

## **Effect of Receptive Music Therapy on Stress and Coping Strategies among Patients with Schizophrenia**

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### **Abstract**

**Background:** For individual living with schizophrenia, music therapy will help them to overcome deficits in coping skills and provide them with the important skills to be able to deal proficiently with daily hassles, solve life challenges and stressors and promote their coping. **Aim of the study** was to evaluate the effectiveness of receptive music therapy on stress and coping strategies among patients with schizophrenia. **Subjects and Method: Setting of the study:** The study was conducted at inpatients ward at the Psychiatric and Mental Health Hospital in Meet-khalf at Menoufia that affiliated by the Ministry of Health and Population, Egypt. **Subjects:** A convenience Tool (I): sample of patients with schizophrenia (50 patients). **Tools of the study:** - Socio-demographic and clinical characteristics structured Interview Questionnaire. Tool (II): Perceived Stress Scale (PSS) and Tools (III): The Brief COPE Inventory. **Results:** The findings of the study revealed that, there was a highly statistically significant reduction in perceived stress post receptive music therapy. Also, there was a highly statistically significant improving in coping strategies post receptive music therapy. **Conclusion:** It was concluded that receptive music therapy proved to be effective on decreasing perceived stress and improving coping strategies among patients with schizophrenic. **Recommendation:** Receptive music therapy should be provided as intervention for patients with mental illness.

**Keywords:** Patients with schizophrenic, Music therapy, Perceived stress, Coping

## Introduction

Worldwide, schizophrenia is associated with considerable disability and result in considerable burden to the individual and society. It affects about 1.1% of the world's population. The disorder, being responsible for 7% of total years lived with disability and is now ranked in the top 20 causes of years lived with disability worldwide. As a result of these factors, schizophrenia is a major public health concerns and a global mental health priority <sup>(1, 2)</sup>.

Schizophrenia is a neurodevelopmental disorder with a hereditary proclivity, and stress has long been linked to its causation. While stress has an impact on all stages of the disease, new evidence suggests that stress at crucial periods of development may be more deleterious and increasing a person's predisposition to psychosis <sup>(3,4)</sup>. Because of the significant and remarkable stressors that persons with schizophrenia face such as chronicity, illness management, unemployment, loss of productivity, rejection from society, isolation, homelessness, and stigma, the risk of patients' vulnerability to experience stress is increasing <sup>(5, 6)</sup>.

A lot of research strongly support the notion that perceived stress correlated positively with symptoms severity in patients with schizophrenia and stress triggers the exacerbation of psychotic symptoms of schizophrenia which lead to drop the follow-up treatment, relapse and poor outcome. As a result, stress is a significant concern among people living with schizophrenia, and it has a significant detrimental influence on their well-being <sup>(1, 5)</sup>.

Coping is described as the cognitive and behavioral efforts to master, tolerate, or lessen the external and/or internal stresses imposed by a stressful transaction. Three basic types of coping strategies are emotion-focused coping, problem-focused coping, and avoidance-focused coping. Emotion-focused coping, for example, involves expressing feelings to others and is typically aimed at managing affect in response to a stressful circumstance. Avoidance Coping aims to avoid dealing directly with stressful demands by rejecting, diminishing, or otherwise avoiding them. Meanwhile, problem-focused coping is aimed at reducing or managing stressful situations, and may

include activities such as problem-solving planning and strategy<sup>(6,7)</sup>.

People with psychotic disorders, such as those with schizophrenia, have been found to adopt mostly maladaptive coping methods. According to studies individuals with schizophrenia often have persistent trouble coping effectively with both substantial and minor stresses, and they tend to avoid instead of actively strive to solve problems<sup>(8,9)</sup>.

Coping influences patients' compliance to therapy and the course of the disease. Patients with schizophrenia often have poor outcomes partly because of their reduced use of positive coping strategies. The inability to manage and respond to stress appears to be widely accepted as the primary leading reasons of relapse and impaired quality of life. Thus, stress and coping styles among individuals with schizophrenia are a key issue in psychiatric nursing<sup>(6,9)</sup>.

