

ACADEMIC STRESS AND MUSIC THERAPY IN ECUADOR



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Abstract

The Academic stress has a close relationship between the educational and mental health contexts of a country. Likewise, this type of stress hinders the pedagogical process in students at different levels. After understanding the Ecuadorian context related to these elements in Ecuador, a proposed intervention is presented, focused in reducing academic stress levels in university students of an educational institution in the city of Quito, Ecuador. The project consists of 6 phases, within which 12 sessions of music therapy will be implemented using the non-verbal methodology of Benenzon and the GIM method. Additionally, it will have an evaluative and statistical component, based on a quantitative methodology, using the SISCO inventory of academic stress. It is expected that the application of music therapy sessions will reduce the academic stress levels in university students, and moreover, the proposal will serve as a reference for future intervention projects and academic research. Through this article, we aim to demonstrate that the use and application of music therapy in educational institutions is an accessible, effective, and inclusive alternative within a multicultural and contemporary society.

Keywords: Academic Stress, education, Music Therapy, Ecuador

BACKGROUND

Education is one of the fundamental pillars of society, however, its development becomes complex when facing current challenges such as academic stress. In this article, we will analyze the axes of education in Ecuador, academic stress, mental health, and music therapy, before the presentation of a proposal for the reduction of academic stress in university students in the city of Quito - Ecuador.

Academic stress is a problem that crosses the education and mental health systems, (which still do not offer innovative and effective alternatives for the treatment and prevention of various problems in Ecuador). This problem justifies the application of alternatives such as music therapy, which today is an innovative tool in the achievement of therapeutic goals of mental health. Referring specifically to adaptive disorders such as academic stress, de Witte et al. (2022) in their multi-level meta-analysis presented in the journal *Health Psychology Review* (HPR) consisting of 47 studies and with 2747 participants from different countries (mainly from the European Union). In summary, it was shown that music therapy positively contributes (in the medium to long term) to problems related to physiological and psychological stress in the academic context. Similarly, in Peru, which has a similar context to Ecuador, we found in a study that by applying music therapy sessions to 30 university students, it was possible to significantly reduce the levels of academic stress in the participants (Tejada Muñoz et al., 2020).

Considering the Ecuadorian context, a music therapy intervention is proposed, whose hypothesis indicates that the use of 12 music therapy sessions, with the Benenzon and GIM methodologies, reduces the levels of academic stress in university students. The specific objectives of the proposal are: to induce physiological and psychological changes to reduce stress levels, to develop activities with the Benenzon and GIM methods to achieve states of well-being, and finally, to measure the levels of academic stress, before and after the intervention of the program to validate the application thereof.

It is intended that the analysis and proposal presented in this article serve as a reference for the development of programs for the prevention and treatment of academic stress in different educational institutions, especially at the middle and higher levels. As well as, an element to raise awareness about the application of music therapy in Ecuador.

Pedagogical Approach in Ecuador

In Ecuador, the Prussian pedagogical approach still has a great influence on the country's educational system, even though in recent decades there have been attempts to implement approaches such as constructivist learning and liberal arts philosophy.

The Prussian educational model, implanted in the second half of the 19th century, had the objective of promoting the conservative and religious values of the time to strengthen the authority and influence of the State and the Catholic Church (Paredes, 2019). However, the constructivist approach began to be implemented in America in the 1960s in countries such as the United States and Brazil, and 1980, it began to be introduced in some secular and private educational institutions in Ecuador (Delors, 1996). Finally, in 1988, the first university with a liberal arts model in Ecuador and Latin America was created, the San Francisco de Quito University, which promotes a type of learning centered on freedom and the student.

Academic stress

Academic stress is considered as the pressure and psychological and emotional demands that one or several students experience concerning the educational context.

