**Music Therapy and Psychotic Symptoms**

In different studies musical activities are reported to benefit adult psychotic patients (Harris, Bradley, & Titus, 1992; Kahans & Calford, 1982; Williams & Dorow, 1983), While a broad range of activities described as “music therapy” encourage verbal as well as nonverbal
responsiveness in with drawn psychotic patients (Alvin, 1975; Priestley, 1975; Tyson, 1981; Vergez, 1984; Verdeau Pailles and Bonnefoy, 1986; Lecourt, 1987).

Studies with psychotic patients have found that they preferred “primitive” music because it did not require restructuring and did not resemble emotional patterns. In the practice of behavior modification, music has been used as reinforcement in overcoming phobias, to evoke positive excitement as a response incompatible with anxiety, and as a time-out situation when unwanted behavior made positive reinforcement unavailable. In psychoanalysis, patients occasionally use song titles or lyrics for expression. Songs may also serve as the conscious and preconscious expressions of the conflicts of the patient. Music has been used in group therapy, with the severely depressed, and to produce a natural altered state of consciousness in alcoholics and drug addicts (Charlesworth, 1982).

Paperte (1949) investigated the effects of music upon behavioral changes in psychotic and non-psychotic groups. They found that the exciting music had no differential effect upon the two groups whereas the calming music had a greater effect in the expected direction on the psychotic group than on the normal group.

Bach and Gruss (1973) studied sociotherapy as group and music therapy on endogenic psychoses. Results showed that group sessions, occupational therapy, and music therapy had beneficial effects on endogenous psychoses such as depression and schizophrenia. Also somatotherapy, specifically medication, seems enhanced by being combined with sociotherapy.

Wolfgram (1978) in study on retarded adult with psychotic symptoms found that group music therapy is a non-threatening
experience and develops a number of important skills. It also enables symptoms to be monitored, lends itself to reinforcement techniques, and builds confidence and self-esteem. Three 1-hr sessions a week were held divided into 15 min sessions given to group movement discussion of acceptable behavior, use of instruments, and singing. The musical materials, which were specially, composed for the group, are short, concrete, and easy to learn and designed to enhance awareness. Opportunities were given for independent decision-making, creative expression, and leadership. The result showed that psychotic symptoms during the session decreased and treated.

Loss described a course of music therapy in ten sessions with a psychosomatic female patient in 1980. The aim was to show how abnormal developments in early childhood could be worked on non-verbally, and how progress towards a more mature command of life can be motivated. The study illustrated the effect of psychotherapeutic and analytically orientated features of music therapy. The focal point in the broad spectrum of extended music therapy, which included active and receptive music therapy, movement, breathing and body awareness, was always needs improvisation.

Rajewski et al. (1982) presented findings on the influence of periodically applied active music therapy on endogenous and psychogenic depressive syndrome. Subjects were administered a measure of general feeling, and the tapping test. The therapeutic effect of music therapy was found to vary depending on diagnosis and kind of therapeutic activities. The effects of music therapy were beneficial in subjects with endogenous depression if the therapeutic activities were of a relatively simple and guided character. There was no improvement in the parameters studied if these activities were of a more complex and
improvised character. No such differences in the therapeutic effect occurred in subjects with psychogenic depression.

Prickett (1987) presents 2 models for music therapy with overcontrolled offenders. The cases were included of 2 black men (aged 26 and 30 yr.) who had committed uncharacteristically violent crimes that they associated with loss of control attributed to alcohol or alcohol and psychosis. In both cases, music provided a context uniquely conducive to treatment. Music allowed the flexibility to introduce challenge while sustaining support. Intense musical expression was associated by the subjects with a positive cathartic experience without the need for designated emotional content.

Buffoil (1981) described the use of music and sound therapy as adjuncts to psychotherapy with 14 primarily autistic children who were difficult to treat in the conventional manner due to their minimal verbal communication. Instead of considering stereotyped movements, autistic play, and nonverbal sounds as problems to eliminate, the therapist used them as rhythmic nonverbal communication, treating them as a primitive language. 13 of the 14 subjects showed significant interest in musical instruments. In addition to attending closely to the child’s sounds and responses to sounds, with this approach the therapist uses his/her own sounds as indicators of countertransference.

Nielzen and Ceaarec (1982) studied the effect of mental illness on the emotional experience of music. To examine the variations in emotional response to music, 107 psychiatric patients were exposed to 7 pieces of symphonic music. The experiences of tension-relaxation factor tension-relaxation, gaiety-gloom, and attraction-repulsion. Anxiety neurosis patients experienced the music as neutral in tensions a gaiety. Compared to other groups, hysterics experienced more gaiety and
attraction together with varying degrees of tension; obsessive more tension; depressive psychotics more gloom; and schizophrenics more attraction. These differences in emotional responses were studied in terms of a link between aspects of subject psychological condition and certain features of the music.

Dubois and Corti (1982) reported a therapeutic intervention utilizing musical mediation with 2 psychotic children (aged 7 and 10 yr.), a small group of 3-5 yr. old children at high risk for developing psychoses, and a 4-yr-old autistic boy and his parents. Intervention was based on both musical listening and expression through musical instruments. Based on D. W. Winnicott’s (1969, 1975) concept of transitional space, it is suggested that children’s production can be assimilated to creative games as a transitional phenomenon and that the musical space thus created can be a potential space.

Nielzen and Cesarec (1982) compared ten patients with manic psychosis with 20 normal subjects with respect to their ratings of emotional meaning in music. As stimulus two pieces of music for a small symphony orchestra were used. These were structurally identical but performed at two different tempos: slow and fast. The change in tempo was found to lead to dissimilar consequences in emotional experience in the two groups studied. In normal subjects an increased tempo led to the experience of more tension, while in manic psychotics this was associated with an experience of more gaiety. The pattern of ratings constitutes further evidence that temporal relations are of importance in the psychopathology of mania.