Treatments for people with schizophrenia consist mainly of physical treatment, which is typically antipsychotic treatment. Although antipsychotic medications are actually basic in suppress some symptoms of schizophrenia, they cannot cure

deficits in patient's social skills as coping with stress. As a result, new intervention approaches for improving patient coping have been established, one of which is music therapy (MT)<sup>(6,10)</sup>. Music therapy is a therapeutic approach that employs music's inherent mood-lifting properties and relaxing effect to assist people in improving their mental health and overall well-being<sup>(11,12)</sup>. Music therapy can be divided into two categories: active and receptive. Active music therapy involves patients participating in some form of music-making, such as, rapping, chanting, singing, playing instruments, improvising, song writing, composing, and conducting, whereas passive or receptive music therapy involves the client listening to music – live or recorded – and responding silently, verbally, or through another modality, such as dancing or drawing.

Music therapy has been shown to be an effective adjuvant treatment for psychoses, and it is deemed to be more beneficial than standard therapy alone because it improves the patient's overall health, mental state, negative symptoms, and social functioning<sup>(13,14)</sup>. For individual having schizophrenia, music therapy will help them to overcome deficits in coping skills and

provide them with the important skills to be able to deal proficiently with daily hassles, solve life challenges and stressors and promote their coping. Recent related studies that are concerned with evaluating the effect of music therapy on coping abilities of patients, studies showed that MT has a positive influence on self-perception, and it can strengthen the ego of patients with schizophrenia, increased patients' participation in vocational and recreational activities, and significant improvement from base line levels on conversation and assertiveness skill to the general social performance<sup>(15,16)</sup>. As a result of these protective effects of MT, it is classified as a support intervention to reduce stress and improve coping, with a variety of outcomes such as stabilizing their illness, improving medication adherence, and promoting recovery progress.

#### **Significance of the study**

While pharmacological treatment for schizophrenia is the first line of defense in reducing main symptoms, many antipsychotics are associated with poor quality of life and debilitating side effects. As a result, health care practitioners have turned to

complementary treatments such as music therapy. While music therapy have a positive effect as a potential tool to mitigate stressful environmental factors and enhance coping, it therapy appears to favour the expression of emotions, strengthen self-awareness, social connection, and a sense of personal support<sup>(15,17)</sup>.

As a result of this association, there is a greater interest in researching the impact of music therapy on improving coping, controlling stress, and supporting individuals with schizophrenia in remaining well in the community. Nurses with this understanding can utilize techniques like music therapy to assist patients improve their coping styles and deliver the kind of care they need to integrate individuals with schizophrenia into society.

#### **The aim of the study**

Evaluate the effectiveness of receptive music therapy on perceived stress and coping strategies among patients with schizophrenia.

#### **Research Hypothesis:**

Patients with schizophrenia who participate in the receptive music therapy are expected to have low stress

level and improvement in their coping strategies.

### **Subjects and Method**

#### **Design:**

Quasi experimental research design (one group pre-test post-test) was used.

#### **Setting:**

The study was conducted at inpatients ward at the Psychiatric and Addiction Treatment Hospital in Meet-khalf at Menoufia that affiliated by the Ministry of Health and Population, Egypt.

#### **Subjects:**

A convenience sample of patients with schizophrenia (50 patients) who admitted in the above previously mentioned setting and selected according to Epi-Info software statistical package created by World Health Organization and Center for Disease Control and Prevention, Atlanta, Georgia, USA version 2002. The criteria used for sample size calculation were as follows: 95% confidence limit. The subjects meet the following criteria

#### **Inclusion Criteria of the subjects:**

- Patient who aged 18 or older
- Patient who willing to participate in the study

#### **- Exclusion Criteria of the subjects:**

- Patient in a acute phase of schizophrenia.
- Patient diagnosed with intellectually disability or other psychiatric disorder.
- Chronic medical illness that may affect psychological state of the patient.