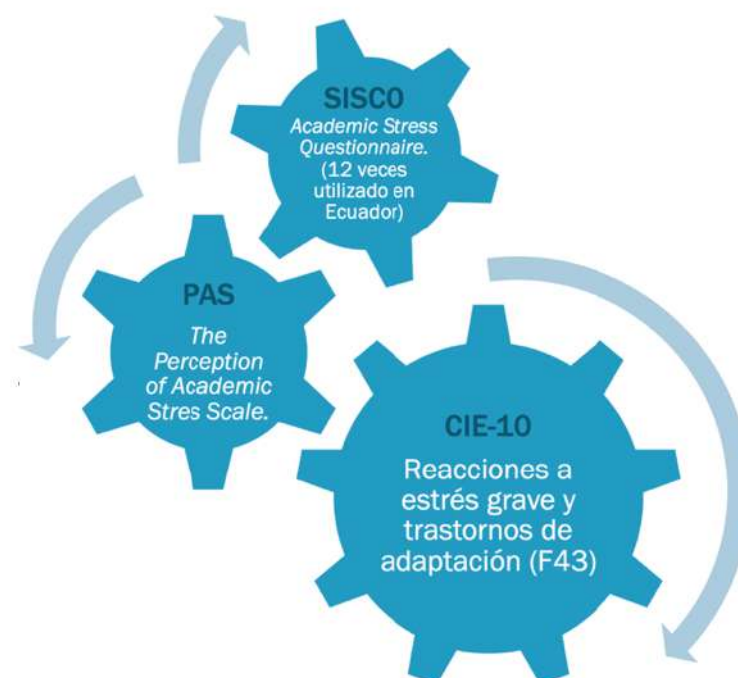
In countries such as Mexico, Colombia, Chile, Argentina, Brazil and Peru, studies and research have been generated in the last decade of the 20th century (Barraza, 2007). In Ecuador, the first studies on academic stress date back to the first decade of the 21st century. In 2007, at the University of Cuenca, 85% of students showed a high level of academic stress. In the Faculty of Psychology of the Central University of Ecuador, in Quito, about 80% of the sample reported a high level of related stress (Barzallo Sánchez and Moscoso Zúñiga, 2015). The lack of knowledge about this problem is also because diagnostic manuals such as the ICD-10 and the DSM-5 do not consider academic stress as a formal diagnosis. Thus, to perform an approach with clinical validity, the reference diagnosis to use is the diagnosis of severe stress reactions and adaptation disorders (F43) of the ICD-10.

Additionally, the study of academic stress has been supported by the research of Gerard V. Silvestri and Charles R. Silvestri, who developed the PAS (The Perception of Academic Stress Scale) in 1986 (Bedewy

and Gabriel, 2015). Another study that contributed to making this problem visible was the creation of the SISCO inventory (Academic Stress Questionnaire) by Arturo Barraza in the first decade of the 21st century (Barraza, 2007)

Figure 1

Relation between PAS, SISCO and ICD-10 models



Taking into account the SISCO inventory, three components have been established that influence how academic stress is experienced through three systemic components or factors: triggers, signs and symptoms, and coping strategies. Within the factor of academic stress triggers, you can find:

- Excessive workload or number of tasks and exams.
- Competition between peers and comparison with other students.
- Fear of getting bad grades or bad grades and not meeting expectations.
- High academic expectations (self-imposed or imposed by parents, teachers or institutions).
- Little time to submit work.
- Bad relationships between peers and little social support.

In terms of the signs and symptoms of academic stress, and how this type of stress is experienced, it includes:

- Constant feelings of worry.
- Mood swings.
- Headaches, muscle tension and/or digestive problems.
- Fatigue and physical and mental exhaustion.
- Changes in eating and sleeping habits.
- Difficulty concentrating, paying attention and remembering information.

- Social isolation and decreased interest in socializing.
- Lack of motivation and lack of interest in learning.

The coping strategy component refers to ways in which students cope with stress in a healthy and balanced way. These strategies can be:

- Maintain a healthy diet, exercise physically and practice relaxation or meditation techniques.
- Time management and organization.
- Establish a balance between study and rest.
- Set realistic and objective goals.
- Establish a support network with peers, friends and/or family.
- Seek help from teachers and/or the psychological or academic counselor.

According to the SISCO inventory, by measuring these three components, three ranges of academic stress can be determined: mild, moderate, and severe, within the current study period (semester or academic year).

Mental health in Ecuador

In 1966, the first psychology degree in Ecuador was inaugurated at the Central University of Ecuador, which offered a cognitive-behavioral approach. Since the 1990s, some Ecuadorian universities have incorporated approaches such as integrative and systemic family therapy into their psychology program. However, to date, there are no higher education institutions in Ecuador that offer undergraduate or postgraduate programs in humanism, gestalt, or artistic-creative therapies.

Music therapy

Music therapy has undergone a remarkable development, which has given it reliability and popularity worldwide. Currently, among the different models recognized by the WFMT, are Benenzon's Non-Verbal Therapy and Bonny's GIM. In addition, it has been proven that participating in group music therapy activities encourages the formation of new interpersonal relationships, creating a social support network among students.