Jolly and Rabiller (1983) described the therapeutic progress of two groups of patients through music therapy. The first group was composed of 6-8 inpatients, mainly psychotics of varying degree, 2 nurses, and 2
therapists. The second group was structured along the same guidelines but consisted of outpatients. Both groups met once a week for 4 yrs. with some personal changes among patients. The decision to include music therapy in the patients’ activities began as a logical outgrowth of musical and choral activities, combined with the idea that it would allow more freedom of expression and provide a form of contact between patients and staff a more personal basis. The two groups developed along extremely different lines. The inpatient group was subject that they learned to work and play musical instruments together in a mutually supportive fashion. The staff participants agreed that working with both groups through music aided their understanding of each patient’s history.

Cohen investigated and compared the rhythmic and subjective tempos of psychotic inmates diagnosed as manic with those of other psychotic and non-psychotic adult male prisoners in 1986. Rhythmic and tempo performance were determined by three musical-rhythmic tasks that involved maintaining steady beats, reproducing rhythm patterns, and creating rhythm patterns. Analyses of variance revealed that manic inmates were superior to the non-manic psychotic inmates and no different from the control inmates in rhythmic and tempo reproduction; they were not different from the other groups in tempo synchrony. Manic inmates scored higher on rhythmic than on tempo, and their performance did not vary with the speed of item presentation. The rhythmic findings suggest that the musical-rhythmic tasks could assist in verifying diagnostic distinctions between manic and other psychotic patients. The tempo findings suggest further inquiry into tempo as a multi dimensional construct.

Brotons (1987) investigated the relationship between diagnosis of offences clients with mental illnesses and the content of songs chosen by
them, and to examine the effect of these preferred songs on their behavior. 30 men with criminal charges and mental illnesses, ages 18-30, residing in a correctional mental health institution served as subjects. Each subject selected three songs as a representation of their music preference, and then was observed during music listening and non-music listening and quantified, as was the individual’s diagnosis using DSM-III criteria. Statistical analysis of the data revealed that subjects with a higher score in diagnosis (indicating a higher level of mental illness) selected songs scoring lower in DSM-III criteria (Inappropriate behaviors were exhibited slightly more often during music listening than during the non-music condition, but this difference was not statistically significant. The suppositions that music therapists should restrict certain types of music from mental health clients to prevent escalation of music from mental health clients to prevent escalation of behavior problems, and that mental health patients choose “socially inappropriate music” would seem to be false.

Ba (1988) measured self-perceived changes in states of relaxation, mood/emotion, and thought/insight in 50 male psychiatric prisoners-patients before and after music therapy. Each subject participated in 3 different treatment modalities: music group therapy, instrumental group improvisation, and music and relaxation. Results showed a significant pretest-posttest change in self-ratings across all scales after music therapy. The magnitude of change differed significantly between scales. Subjects showed similar responses, and the different treatment modalities did not significantly influence the results.

Burleson and Center (1989) attempted to evaluate the effect of background music on the task performance of psychotic children. The subjects were four male psychotic children, ranging in age from 5 to 9
years, who were students in a psycho educational day treatment center. An ABAB single-subject design was used to evaluate the effect of background music on the dependent variable the dependent variable was a color-coded sorting task. Data were analyzed using graphic analysis, a nonparametric statistic, and a criterion for clinical significance. Results supported a facilitative effect for background music on task performance.

Chicayban (1989) studied the use of workshops of musical expression and composition in 18 male and female Brazilian psychiatric adults aged 18-45 yrs. The main aim of the musical workshops was to help psychotic patients recover abstract thinking ability and improve problem-solving ability and the capacity to see both general and particular characteristics of situation. The results showed the effect of the program in treatment of psychotic patients.

Hawkinson (1990) examined the relationship of music preference and psychosocial variables between chemically and non-chemically dependent adolescents. 240 adolescents participated in the study. 54 of who were undergoing treatment in private psychiatric hospitals for chemical dependency. The 186 public school students who participated in the study reported drug use of once a week or less. The subjects participated in a two-part test consisting of a music preference test (part 1) and a questionnaire (part 2). During part 1, subjects listened to 15 musical excerpts and recorded how well they liked each selection on a fixed-choice, four-point scale. Five excerpts of the three music styles of rap, rock, and heavy metal were represented in the test. Part 2 contained information regarding the subject’s sex, age, ethnic origin, and religious preference. Also included were 22 questions pertaining to each subject’s involvement with music, drugs, and family. A two-way ANOVA with repeated measures was computed using type of music (rap, rock, and
heavy metal) as the repeated measure, and group (hospital and school) as the between subjects’ factor. Data from the study showed a significant difference in music preference between the two subject groups (P < .00). Chemically dependent adolescents preferred heavy metal music, while non-chemically dependent adolescents preferred rock-music. The results indicated that music preference is related to group membership. Variables which yielded the greatest statistical significance between groups were: (1) number of hours spent watching music TV, (2) drug abuse, and (3) subjects reported watching an average of two hours of music TV a day, while school subjects reported an average of one hour viewing a day. The strength of the relationship between group membership and drug use confirms that, indeed, the groups were properly segregated into chemically and non-chemically dependent adolescents. Results showed that 26.6% of the chemically dependent adolescents listen to music more than half the time they take drugs, while 51.9% report they always pair music listening and drug use.

Steinberg et al. (1990) analyzed the music therapeutic productions of 67 psychiatric inpatients concerning a systematic variation in the course of therapy. The change for the better of rhythmic and motor skills of endogenous depressed patients was seen to the same extent as with traditional music. The polarity profile developed for the assessment of music proved meaningful in the characterization of music therapeutic utterances.

Weidinger (1991) investigated the relationship between music listening preferences and preadmission dysfunctional psychosocial behaviors (PDPB) of 60 mental disorder adolescents. Those who primarily listened to music with negative lyrics/themes had a history of more PDPB than hospitalized adolescents who primarily listened to
music that did not contain negative lyrics/themes. Hospitalized adolescents who primarily listened to heavy metal music had a history of more PDPB than hospitalized adolescents who primarily listened to other types of music.