#### **Tools of the study:**

.To fulfill the study's goal, three tools were used.

#### **Tool (1): Socio-demographic and Clinical Characteristics Structured Interview Questionnaire**

It was developed by the researchers based on the review of the relevant literatures to elicit data about socio-demographic data of patients (age, sex, occupation, marital status, level of education, income, residence as well as clinical characteristics of patients (family history of psychiatric illnesses, history of previous hospitalization, and medication adverse effect.

#### **Tool (II): Perceived Stress Scale (PSS)**

It was adopted from Cohen et al. <sup>(18)</sup>. PSS was used to assess the degree to which people perceive their lives as stressful and to ask about feelings and thoughts during the last month. It's a four-point Likert scale that ranges from

0 (never) to 4 (very often). It had ten items, four of which were positive and six of which were negative (1, 2, 3, 6, 9, and 10). The total score ranges from 0 to 40, with higher numbers indicating higher levels of perceived stress.

#### **Scoring System:**

- 0-13 indicated low perceived stress
- 14-26 indicated Moderate perceived stress.
- 27-40 indicated High perceived stress.

#### **Tools (III): The Brief COPE Inventory**

It was adopted by Al Mansoori (2014)<sup>(49)</sup>. It is a four-point Likert-type scale, ranging from one (“I haven’t been doing this at all”) to four (“I’ve been doing this a lot”). This questionnaire includes 28 items that explore the following The dimensions of coping strategies and were labeled according-to their constitutive items:

- Social support strategies; (8 items)which include items number 5,9,10,15,21,22,23,27
- Problem solving strategies; (4 items) which include items number 2,7,14,25
- Avoidance strategies; (10 items) which include items number 1,3,4,6,8,11,13,16,19,26

-Positive thinking strategies; (6 items) which include items number 12,17,18,20,24,28

Higher scores indicate a greater likelihood of using the appropriate coping mechanisms.

#### **Method of data collection**

##### **-Administrative approval:**

An official permission to conduct the study was obtained from the directors of the psychiatric and addiction treatment hospital in meet-khalf at Menoufia, Egypt and the committee for research ethics of the general secretariat of mental health hospitals.

##### **-Ethical consideration:**

-Informed consent to participate in the study was obtained from the patient.

-Assure the participants about their privacy and confidentiality of the obtained data and it was used only for the purpose of the study.

-Emphasizing the right to withdraw from the study at any time.

-Nature of the study didn't cause any harm or pain to subjects of the study.

- The subjects' anonymity was guaranteed.

##### **-The validity of the Tools:**

The tools were tested for content validity by jury of 5 experts in the field

of Psychiatric and Mental Health Nursing and Medicine to ascertain relevance and completeness of study tools.

**-Reliability of the instruments:**

The internal consistency of the tools (II&III) was done by using Cronbach's alpha with high test re-test reliability and seemed to be strongly reliable at 0.84 for tool II and 0.81 for the instrument III.

**-A pilot study:**

A pilot study was carried out to assess the tools' usability and applicability, as well as to estimate the time required to fill the instruments. A pilot study was conducted on 10% of the subjects. The subjects of the pilot study were chosen at random and afterwards excluded from the study participants.

**-Actual study**

The actual study was divided into four phases:-

**- Phase one: Assessment phase (pretest phase )**

- The aim of this phase was to create a connection between the researchers and the patients, as well as to explain the study's purpose and intervention schedule.

- The researcher went through all of the inpatients' records to find individuals

who fit the inclusion criteria, then conducted the interview in the ward.

- Using the three study tools as a guide, the researcher interviewed each patient individually to obtain a baseline assessment (pre-test). Each patient interview lasted between 40 and 60 minutes, depending on the patient's ability to understand and speak.

**Phase two: Implementation phase**

-This phase was aimed to provide studied patients with firstly by theoretical knowledge about receptive music therapy such as definition and benefits of receptive music therapy with the aim of gaining optimal participation and cooperation of the patients and then applying receptive music therapy.