Unfortunately, in Ecuador, this discipline is not recognized by the state, and the idea of the music therapist is confused with the work of other professionals, generating a wrong idea of what music therapy is.

In addition, there are few academic approaches to music therapy in Ecuador. Since 2010, it is known that in the psychology faculties of the Catholic University of Cuenca, the pedagogy faculty of the Pontifical Catholic University of Quito, and the medicine faculty of the University of Jaén in Riobamba, topics have been addressed on the management of school stress in children, the influence in learning difficulties and Parkinson's disease treatment, respectively (Rosales Fernández, 2014). All these studies provided evidence of the positive effects of music therapy. According to Montánchez (2012), there is a total institutionalization of intervention programs associated with this topic in higher education centers in Ecuador.

Next, the music therapy proposal to reduce academic stress will be presented, which uses the active non-verbal Benenzon methodology and the passive GIM methodology.

INTERVENTION PROPOSAL

Participants

This proposal is based on the San Francisco de Quito University and is aimed at a group with a minimum of 12 participants (students of any career) over 18 years of age, regardless of sex, race, or religion.

Resources

Regarding the resources, we have divided them into three groups: human resources, materials, and financial. Two music therapists, as well as a university representative, are required to participate. In a first intervention, the music therapists will carry out the project pro bono.

In terms of material resources, a large physical space, musical instruments, sound material (musical and non-musical), evaluation sheets, yoga mats, support material, office material, and promotion are necessary.

In terms of financial resources, if the institution does not have some of the musical and sound resources, or support, it will be asked to assume that expense.

Music therapy sessions

Objectives:

Reduce academic stress levels through the implementation of a music therapy program in university students over 18 years of age, inducing physiological and psychological changes through active (all Benenzon) and passive (GiM) music therapy activities to reduce the levels of stress, and in addition, measure the levels of academic stress, before and after the intervention of the program to validate the implementation of the same and present the report to the institution.

Implementation timeline and phases

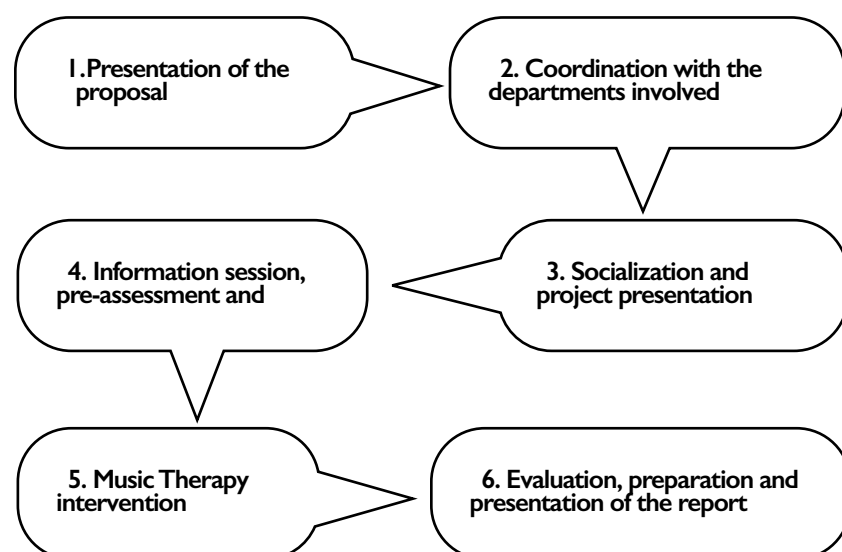
The duration of the project is six months, in which six phases are considered: a first approach to the educational institution (phase 1), meetings with those responsible (phase 2), and the socialization and presentation of the project to students (phase 3), to be carried out in two months. Subsequently, the first evaluation of the interested students and obtaining informed consent (phase 4), the music therapy intervention and final evaluation (phase 5), and the presentation of reports to the educational institution (phase 6), will be carried out during the four months of the academic semester.

The phase of music therapy intervention and the final evaluation (phase 5), is where the application of the intervention proposal will be carried out and lasts three months. This will have the participation of students, who attend sessions per week in the facilities of the university, in a total of twelve sessions. Each of the sessions lasts 90 minutes. The following table shows an example of the succession of ses-

sions, with the methodology to be used and the objective or topic of the session to be treated.

Figure 2.

Timing and phases of the project



Note: Own elaboration

Music therapy sessions

The implementation of the 12 sessions of this project is based on face-to-face and group modalities. Working with two music therapists, two models of music therapy have been chosen, non-verbal music therapy (Benenzon) and GIM (Bonny). As shown in Table I, the application of these two models will be carried out consecutively, that is, in the first session it will be applied to a Benenzon methodology, and in the second, GIM. In this way will be applied in 6 sessions with each method (see Table I).