Sydenstricker (1991) discussed the use of music therapy in the treatment of patients with psychosis. In this study a 7-yr-old child with premature infantile autism and obsessive-compulsive behaviors was treated using music therapy. The hypothesis that music, which is a non-referential language, may permit a revival of archaic or buried phases of personality development was presented. The results supported that music therapy facilitates communication between patient and therapist.

Bollea and Guarino (1991) studied the use of group music therapy as an integrated part of the treatment of severe mental illness: borderline and psychotic cases. They found four phases of treatment in the evolution of group music therapy; take place successively over time, 1) a motor phase in which patients dance, play games with movement and do physical exercises; 2) a receptive phase based on listening to music; 3) an active phase during which they make music and sing; 4) and a predominantly verbal phase during which patients discuss the emotions, thoughts and fantasies experienced while listening to music within the group. The therapeutic function of listening to music, taking into accounts the clinical aspects and concepts of dynamic psychology.

Bednarz (1992) described the effect of special activity resources, including music therapy in 30 subjects (aged 18-40 yrs) with dual diagnoses of mental illness and substance abuse. Music therapy interventions were divided into the categories of music discussion, music instruction, group participatory music, music listening, and expressive music intervention. They were also related to the stages of dual diagnosis.
treatment: engagement, crisis intervention, stabilization, active treatment, and recovery. Result showed music therapy was an effective medium for facilitating subject progress.

Rosling (1992) studied music and drawing with institutionalized elderly. A 14 week music therapy program with 12 residents of a long term care facility used relaxation, a variety of recorded music selections, art materials, writing and discussion to facilitate the exploration of feelings and memories. The depth of emotional engagement offered by this method and its usefulness in working with depressed elderly persons was emphasized. This type of program could a valid therapeutic activity for long term care residents who are depressed, with drawn, or experience anxiety.

Robinson et al. (1996) investigated the relation between personality and the appreciation of rock music. In this study scores on five personality characteristics, extraversion, neuroticism, and psychoticism as well as reactive and proactive rebelliousness and the appreciation of soft/nonrebellious and hard/rebellious rock-music videotapes were explored. After completing the personality tests, female and male undergraduates were exposed to rock-music videotapes and asked to rate various aspects of their enjoyment of each. Analysis indicated that psychoticism and reactive rebelliousness were associated with enjoyment in a parallel fashion. Specifically, respondents scoring high on psychoticism or high on reactive rebelliousness enjoyed hard/rebellious rock-music videotapes more than did their peers scoring low on psychoticism or low on reactive rebelliousness. The reverse was evident for the enjoyment of soft/non-rebellious rock-music videotapes. In contrast, scores on extraversion, neuroticism and proactive rebelliousness were not associated with enjoyment. Gender differences emerged,
however; women (n=73) enjoyed soft/non-rebellious rock music more than did men (n=60); and conversely, men enjoyed hard/rebellious rock music more than did women

Gabriel (1997) in a study found that why music is the suitable means for therapy of people who are in danger of becoming psychotic. Results proved that different music therapy method, such as active group music therapy music and motion, singing, music and relaxation and music listening to music have positive effect in compression with free practice such as work situation, assignment, team work and cooperation with other groups of professionals and setting.

Montello and Coons (1998) attempted to compare the behavioral effects of active rhythm-based group music therapy vs. those of passive, listening-based group music therapy on preadolescents with emotional, learning, and behavioral disorders. It was hypothesized that preadolescents who participated in active music therapy would more significantly improve target behaviors than those involved in passive music therapy. Achenbach’s Teacher Report Form (TRF) was used to confirm changes among subjects in attention, motivation and hostility as rated by homeroom teachers. Twelve music therapy sessions were conducted over a 4-month period with three different groups of subjects (n=16), with two groups participating in active music therapy and the other receiving passive music therapy. Results indicated that subjects improved significantly after receiving both music therapy interventions. The most significant change in subjects was found on the aggression hostility scale. These results suggested that group music therapy can facilitate the process of self-expression in emotionally disturbed/learning disabled adolescents and provide a channel for transforming frustration, anger, and aggression into the experience of creativity and self-mastery.
Music Therapy and Schizophrenia

Before discussing the music therapy of schizophrenics’ symptoms, it’s necessary to notice that a review of empirical literature shows that only a few studies have been reported on the effect of music therapy on schizophrenics. So far, no news on effect of music therapy over positive and negative symptoms, just one study is available. So, the limitations of available empirical studies on music therapy of negative and positive symptoms in schizophrenic patients, is a valuable opportunity to conduct this research.

The schizophrenics usually dose not express himself verbally, but may manifest the organization of his feeling via the music

Pacher (1951) studied the effect of music on fear of paranoidschizophrenic patients. In this study music was used to suppress negative associations. Fears were in this case connected strongly with anal and odipal conflicts of the patient. Music supported the patient in learning to live with his own shortcoming and to overcome the pain of loss of object. Through music the super-Ego was calmed down. Result showed musical expression enabled patients to discharge erotic and aggressive impulses with breathing for instance (Cited in Givenc, 1985).

Simon, Holzberg, Alesse, and Garrity (1951) played eight piano pieces to normal, schizophrenics, maniacs, and psychotic depressives and asked them to indicate whether each piece was happy, sad, or neither and whether they liked or disliked each piece. They found no significant differences between the normal and psychotics in their identification of the mood of the music (Cited in Sandu, 1996).

Haslerud (1952) played a number of short pieces of music to 39 female schizophrenic patients. The presentation of the music to the
patients began the pieces rated as depressing, continued with a gradual shift to pieces rated as exciting, and concluded with a shift back to pieces rated as depressing. The patients were given such a series of pieces lasting 20-30 minutes daily for over a month. It was found that in comparison to their base activity level, the patients showed a statistically significant increase in activity level during the playing of the exciting music. No carry over effect of the exciting music on activity level after a 5-hours period was found. Thus indicating that the stimulating effects of the music were short term (cited in Sandu, 1996).