- The studied subjects were divided into subgroups. Each subgroup was homogenous in terms of sex. Each subgroup consisted of 6-8 patients and attended 8 sessions. 2 sessions per week for one month. Each session was lasted from for 45-60 minutes.

- From the beginning of February to the end of May (2021), application of the receptive music therapy was done.

- The sessions were carried out at the meeting room of the setting of the study.

- Patients' individual differences, levels of understanding, willingness and response of patients were taken into consideration during the sessions for better patient's participation.

- In the sessions, the researcher was the initiator, provider of the information, and the encourager for the patients. He also acted as the group leader who operated as a facilitator, teacher and trainer.

- Begin a group session by going around the circle and asking everyone to answer a question regarding their current feelings (sometimes called a round or a check-in).

- Using receptive interventions, first researcher heard to the participants different type of music such as soft and loud music, and then then researcher asked the participants what kind of music they preferred to listen. They preferred soft music. The participants becoming recipients of the musical experience rather than active music makers. During or after the listening experience, clients discuss evoked thoughts, feelings, and emotions.

- Each session was structured as follows: within the first 5 minutes, the researcher stated the session theme and planned activities. After that, 40 minutes were spent finishing the

session work, and the final 10 minutes were spent summarizing, soliciting feedback, thanking patients, and reminding them of the next session's schedule.

- Group discussions, flip charts, Pictures, lap top, head phones, sound system and musical CDs were used in the study.

**Sessions are scheduled as following:**

**-Session 1:** The aim of this session was to encourage patients to participate actively in receptive music therapy. This is accomplished by acquainting the researcher with the patients, outlining the group rules as confidentiality, as well as purpose and nature of the study.

**-Session 2:** This session aimed to acquiring the subjects' knowledge about definition, importance, types and benefits from it, and problems which can be treated by receptive music therapy. The researcher presented by a video and power point.

**Session 3:** This session was designed to educate the participants about the concept of stress, as well as its causes and symptoms. The researchers showed a film depicting stress symptoms as well as the medical complications associated with anxiety and stress. During this session, the

researchers inquired about the source of their stress as well as the symptoms of stress. The participants benefited from the presentation of reality models of patients' stress experiences and the problems that stress causes.

- **Session 4:** It aimed to identifying the studied subjects the concept of coping to identify different coping skills and strategies which can be used when there is a stress and also aimed to clarify the relationship between stresses and coping, teach the importance and the factors affecting coping.

- **Session 5:** The participants were allowed to listen to music and sing songs during the session.

The subjects are encouraged to talk with others and sharing their memories and express their emotions with each other's that require personal interaction and cooperation. During listening to music patients response differently, some by sing with songs and others dancing and swaying their bodies.

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some by sing with songs and others dancing and swaying their bodies.

**Session 6 and 7:** aimed to teach patients the meaning of relaxation and its benefits accompany to listening music in these sessions music selected and played with the intention of creating a relaxing and calming experience. Training the patients on different relaxation techniques accompanied by listening to music (deep breathing exercises - mental relaxation– progressive muscle relaxation - meditation exercises), explain and apply the steps several times, ensure that patients master the application of relaxation techniques (demonstration and re-demonstration).

**Session 8:** this session designed to provide a summary of previous skills, gain insight into the patients' experiences, and receive feedback on receptive music therapy and relaxation techniques sessions the researcher congratulated the patients who took part in the receptive music therapy session at the end of the session.

#### **Evaluation phase:**

The training was evaluated by immediately reapplying the study tools (tool II & tool III) as (post-test).

### Statistical analysis

For coding, entering and analyzing data SPSS (version 20) was used. The range, mean, and standard deviation were calculated for quantitative data. Comparison was done using chi-square for qualitative data. For comparison between means of two parametric variables student t-test was used. Spearman's correlation coefficient was used for evaluation between variables of the study. Significance was adopted at P value < 0.05 and at P value < 0.01 for significance and high significance was adopted respectively.