The reason for using two modalities of music therapy is justified by the effectiveness in the treatment of adjustment and emotional disorders at the group level in university students. In addition, music therapy serves to prevent and treat such problems, becoming a coping tool

to attract students (Barraza, 2006). Also, both models share their therapeutic approach to work with the subconscious and unconscious, generating moments of timelessness, which allow introspection and catharsis. As for the particularities of each method, it has been found, on the one hand, that the non-verbal model proposes an approach through responses with musical and non-musical sound elements. Through free musical improvisation, percussion or integrative percussion, dance, the use of music and sound elements, an application of active music therapy is fulfilled. The application of this model requires prior identification of the cultural Sound Identity (ISO) of the participants, which will allow the selection of non-musical sound objects such as coconuts, corn leaves, and other elements, from the different regions of the country. Pasillo, Yaraví, Bomba, and other rhythms, from the Ecuadorian and Latin American regions, such as Tango, Reggaeton, and Salsa, among others. Another positive consideration for the group application of the Benenzon sessions is the creation of a network of support and social contention, which becomes a heal-

thy and positive coping strategy for university students. Finally, the structure of the sessions in Benenzon has 3 stages: introduction, symbolic development, and closure and internalization.

Table I

Successions and objectives in phase 5

| Number | Sessions | Objetives |
|--------|--------------------------------|---|
| 1 | Program start Benenzon Session | Creation of the therapeutic bond. Integration. Discussion around the group ISO. |
| 2 | GIM session | Awareness of how stress is experienced. Approach to the GIM method |
| 3 | Benenzon Session | Journey to the unconscious Exploration of the unconscious through sound resources. Cultivation of patience. |
| 4 | GIM session | Emotional awareness related to the way teachers assess. |
| 5 | Benenzon Session | Collective energy release. Exploration of the voice and its scope. |
| 6 | GIM session | Emotional awareness related to the level of demand at work. |
| 7 | Session Benenzon | The sense of humor as a catalyst of positive energy and conscious management of the breath |
| 8 | GIM session | Competition among my peers. |
| 9 | Benenzon Session | Body consciousness. Spatial displacement as liberation. |
| 10 | GIM session | Delve into professional expectations. |
| 11 | Benenzon Session | Visualize and create catharsis. Final work on identification of emotions and their management. |
| 12 | GIM session <Program closure | Remember how I solved distressing situations in the past. Finish the intervention program. |

Note: Own elaboration

On the other hand, in the GIM model, students experience a guided musical journey, in which after being induced into deep relaxation, they are allowed a free association experience. The musical journey has as its sound element pre-recorded music, which allows those involved to focus on the creation of images and stories related to therapeutic objectives. In GIM, there are 4 stages: preliminary conversation, relaxation (all of Jacobson and Schulz), musical journey and revision.

While it is true that Helen Bonny's GIM methodology began to be used individually in hospitals, today, the GIM model has developed flexibility and adaptability. The GIM model is subdivided into three approaches: MI (Music and Imagery), for individual and group sessions; the GIM (Guided Imagery and Music), for individual sessions and, occasionally, in groups; and, the Shortened Bonny Method of GIM, only for individual sessions (Grocke and Moe 2015).

In our intervention, the GIM sessions use the MI and GIM methodologies mentioned above. The MI is used to reach a state of relaxation and present a series of images, on which the participants concentrate during the listening of music. Images such as a place in nature are induced in the participants to install new sensations, emotions and

ideas that serve as a coping strategy. During this stage, the beneficiary does not verbalize and the effect of the creation of genes can be enhanced through these tactile and olfactory mules. In addition, the participant can be encouraged to remember the image and experience in situations that generate stress such as when taking a test (Wheeler et al., 2007). The IMT is based on the same principles and steps as the IM, since, in both methods, during the interventions, the therapist accompanies and emotionally supports the beneficiary. However, at this stage, the therapist suggests an initial image as a starting point for the musical journey. After that first moment, the therapist does not alter or induce the appearance of new genes, but rather, allows the beneficiary to freely experience and associate the images that the music suggests.

Since the duration of the sessions is 90 minutes, during the Musical Journey period two works from the pre-recorded music set Music for the Imagination, by Bruscia, will be used. In addition, the repertoire of academic music will be instrumental, vocal, choral, and orchestral.