Weidenfeller and Zimny (1961) conducted two experiments, one using depressive and the other using schizophrenic patients to examine the hypotheses that claming music produces an increase and exciting music a decrease in electrical resistance of the skin (GSR). In both experiments, a musical piece judged by college students to be exciting and another piece judged to be claming were played for 6 minutes in counter balanced order to 18 randomly selected depressives and to 18 randomly selected schizophrenic patients. Measures of GSR were obtained for each one of the 6 minutes during which the music was played. The hypotheses were confirmed in each experiment. It was found for both the depressives and the schizophrenics that the decrease in the electrical resistance due to the exciting music was of greater magnitude and shorter latency than the increase in resistance due to the claming music. Comparison of the results for the two pieces of music within each experiment demonstrated a difference in the level of resistance. The response to the exciting music was less consistent than the response to the claming music. The changes in electrical resistance are interpreted as due to the emotional effects produced by the music. The possibility is thus presented that music can
be used to modify temporarily the general emotional level of depressive and schizophrenic patients.

Hundson (1973) described several theatrical considerations contribute to the notion that music therapy is a useful adjunct to psychotherapy, particularly in the treatment of schizophrenia and autism. The advantage of music in therapy is that music can communicate at the more primitive, physiologic level of rhythm, and develop a rapport that may not be attainable with conventional language. Going from simple rhythms to complex music is a progression rather than regression. In the case of the Schizophrenic, the trend toward complexity will necessitate a reintegration of the Ego if the music is to be followed. Music thus is potentially capable of bridging the gap between the language of physiology and the language of consciousness.

Hadsell (1974) discussed the scientific development of music therapy and its place among other therapeutic professions in schizophrenia. He emphasized the potential value in schizophrenia.

Wdowiak, Karczynska and Poboch (1975) conducted music therapy with 30 chronic schizophrenics. The influence of music on image forming and emotional reactions of the patients was analyzed. Analyses proved to be useful in psychodiagnosis of thought and emotional disturbances. Results confirm the data of other authors on the usefulness of music therapy in early rehabilitation of schizophrenics.

Arthur, seventeen year old schizophrenic using his musical ear to pick out the notes on the keyboard, he wanted to recreate the musical composition, but was defeating himself by mechanically trying to reproduce the melody. Since he had already learned the accompanying chords of the composition while supported melodically by the therapist, he was guided to recognize that the melody was composed of the same
notes as the accompanying three-note chore. He joyfully experimented with the concept while the therapist aided him. Given a meaningful structure within which to work, it was easier for him to grasp the melodic meaning of the composition. The rhythm had to be structured and modeled for Arthur by the therapist as well; his ability to organize himself musically was tremendously impaired although he was quite gifted musically (American Hand Book Psychiatry, 1988).

Cassity (1976) conducted a study on female adult psychiatric patients specially schizophrenia to determine if participation in a valued group musical activity enhances interpersonal relationships to a significantly greater degree than participation in non-music activities. Measuring changes in peer acceptance compared interpersonal relationships with two groups, group cohesiveness, and general interpersonal relationships occurring between sociometric pre-and post-tests. In this study volunteers for guitar lessons were distributed randomly into experimental and comparison groups. Results indicated that comparison subjects (nonmusical) initiated 50% fewer choices on the posttest and experimental subjects (musical) initiated 38.7% more choices on the posttest when data from both groups were combined. Experimental subjects gave 31.4% more choices to members within their own group and comparison subjects to members within their own group and comparison subjects gave 50% fewer choices to members within their own group.

Carroccio (1976) described a 40 years old male chronic Schizophrenic earned tokens during guitar lessons for decreasing rates of the target behavior which he could exchange for the use of a guitar for a specified time period on the ward. The program successfully reduced the rate of head/face touching after 21 sessions, and after 2.5 years, the rate
was still below baseline with generalization to other music therapy activities and to the ward.

Tyson and Florene (1979) presented a case study of a 27-yr-old woman with pseudoneurotic schizophrenia. Characteristic behavior patterns included fear of being attacked; depression; and repressed, impotent rage followed by withdrawal into fantasy. As music-related events were uncovered in connection with repressed traumatic experiences, subjects, musical and expressive capabilities improved, as did her contact with reality.

Marie, schizophrenic patient, was consistent in her creation of very literal music materials. She was a conservatory graduate and had received considerable musical training in piano and theory and composition. The usual musical directions were completely absent from her composition. Only as she became more trusting of the therapist and more revealing of her emotions in her dearly loved classical music was she able to begin to compose with syncopated rhythms, dissonant harmonies, larger tonal range, and an emotional content related to the title of the music. She spontaneously to began to include musical markings and to point out the new aspect of her work (American Hand Book Psychiatry, 1988).

Schmuttermayer (1983) has been used graduated group music therapy on women were mainly patients with psychosis of the manic depressive and schizophrenic forms. This method was developed from a combination of various music therapeutic techniques, which were established under the aspect of a social training and coordinated with each other. The various techniques show a specific influence on the behavior of the psychotics and support the development of adequate modes of behavior via nonverbal communication systems.
Priestly (1980) discussed the case history of a 32 years old male schizophrenic treated with analytic music therapy. This technique involved the use of words and improvised music by patient and therapist to explore the former’s inner life and facilitate growth. At first, the patient talked about anything that seemed personally important, from this material the therapist and/or patient choose a title for their musical improvisation. Their duet provided a focus for the conscious mind while allowing the free expression of unconscious material through images, memories, and emotions arising in the form of counter transference. Thus, therapy took place in a continuously open channel of expression.