### Results

**Table (1)** illustrates socio-demographic characteristics of the studied patients. Result revealed that the range age in years of the studied patients were (20-49) with mean age  $29.7 \pm 5.97$  and more than half of them (54%) were male and (52%) were from rural residence. Regarding educational level, one third of the studied patients 34% had primary education and more than three quarters of them (76%) were married. Concerning occupation 42% had free work and more than half (52%) had enough income. Relating to medication side effects, around two thirds of them (64%) have medication

side effects and the mean of the disease duration was 3.34 years.

**Figure (1)** shows mean score of perceived stress and coping strategies pre and post implementation of receptive music therapy among the studied patients. It can be noticed that the mean score of perceived stress was decreased from 24.9 pre- the intervention to 19.8 post the intervention and mean score of coping strategies was increased from 58.6 to 68.5 post the intervention. There was a highly statistically significant difference in the mean score of studied patients regarding their perceived stress and coping strategies at pre and post implementation receptive music therapy.

Table (2) prescribes levels of perceived stress and coping strategies pre and post implementation receptive music therapy among the studied patients. There was a highly statistically significant difference in the studied patients at pre and post implementation receptive music therapy regarding their stress and coping strategies levels. Before implementation receptive music therapy low level of stress was 0% which increased to 28.0% after and high level of stress decreased from

decreased from 52.0 % to 20.0. Concerning coping strategies, before implementation receptive music therapy low appropriate coping strategies changed from 96.0 % to 44.0% meanwhile moderate appropriate increased from 4.00% to 56.0% after implementation receptive music therapy.

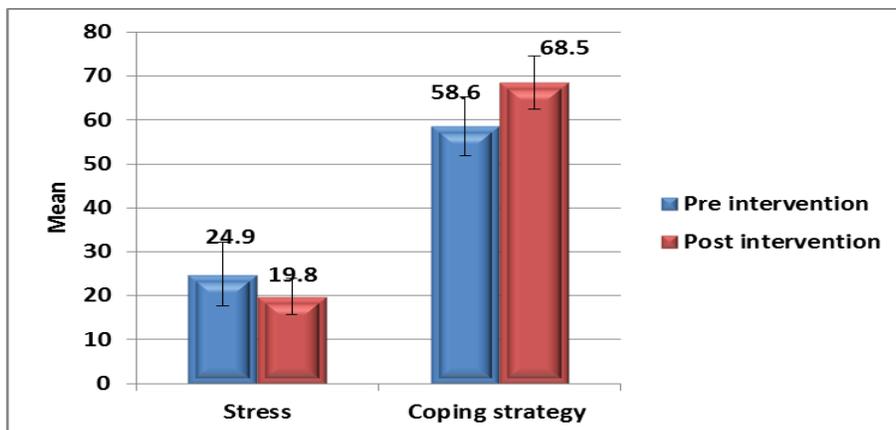
**Table (3)** emphasizes on mean score of coping strategies subscales pre and post implementation receptive music therapy among the studied patients. Results showed that there was a highly statistically significant difference among the studied patients at pre and post implementation receptive music therapy regarding their coping strategies subscales at P-value (<0.001). The mean scores of social supports, problem solving and positive thinking coping strategies were increased post implementation receptive music therapy meanwhile the mean score of avoidance coping strategies was decreased.

**Table (4)** presents correlation between perceived stress and coping strategies among the studied patients. Results revealed that there was a highly statistically significant negative correlation between perceived stress and total coping strategies post intervention at P-value (0.003). It means when the perceived stress decreases the total coping strategies increase.

**Table (5)** reveals relation between socio demographic characteristics of the studied patients and perceived stress and coping strategies .There was a statistically significant relation between high perceived stress and male gender at P-value (0.05), there was a statistically significant relation between high perceived stress and duration of disease more than 3 years at P-value (0.001), and there was a highly statistically significant relation between high coping strategies and male gender at P-value (0.001).