As a first proposal of objectives and use of works in the GIM sessions, we have the following scheme, which can change and adapt according to the needs of the group (see Table 2).

As for the revision phase, various externalization tools are used, such as painting of images, free drawing, modeling in plasticine, verbalization or writing.

Data collection and analysis

To obtain data and generate objective results, the intervention proposal has a scientific approach, with a qualitative research model (with the control group). For this purpose, the following variables have been established:

The independent variable is attendance at music therapy sessions, and the dependent variable is the level of academic stress. To validate the research, it is considered to have a control group with a similar sample of students who have a moderate level of academic stress and who have not attended the intervention program.

The categorization of the independent variable has four ranges: either optimal (12 sessions), adequate (from 10 to 11), insufficient (from 5 to 9), or not usable (from 0 to 4), whose data will be collected through the periodic evaluation sheets. The dependent variable considers the 3 ranges of the SISCO inventory: strong-distress (from 151 to 225 points), moderate (from 76 to 150) and mild (from 0 to 75). Which will be obtained through the application of this inventory.

As an initial evaluation, in phase 4, the SISCO inventory will be applied to participants and a control group, both groups with a sample of 12 students. During the intervention phase, data on attendance at music therapy sessions will be obtained through the periodic evaluation sheet. In phase 6, after the implementation of the program, a new evaluation of the SISCO inventory will be carried out to the participants and the control group.

Table 2

Works planned for the GIM sessions.

| Number | Objetivo | Music |
|--------|--|---|
| 1 | Awareness of how stress is experienced. Approach to the GIM method. | Faure: Pavane y Brahms: Violin Concerto (Adagio). |
| 2 | Emotional awareness related to the teachers' way of evaluating (MI). | Wagner: Lohengrin (Prelude to Act I) y Nielson: 5th Symphony (Excerpt of Its movement). |
| 3 | Emotional awareness related to the level of demand at work (GIM). | Debussy: Nocturne (Sirenes) y Arensky: Piano Trio (Elegia). |
| 4 | Stress trigger: competition among my peers (MI). | Elgar: 2nd Symphony (Larghetto) y Holst: The Planets (Mars). |
| 5 | Professional expectations after completing my studies (GIM). | Puccini: Madama Butterfly (Humming Chorus) y Vivaldi: Violin Concerto in A minor (Largo). |
| 6 | Remember how I solved distressing situations in the past (MI). | Sibelius: 2nd Symphony (1st movement) y Mozart: Laudate dominum. |

Note: Own elaboration

Both academic-level data and attendance at music therapy sessions will yield numerical results, which will be processed to categorize them. In our research, a strong negative correlation is sought (tending to -1), that is, the greater the number of attendance at music therapy sessions, the lower the rank, or level, of academic stress.

With the processing of the numerical results of both variables (of the participants), we will look for how independent they are with the Chi-square test. If these variables are independent (with numerical data), the non-linear correlation will be verified through the Spearman test (with the results corresponding to the ranges).

The same process will be carried out with the control group, resulting in the unusable range (value of 0) in the independent variable, as they have not attended the music therapy sessions. Once the results of both groups have been obtained, the hypothesis will be compared and verified.

Results

The results expected after implementing this intervention proposal are improving the way of managing academic status, balancing the emotional state of students, providing new tools and coping strategies, and improving individual and group academic performance.

In addition, this generates a benefit for society, since, when implementing this proposal, there will be a reference and a guide to deal with problems of stress and needs of the educational field, as well as a starting point for future work of music therapy in the country. Finally, we hope that its use will be promoted in other contexts, populations, and needs. In this way, you can reach the formalization of music therapy in Ecuador and achieve a better lifestyle.

CONCLUSIONS

Education in Ecuador is constantly developing and faces new challenges such as academics. Likewise, new disciplines of mental health,

such as music therapy, are used for first-level care in the academic world. In the Ecuadorian context, this problem concerns health, education, families, and public and private institutions alike. Music therapy emerges as an accessible, novel and inclusive alternative since it is necessary to implement new strategies for the treatment of academic stress. In addition, its application in the educational context can have multiple benefits, such as: reducing emotional problems, encouraging emotional expression in creative ways, strengthening social-emotional development and links between students, and thus improving academic development. In prospective, music therapy can gain recognition and space in society, by positively impacting various contexts. We trust that this work will make music therapy visible as an effective tool so that it is a key element in the transformation of paradigms in the different scenarios of Ecuadorian society.

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