Resnik (1980) discussed the case history of a 32-yr-old male schizophrenic treated with analytic music therapy. This technique involves the use of words and improvised music by patient and therapist to explore the former’s inner life and facilitate growth. At first, the patient talks about anything that seems personally important. From this material the therapist and/or patient chose a title for their musical improvisation. Their duet provided a focus for the conscious mind while allowing the free expression of unconscious material through images, memories, and emotions arising in the conscious mind of the patient, or as unconscious emotion passed from patient to therapist in the form of counter transference. Thus, therapy took place in a continuously open channel of expression.

Stephens described the use of music therapy in the treatment of a young woman hospitalized for catatonic schizophrenia in 1981. At the initiation of treatment, she did not speak, was unable to feed or dress herself, and was incontinent. It was felt that music therapy might help the subject express herself non-verbally, while also providing some insight into her problems. Over the course of 13 months, the Schizophrenia came
to approach and touch the therapist and attempted to make her own music on a guitar.

Kupperschmitt and Sizaret (1981) discussed a case history of a 38-yr-old schizophrenic who had been hospitalized for 12 yrs after a suicide attempt. At the time of the study, subject had been a resident of his present facility for 9 yrs. During that time, he had grown increasingly withdrawn and noncommunicative. Subject worked, when able, at bookbinding but his life was punctuated by episodes of hallucination or delusion. The resocialization process began when a group of music students were invited to perform for some of the patients. They presented a recorder recital and then invited some of the patients to play themselves. Although shy at first, subject began to listen and then to play. Over the next 3 yrs, subject seemed to lose his self-conscious isolation when playing. He progressed to the point where he gave recitals for the other patients and even assisted some of them with their playing. His psychotic episodes became less findings showed subject’s improvement in terms of the breadth and symbolism of the instrument.

Frick and Pichler (1982) discussed group meetings about 12 regressed schizophrenics who gathered weekly and were led by a nurse in singing, music concentration, and relaxation exercises. Findings suggested that this kind or therapy offer even autistic and negative subjects an opportunity to experience intensive collective involvement and to contact others while finding self-identity. Emotional engagement of subjects could not be predicted, but enforcement of the ego took place. More than half of the subjects who took part in the groups was subsequently able to engage in simple work outside the hospital; half of this group has been living in the community for over 3 yrs.
Dvorkin (1982) describes the use of piano improvisation as a therapeutic tool in the treatment of a 26-yrs-old female schizophrenic paranoid with avoidance personality. Piano improvisation was used as a supportive expansion of subject’s nonverbal statements and a means of providing an opportunity for growth of the healthy elements of subject’s personality. A month-by-month description of subject’s individual treatment illustrate phases of respect and support labeling of emotions, musical expression of negative emotion, verbal expression of negative feeling and problem solving, beginning insight and new levels of acceptance and resolution. Subject made a transition from using her consonant music as safety music; as her tolerance increased, the time she needed to support her-self through consonance.

Schmuttermayer (1983) applied a special method, which called “graduated group centered music therapy” on group of schizophrenics. This method was combination of four types of music therapy (listening, singing, dancing and playing instruments). Each of the therapy types acts in a different possible to influence these variables during group centered treatment and to lead the group towards modes of communication and behavior that are more appropriate to reality.

Jaroszynski et al. (1983) conducted a study on 128 schizophrenic patients were administered psychotropic drugs and underwent sessions of supportive group therapy and chore therapy (music and dance therapy) in open-door, mixed-sex wards. Results show that this treatment was feasible and accepted by male and female schizophrenic patients.

Stephens (1983) examined the phenomenon of relatedness and how musical improvisation can promote relatedness. Music therapy improvisation techniques include modeling, leading, mirroring, role playing, grounding, and stimulating; therapists may assume the roles of
initiator, supporter, and/or guide. Case examples were presented schizophrenia, residual type, who used improvisation to begin to communicate; a resettlement group that used improvisation to prepare for and negotiate the experiences of living together, and a neurotic client who used improvisation to focus more on the present and work through issues of relatedness. Musical improvisation showed promote relatedness in schizophrenic patients.

Schmuttermayer (1983) has been used graduated group music therapy on women were mainly patients with psychosis of the manic depressive and schizophrenic forms . This method was developed from a combination of various music therapeutic techniques, which were established under the aspect of a social training and coordinated with each other. The various techniques show a specific influence on the behavior of the psychotics and support the development of adequate modes of behavior via nonverbal communication systems.

Moura, Clarice, Sampio and Martha described the utilization of music therapy with schizophrenic patients in 1984. Results showed that 68 schizophrenic patients in music therapy enlarged their capacity for interpersonal relationships and were more improved at discharge relative to 53 subjects in the control group.

Lund (1984) described case study of a 34-year-old schizophrenic woman who had individual music therapy sessions over a period of three and a half years. Initially the therapist aims to patient’s progress described by examining the musical improvisations in the music therapy sessions. Although the patient progress was sporadic, after three years there were definite signs of improvement.

Steinberg (1985) studied musical expression of the instrumental playing of 61 mentally ill patients and 29 controls recorded several times
by means of a short polarity profile. The performances were reversibly impaired in correlation with the psychopathology. Musical expression followed a systematic variation according to nosological classification. Endogenous depressive patients could be clearly distinguished from neurotic depressive due to weakened motoric qualities in their playing. In schizophrenia, motoricity did not seem to be so much involved, although the performances were altered in the dimension of musical logic and order.

Green (1986) conducted a study on chord perception in acute schizophrenia and normal controls in performance due to ear of presentation (left, right or both) between two groups. Other groups were presented with two tasks involving the perception of musical chords. Taking performance over all conditions, the schizophrenic group was not significantly different from the controls on one of the two tasks although it was significantly worse on the other. These findings contrast with earlier results using a story comprehension task which suggests that the schizophrenic deficit in performance found in those studies may be specific to the processing of verbal information.