**Table (1): Socio-demographic Characteristics of The Studied Schizophrenic Patients  
(N= 50)**

<b>Socio-demographic characteristics</b>	<b>No.</b>	<b>%</b>
<b>Age / years</b>		
Mean $\pm$ SD	29.7 $\pm$ 5.97	
Range	23 – 49	
<b>Sex</b>		
Male	27	54.0
Female	23	46.0
<b>Residence</b>		
Urban	24	48.0
Rural	26	52.0
<b>Educational level</b>		
Illiterate	11	22.0
Primary	17	34.0
Preparatory	10	20.0
Secondary	4	8.00
University or higher	8	16.0
<b>Marital state</b>		
Single	5	10.0
Married	38	76.0
Divorced	7	14.0
<b>Occupation</b>		
Governmental work	13	26.0
Free work	21	42.0
Not work	16	32.0
<b>Income</b>		
Enough	26	52.0
Not enough	24	48.0
<b>Medication side effects</b>		
Present	32	64.0
Absent	18	36.0
<b>Disease duration / years</b>		
Mean $\pm$ SD	3.34 $\pm$ 1.64	
Range	1.00 - 8.00	



**Figure (1): Mean score of Perceived Stress and Coping Strategies Pre and Post implementation of Receptive Music Therapy among the Studied Patients (N= 50)**

**Table (2): Levels of Perceived Stress and Coping Strategies Pre and Post Implementation Receptive Music Therapy among The Studied Patients (N= 50)**

Studied variables	Pre-intervention		Post-intervention		Mc Nemar test	P-value
	No.	%	No.	%		
<b>Perceived stress</b>						
Low	0	0.00	14	28.0	5.00	<0.001**
Moderate	24	48.0	26	56.0		
High	26	52.0	10	20.0		
<b>Coping strategies</b>					24.0	<0.001**
Low	48	96.0	22	44.0		
Moderate	2	4.00	28	56.0		

\*High significant # Marginal homogeneity test

**Table (3): Mean score of Coping Strategies Subscales Pre and Post Implementation Receptive Music Therapy among The Studied Patients**

coping strategies subscales	Pre-intervention Mean ±SD	Post-Intervention Mean ±SD	Ch-	P value
<b>Social support</b>	14.6±2.17	20.4±3.51	6.03	<0.001**
<b>Problem solving</b>	6.30±1.54	12.4±2.01	5.96	<0.001**
<b>Avoidance</b>	24.0±3.48	19.8±3.71	6.17	<0.001**
<b>Positive thinking</b>	13.7±1.61	15.8±1.54	6.24	<0.001**

**Table (4): Correlation between Perceived Stress and Coping Strategies among the Studied Patients**

Coping	Perceived stress	
	R	P-value
Social support	-0.258	0.071
Problem solving	-0.123	0.394
Avoidance	-0.273	0.055
Positive thinking	-0.210	0.143
<b>Total coping strategies</b>	<b>-0.412</b>	<b>0.003**</b>

**Table (5): Relation between Socio demographic Characteristics of the Studied Patients and Perceived Stress and Coping Strategies**