Pfeiffer, Wunderlich, Ender, Elz and Horn examined the effects of a course of music therapy with free improvisation on 7 patients with a diagnosis of schizophrenia or Schizoaffective psychosis in 1987. The study was consisted of 27 sessions over a period of 6 months, the results showed significant positive changes in the self-assessment questionnaires completed by the participants. The patients had mostly approved of the improvising orientation of the music therapy course, it however also gave rise to a desire for more structuring and a more goal directed therapeutic approach.
Michel (1987) described a technique for use with groups of inpatient and outpatient schizophrenics that were designed to overcome difficulties in body language and vocalization. Musical instrument stimuli were selected and activities were proposed based on the mood prevailing in the group. It was maintained that music therapy provides opportunities for new channels of concrete and symbolic communication in schizophrenics.

Langdon, Pearson, Stastny and Thorning (1989) presented an expanded view of music therapy as part of the total treatment approach on a transitional ward serving adult psychiatric patients preparing to reenter the community. The case of a female inpatient with Shizoaffective disorder illustrated the integration of music therapy into this environment. Subject’s progress was traced from the transitional ward in the hospital to her residence in the community. Therapy included the interweaving of verbal and music therapy, taking place both within the same and separate group sessions. The result was an effective treatment transition from hospital to community.

Penny (1989) compared the performance of schizophrenic subjects with groups of normal and depressed subjects on a number of auditory short-term memory tasks. Result showed (1) short-term verbal memory was impaired to a greater extent than short-term musical memory in schizophrenia. (2) Short-term verbal and short-term musical memory was processed by different mechanisms. Analysis supported the hypothesis that schizophrenia is partly a dysfunction of the dominant cerebral hemisphere and find the extant theorem on working memory inadequate and suggest that a separate “musical loop” co-exists with the articulator loop.
Wengel, urke and Holemon (1989) have collected data on 7 female (72.9 years) patients with musical hallucinations. All reported onset of musical hallucinations after the age of 60. All 7 had major psychiatric illnesses. 4 had major depression, 2 had late-onset schizophrenia, and one had multi-infarct dementia. Of the 5 who had CT Scans, 1 was normal and the rest demonstrated varying degrees of brain pathology. Neuroleptics were used with varying results in three cases; antidepressants were used on 2 depressed patients and were temporally related to the onset of musical hallucinations in one patient. Electroconvulsive Therapy (ECT) was very effective in treating depression and musical hallucinations in the 3 patients for whom it was used, usually providing relief from hallucinations after only two treatments.

Palvicevic, and Trvarthen (1989) in a study on 15 schizophrenics, 15 depressed patients and 15 clinically normal controls found that joint musical improvisation of therapist and patient could be used to reveal the subject’s capacity for emotional contact with another person, the nature of this contact and how well it is sustained. A comparison between three groups revealed significant differences. The findings, which take into account subjects’ musical background and perceptual functioning, have implication for the diagnostic use of music therapy in adult psychiatry.

In another study, Pavlicevic and Trevarthen (1989) found that a group of chronic schizophrenics had greater difficulty organizing their production of sounds and establishing reciprocal musical contact with the therapist than a group of unipolar depressed patients or normal controls. The musical assessment scale which measured the degree of musical engagement showed that the musical utterances of these patients were frequently so disorganized that the therapist had difficulty supporting and
matching them through music improvisation. The schizophrenic patients also had the most difficulty making musical adjustments to facilitate the sharing of the musical performance, and their musical statements and those of the therapist frequently remained unconnected. This may have been the result of the schizophrenic person's incapacity to attend to the musical utterances of another player.

McIntyre (1989) studied the use of music improvisation in schizophrenic's nonverbal communications. A comparison of 15 schizophrenics, 15 depressives and 15 clinically normal controls (aged 17-55 yrs) revealed significant differences in the subject's capacity for musical contact with another person, the nature of this contact and how well it is sustained, and the ability to take musical initiatives. The findings, which took into account subjects musical background and perceptual functioning, had diagnostic implications for the use of music therapy in adult psychiatry.

Nakamura et al. (1990) examined the effects of music therapy administered to 59 psychiatric patients and 30 normal subjects by the use of a body sonicator in 1990. The experimental groups consisted of 20 schizophrenics, 19 neurotics, and 20 normal subjects; the control groups consisted of 10 schizophrenics, 10 neurotics, and 10 normal subjects. The experimental schizophrenics and neurotics showed a statistically significant decrease in the State-Trait Anxiety inventory scores after listening for 15 min in the body sonicator to music composed from the sounds of a stream and the voices of birds, while no significant decrease in the scores was found in the control groups. The scores of the neurotic group decreased the most.

Zagelbaum, and Rubino (1991) described a case study in which the use of dance/movement, art, and music therapies was effective in the
treatment of a dual diagnosed 51-years old woman who was considered profoundly retarded and schizophrenic on admission to a day treatment program. The subject’s psychological development and behavioral progress within the multiple creative arts setting in chronicled.

Reker (1991) presented Music therapy as an integral part of the therapeutic program on 30 schizophrenics. The especially development questionnaire was used for evaluation and rating of the effect. The primary results were: Music therapy has a high level of subjective acceptance among schizophrenic patients. No negative effects were recorded despite the therapy being introduced in the post-acute phase. The positive therapeutic effects quoted were relaxation, activation, reduced anxiety, and easier contact-making and improved opportunities for emotional expression. The training-related concept and the clearly structuring behavior of the group leader are given a positive rating by the patients.

Gunther (1992) reviewed a series of investigations on brain dysfunction in untreated schizophrenics using manumotor and music listening tasks as activation paradigms. Methods involved were EEC mapping, single photon emission computerized Tomography (SPECT; Xenon-133 inhalation method), Magnetic Resonance Imaging (MRI) and Positron Emission Tomography (PET; 11-2-Deoxyglucose as tracer). Major signs of brain dysfunction yielded a nonreactivity on both motor and music stimulation in-patients displaying marked negative symptomatology, as shown consistently by EEG Mapping, SPECT and PET. In contrast, first-break patients with predominate positive and without underlying negative symptoms showed sings of normal to diffuse hyperactivation on such stimulations, as demonstrated by EEG and SPECT imaging methods.
Cesarz (1992) studied the influence of music therapy on psychomotorics of chronic schizophrenics. The result showed the disease and neuroleptics didn't influence the ability of rhythm perception and a creative method of music therapy in connection with other methods was most effective in motor ability disclosure and formation, movement ability improvement and the animation of feelings of competency being dulled within the patients. Also this study showed the music rhythm was the junctive factor of strains and body movement.

Nielsen, Olsson and Ohman (1993) discussed that in what ways differences of complex sound perception maybe related to characteristic symptoms of the psychopathological. They compared 11 schizophrenic psychotic and 11 manic psychotic patients with each other and with a reference group of 34 dentists with respect to their emotional experience of seven complex nonverbal sounds. A rating form was used which measures three factors of emotional perception: tension relaxation (factor1), gaiety gloom (factor2), and attraction repulsion (factor3). Analyses of variance of the factor scores revealed main tendencies between the psychopathological groups in factor 1 and 2; i.e. schizophrenic psychotics rated the sounds generally as tenser and more attractive than the other groups. In factor 2 the manic psychotics rated one piece as significantly more gay than the other groups it is.

Gunther et al. (1993) in a study on 26 untreated schizophrenic inpatients and 34 control persons investigated using 16 channel EEG mapping during resting, manumotor and music perception tasks. Power values of activation tasks were each to a separate, immediately preceding resting condition, using conventional delta, theta, alpha and 2 beta frequency bands. Results indicated a non-reactivity (in all frequency bands) on the two activation paradigms in schizophrenic patients as a
group. Major gender effects were obtained in normal persons. Subdividing patients exclusively by means of their EEG changes on activity produced meaningful clinical subgroups of positive/negative schizophrenics. This latter finding could contribute towards clinical utility of EEG mapping in psychiatry.

Giffith et al. (1993) examined the effects of variation in sound intensity on this phenomenon in schizophrenics and normal subjects. Paired clicks, 500ms apart were presented 50 dB above threshold to 10 normal subjects and 10 schizophrenics. The normal subjects demonstrated significantly more decrement of response to the sound stimulus than did the schizophrenics. When the sound was noticeably louder (70 dB above threshold), no such difference was observed. Rather, both groups had similarly diminished gating of response. A significant difference between schizophrenics and normal subjects was also observed when the sounds were 30 dB above threshold, but the difference was smaller than that at 50 dB. At any stimulus intensity, concomitant eye movements led to loss of gating of P50 in the normal subjects.

Gallagher et al. (1994) studied the effects of different types of auditory stimulation on reports of auditory hallucinations at the time of the experiment. The results showed that self-reports by seven schizophrenic patients of auditory hallucinations were reduced by different types of auditory stimulation, particularly by listening to pop music. Requiring the subject to read a passage aloud also reduced the levels reported. This study was a replication of one by Margo, Hemsley and Slade (1981) who reported similar findings.

Pavlicevic and Trevarthen explored how improvisational music therapy can play a significant role in the rehabilitation of chronic schizophrenic patient in 1994. 21 treatment patients suffering from
schizophrenia and 20 controls attended a series of 10 weekly, individual music therapy sessions. The music interaction rating for schizophrenia was used to take into account what appeared to be peculiarities of the chronic schizophrenic state. Schizophrenic subjects improved in their clinical status and in their level of musical interaction with the therapist compared to control subjects. Results suggested that in addition to improving patients’ quality of life, regular, individual music therapy invited, encourages, and supports the development of an intimate, nonverbal interaction and enhances the quality of patients’ communicative skills.

Tang, Yao, and Zheng (1994) conducted a study on 76 residual subtype of schizophrenia. These patients were randomly assigned to a treatment group or control group. Both groups received standard medication as prescribed by their treating physicians, but the treatment group also received a one month course of music therapy that included both passive listening to music and active participation in the singing of popular songs with other patients. Outcome was evaluated by four nurses using Chinese versions of the scales for assessment of negative symptoms and the inpatient version of the world health organization’s disability assessment scale. Music therapy significantly diminished patients’ negative symptoms increased their ability to converse with others, reduced their social isolation and increased their level of interest in external events. As music therapy has no side effects and is relatively inexpensive, it merits further evaluation and wider application.

Pavlicevic and Trevarthen (1994) in a study showed that patients who suffer from schizophrenia that attended a series of individual music therapy sessions improved in their clinical status and in their level of musical interaction with the therapist. The present study explored whether
improvisational music therapy, may play a significant role in the rehabilitation of chronic schizophrenic patients. An improvisation was held with the therapist, using an unturned percussion instrument (a marimba). Subjects were asked to begin playing, in whatever way they liked, and were told that the therapist would join in and play with them after they had begun. For the bongo improvisation, the therapist played on the piano concurrently with the subject, whereas for the marimba improvisation, therapist and subject took turns to play a musical “conversation” on the same instrument. Improvement for their scores, and the difference in the length of their improvisation between their first and final session was negligible.

Inselmann (1995) in a study described a music therapy program for inpatients with psychotic and schizophrenic disorders. The program consisted of 21 hr. open group per week and involved active improvisation music therapy followed by discussions of the participants emotional responses. Result showed the positive and potential effects of music therapy in schizophrenic patients.

Estroff (1995) explained the effect of practice in music church choir in woman schizophrenia. One evening I accompanied to choir practice at church a woman who was participating in my current study. When the choir began to sing acquaintance’s face and posture were transformed—from troubled and self-conscious to joyful, free, and flowing. Her face and body reflected relief, peace, and happiness as she swayed with the music; she was a different person from the psychotic, fearful, confused woman I had first interviewed in a hospital two years previously. After practice, she chatted easily with friends of many years. She had primarily the benefit of herself and the passage of time as a means of “getting better,” plus prolixin and a monthly visit to a busy
psychiatrist at a mental health center. She now spent most of her time sitting on the front porch of her father’s ramshackle house, watching the neighborhood and the world pass by. I had had no way of really knowing what she was missing when she had mentioned that she missed going to church and singing in the choir. Now it was evident that she was retrieving lost social roles and contacts, reconstructing her self and her life in all the ways.