Socio demographic characteristics	Perceived stress	Test of sig P-value	Coping strategies	Test of sig P-value
	Mean ±SD		Mean ±SD	
<b>Age / years</b>		t-test=		t-test=
≤ 28	19.2±6.95	0.719	69.5±5.35	1.26
>28	20.5±6.39	0.475	67.3±6.77	0.211
<b>Sex</b>		t-test=		t-test=
Male	21.9±7.16	2.54	70.6±5.98	2.76
Female	17.3±5.20	<b>0.014*</b>	66.2±5.29	<b>0.008**</b>
<b>Residence</b>		t-test=		t-test=
Urban	19.7±7.25	0.029	69.7±6.31	1.37
Rural	19.8±6.25	0.977	67.4±5.69	0.176
<b>Educational level</b>		F=		F=
Illiterate	20.5±6.00	0.435	67.9±5.55	0.577
Primary	18.4±7.82	0.783	68.6±6.74	0.681
Preparatory	21.8±5.15		70.0±6.86	
Secondary	19.0±6.32		71.0±3.16	
University or higher	19.7±7.62		66.4±5.55	
<b>Marital state</b>		K=		K=
Single	22.2±9.06	0.691	67.6±5.77	0.165
Married	19.4±6.36	0.708	68.5±6.15	0.921
Divorced	20.2±6.68		69.4±6.42	
<b>Occupation</b>		F=		F=
Governmental	18.0±7.35	0.714	69.1±7.57	0.615
Free work	19.9±5.91	0.495	69.2±5.42	0.545
Not work	21.1±7.19		67.1±5.61	
<b>Income</b>		t-test=		t-test=
Enough	20.1±7.23	0.364	69.0±4.93	0.507
Not enough	19.4±6.16	0.717	68.1±7.15	0.615
<b>Medication side effects</b>		t-test=		t-test=
Present	19.4±6.72	0.580	68.8±6.06	0.407
Absent	20.5±6.74	0.565	68.1±6.17	0.686
<b>Disease duration / years</b>		t-test=		t-test=
≤ 3 years	18.0±6.01	2.60	68.6±6.17	0.144
> 3 years	22.7±6.0	<b>0.012*</b>	68.4±6.00	0.886

## Discussion

Despite many people have found adaptive ways to appropriately manage with stress and its harmful consequences, a substantial number of people still appears to struggle to cope with life stressors. This may be especially true for people with schizophrenia, who have been shown to endure significantly more stress in daily life than people without mental illness and to have fewer resources to cope with stress. As a result, more research into the effectiveness and applicability of therapeutic interventions for stress reduction in people with schizophrenia is critical<sup>(18,20)</sup>. One of these approaches is music therapy. Music therapy is an effective tool for helping people manage stress and improve coping abilities.

Along this line, the current study was undertaken to assess the effect of receptive music therapy on stress reduction and enhancing coping among people with schizophrenia, and the findings revealed that receptive music therapy had a positive effect on stress reduction and coping among the participants. The results of the current

Study showed that the mean score of perceived stress among studied subjects was significantly decreased post the receptive music therapy.

This may be attributable to various possibilities, one of which being the biological influence of music on the brain. Music stimulates activity in parts of the brain that release dopamine, the body's natural pleasure chemical, which is a big reason why people like music so much. In this regard music has been demonstrated to modulate the activity of brain areas involved in the initiation, creation, maintenance, termination, and regulation of emotions<sup>(21, 22)</sup>. Another explanation is that the distraction effect of music is involved, as MT captures people's attention and diverts them away from stimuli that can contribute to negative emotions like worry, anxiety, and stress.

Furthermore, one of the most essential attributions of music therapy as a stress-relieving agent for people with schizophrenia is that music influences a person's emotions immediately without requiring the use of an intellectual process. In other words, neuronal codes transmitting music from the hearing organ travel straight

to the brainstem. Because music therapy does not need patients to be able to communicate verbally, it is often appropriate for people with chronic schizophrenia who have communication problems. They improved their capacity to communicate with others, decreased their social isolation, and enhanced their interest in external events, all of which reduced stress.

The current study finding is consistent with **Amigo and Mariati (2020)**<sup>(23)</sup> studied" the effect of music in reducing stress among persons with mental disorders. They found a significant result in stress reduction among their studied subjects. Also, this finding was in harmony with the results obtained by **Georgiev et al. (2012)**<sup>(24)</sup> who studied" Effects of music therapy in chronic patients with schizophrenia. However, the findings of the current study are in contrast with **Artemiou et al. (2017)**<sup>(25)</sup> found that there were no significant baseline differences between the music and no music groups for DASS-21 depression, anxiety, or stress scores. In addition to **Alagha and Ipradjian (2017)**<sup>(26)</sup> came in contrast with current study.