Inselmann (1995) in another study examined the emotional and cognitive music perception and its possible influence on self-perception and strengthening of ego in psychotic patients. Since exercises instructions were limited the observed improvement of communication seems rather due to intro-and interpersonal effects of active improvisation than due to a training process. In this study with regard to schizophrenic patients positive effects of music therapy are discussed in the light of self-object-differentiation.

Chambliss et al. (1996) studied the effect of mellow and frenetic music on motor performance of 19 Schizophrenia patients. They presented 3 types of music mellow (4:4 time), music frenetic (2:8 time), and noise music conditions, each of 19 schizophrenic inpatient volunteers performed a produce pegboard and finger oscillation (tapping) test following 1 min. The result showed that pegboard performance was higher after frenetic music but unaffected by mellow music. There was no effect on taping.

Jensen (1996) described the four phases in developing a general model of contact with schizophrenics in music therapy. Bent explained 29 years old schizophrenic that his only connection or anchor to the normal world, was his dreams about becoming a professional composer. He played many hours a day, but felt that he was blocking. When he was
playing alone in his room at the ward, he still blocks. In the music therapy he don't block when he plays and that made him happy. But on a conscious level, he did not understand why, and was not able to connect it to playing with another person. He had made great changes in a therapeutic context. He lived in his own spacey world, with a feeling of omnipotence. Also music therapist let him stay in his own world, while at the same time-making a contrast to his music.

Chambliss et al. (1996) investigated the effect of mellow and frenetic antecedent music on purdue pegboard and finger tapping in 34 schizophrenics. Using mellow music (4:4 time), frenetic music (2:8 time), and noise conditions on each of schizophrenic inpatients that volunteered to perform the purdue pegboard and finger oscillation (tapping) following 1-min counterbalanced presentations of three types of music. Result showed both pegboard and tapping performance were higher after frenetic music but unaffected by mellow music.

Saba and Keshavan (1997) characterized the prevalence and phenomenology of musical hallucinations. In this study 100 consecutive schizophrenic inpatients were examined for the presence of musical hallucinations and musical imagery. Sixteen patients responded positively, and were engaged in a more thorough interview. They were then into two groups: Those with musical hallucinations, and those experiencing musical imagery. This determination was made based on the absence or presence, respectively or volitional control, hypothesizing that lack of volitional control was compared to the various other aspects of the experience, and association with religions content was demonstrated. Religious musical hallucinations also tended to be experienced as distressing. Further supporting the hypotheses that the experience was hallucinatory rather than a product of volitional imagery.
Leung et al. (1998) studied the efficacy of karaoke singing and its implications in the rehabilitation of schizophrenic patients in Hong kong Chinese. In this study a double blind controlled trial was conducted over six weeks in a small sample of chronic schizophrenic patients matched in age, sex and duration of illness. The index group practiced Karaoke and the controlled group practiced simple singing. Subjects were assessed in changes in mood and social interaction. Analysis of data indicated significant differences of anxiety and social interaction at the end of the third and sixth weeks respectively, were detectable between the two groups. Karaoke therapy may be more effective than simple singing in improving social interaction. There was preliminary evidence that it may be anxiety provoking for unstable schizophrenic patients.

**Music Therapy in India**

Music has a very important role in the Indian society. One sees the effects of music in very sphere of Indian life. It shows in their mental adaptation and tranquility. But unfortunately only a few studies and empirical research has been done on this subject especially music therapy of mental disorder. Below we briefly mention some of them:

Manjula (1996) in the National Institute of Mental Health and Neuro Sciences in Bangalore in study found that verbal music for the depressive patients and melodic music, which played on string instruments, is particularly beneficial. In cases of mania, where attention spans are shorter, faster music is preferred. Raga Research Center in Channer studied the effects of Ragas on mental health. They found the raga Anadabhairavi useful in cases of hypertension and the raga Sankarbharanam, beneficial for mental illness.

Another music therapist in Chennai, Sriama Bharathi, practices a unique from of sound and herbal therapy. Patients are made to listen to
the dwya prabhanam, which are hymns of the alvar saint, and eat special herbal preparation.

Gauthandas (1996), a psychiatrist specializing in organizational behavior, evaluated the effect of Garnatic music on the mental state of individuals. A study conducted on 90 emotionally stressed individuals, divided equally into three groups, exposed one group to 20 minutes of Sankarabharanam every day for two weeks. The second group was exposed to film music for the same duration, and the third group was left untreated. After a fortnight, 22 individuals in the first group showed a significant decline in stress levels, while only eight in the film song group showed stress level reduction while the third group was unaffected (cited in Sunday Review, 1994).

Sandhu and Minhas (1996) in the Panjab University studied the effect of sedative and stimulative music on creativity, anxiety, and performance on postgraduate female students. The main findings were:

1. Sedative music has facilitative effect on creativity and stimulative music interfered with the ongoing process of creativity.

2. Sedative music has facilitative effect on performance while stimulative music interfered with the performance.

3. Sedative music had no effect on anxiety and stimulative music increased state anxiety.

Mockel (1994) compared the effect of three, Ravi Shankar Music, Johann Strauss, and Hans Werner Henz on stress. Ravi Shankar used significant decreases in the levels of the stress hormones, and cortisol, but also relaxed the heart considerably (cited in Sunday Review, 1994).

A global look at the review of literature as present about overall reveals that clinical symptoms to register the effect of music therapy
information is relatively scanty in relation to negative and positive symptoms of schizophrenia. The present studies represent modest attempt to study the effect of music therapy on negative and positive in systematic and rigorous manner.