The fact that music is involved in so many various kinds of mental wellbeing interventions reinforces the belief that being affected or touched by music cannot be viewed solely as a metaphor, which renders music as mere embellishment of individual's daily lives. The current study findings presented that coping of studied subjects was a highly statistically significant improved after attendance receptive music therapy. These findings are similar **Hakvoort et al. (2015)**<sup>(27)</sup> who studied" Influence of Music Therapy on Coping Skills and Anger Management in Patients with schizophrenia: They found that an improvement of positive coping skills and reduction of avoidance coping skill in music therapy participants. Additionally a lot of researches have shown that music therapy can increase self-awareness and strengthen coping skills for individuals with mental disorders<sup>(20, 21)</sup>.

This may be due to the fact that music therapy can aid in the identification and labeling of emotions in a safe environment, which can lead to improved communication of feelings and needs in other situations, particularly in the case of schizophrenia patients who have

difficulty expressing their emotions. Music therapy can help people learn to securely communicate their feelings, both verbally and nonverbally, in order to improve emotional regulation. Another plausible justification is that music therapy might provide opportunity for people to practice social skills that can be transferred to daily relationships and help them cope better. According to clinical accounts, MT has traditionally been thought of as a way to improve group cohesion, acceptance, and interpersonal interactions in psychiatric settings<sup>(28,29)</sup>. Another supported rationalization of effect of music therapy is music therapy has a positive influence on self-perception and it can strengthen the ego of schizophrenic patients. In this respect, **Soumitra (2021)**<sup>(5)</sup> added that when music therapy used therapeutically, music can provide a wide range of coping skills such as breathing techniques, relaxation, distraction, and emotional expression. It has been reported that music therapy has been found to be useful for improving coping of schizophrenia.

Concerning the types of coping strategies, the findings of the present study indicated that the studied patients were using negative coping strategies

at pre-receptive music therapy. This may be due to regulating emotions can be challenging with schizophrenia that prevent the patient from coping effectively. This finding was in the same line with **Kommischer et al. (2017)**<sup>(30)</sup> who studied "Coping in people at risk of psychosis". They found that the subjects depend significantly more on the negative coping strategies than on the positive one. Also, findings of **Holubova et al. (2015)**<sup>(28)</sup> were in the same harmony.

According to the present study, a statistically significant relationship was found between high perceived stress and male gender. This could be because men are unable to express their emotions as openly as women, and hormones play a significant part in the difference in stress perception between men and women. This result was inconsistent with **Lavoie and Douglas' (2021)**<sup>(31)</sup> and **Kneavel (2021)**<sup>(32)</sup> who reported that females had significantly higher levels of perceived stress than males.

The result of the current study revealed that there was a statistically significant relation between high perceived stress level and duration of disease that subjects have more duration of illness;

they are more likely to have more stress. The attribution for this may be increasing duration of disease leading to a high state of distress, chronicity more hospitalization and more experienced stigma. This result was consistent with **Salleh (2018)**<sup>(33)</sup> who studied " Life Event, Stress and Illness". He found that the relationship between psychiatric illness and stresses is strongest in neuroses, which is followed by depression and schizophrenia.

The results of the current study found that there was a highly statistically significant negative correlation between perceived stress and total coping strategies. It means when the perceived stress decreases the total coping strategies increase. This result was consistent with **Zadwornaetal (2020)**<sup>(34)</sup> who observed negative relationships were between the level of stress and the coping strategies among patients with schizophrenia.

### **Conclusion**

According to the findings, receptive music therapy was found to be useful in reducing perceived stress and enhancing coping mechanisms among schizophrenic patients.

### **Recommendations**

1-The effect of utilize receptive music therapy as intervention for patients with mental illness should be included in student's nurses' curriculum.

2- In services training program for nurses about the importance of receptive music therapy and how to use it to reduce stress and improve coping strategies.

3-Establishing of workshop for nurses about utilize receptive music therapy as effective coping strategies for patients.

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