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Article

Emotional Intelligence Based Intervention Program for Children in Residential Care During Pandemic Lockdown

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Abstract: Children living in residential care homes (RCH) often present conditions of abandonment due to separation, abuse and mistreatment; circumstances that are detrimental to proper emotional development, resulting in poor self-confidence, aggressive behaviors, low self-esteem, anxiety, among other developmental problems. Additionally, pandemic lockdown hinders access to mental health services for RCH service providers, and limits children to external mental health support and resources. The objective of this study was to design and evaluate the effectiveness of a remote-applied Emotional-Intelligence-based intervention program (RA-EIBI) for children living in RCH during pandemic lockdown. A non-parametric pre-test, treatment, post-test comparative design was used to evaluate effectiveness of the intervention program. Seven children living in RCH during pandemic lockdown were initially assessed using Evaluation of Neurological Soft Signs, and Empathy Quotient (EQ-I) to estimate emotional intelligence quotient. A 10 session RA-EIBI program was designed and applied to the children after initial assessment, and a final evaluation was conducted to perform related samples comparisons. Results shown a non-significant mean increase of intrapersonal, interpersonal, stress management, adaptability, and emotional state, all emotional intelligence-related skills. A RA-EIBI program is an accessible resource for RCH, and children living under this condition. EI skills were maintained along the social isolation period due to COVID-19. Followup of emotional conditions of children demonstrated an improvement in self-perceived well-being.

Keywords: emotional-intelligence; life-skills; vulnerable-populations.

1. Introduction

Social isolation represents a critical condition that particularly during the pandemic period affected children [1], and according to recent research may affect their mental health [2] and emotional intelligence and development as well [3]. However, particularities about how it affected the mental health of children in residential care homes (RCH) during that period, and its effects on development remains unknown. The United Nations International Children's Emergency Fund (UNICEF) indicates that despite the fact that, during the last decade, in different parts of the world there have been advances in addressing the living conditions of children and adolescents, progress has not been equal for all, since factors such as poverty and inequality have affected their lives, becoming barriers that prevent the full fulfillment of both their rights and development. Evidence suggests that persons living in vulnerable conditions may experience social isolation in a more adverse way [4]. Accordingly, in Mexico, the nearly 40 million children and adolescents represent a third

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of the country's population and live diverse realities [5]. For example, it is increasingly common to find children and adolescents working in public spaces to meet their daily needs; these problems and lifestyles are part of a growing phenomenon whose origin is economic adversity and domestic violence, among other factors, which forces families to incorporate minors into economic activity, or may lead to abandonment [6]. Children from vulnerable conditions are exposed to living in the street, victims of human trafficking and/or to work in conditions that affect their development and physical and mental integrity, among others [7]. The degree of vulnerability of children is determined by their exposure to risk factors and their capacity to face or resist problematic situations [8,9]. Government, civil, as well as religious organizations through specific programs and social assistance instances, have devised ways to try to meet the needs of children who face these deficiencies [10]. As a result, there are 703 institutions in Mexico focused on the attention and care of minors. These institutions are considered a point of support or even a survival strategy for minors, since there are approximately 412,456 children deprived of parental care, of whom only 29,310 are in these social assistance institutions, there is no record of the remaining, so the number could be much higher [11].

As mentioned before, the action of sheltering children in institutions, such as RCH, has been proposed as an exceptional and provisional protection measure with the purpose of removing them from a risk situation and protecting their rights until their conditions improve, as well as reintegration into their family of origin, or in more extreme cases, adoption may be offered to them. Several studies [12,13], have evidenced that the institutionalization of minors represents a wide variety of challenges to resolve for developmental improvement of children. On the other hand, the children living in RCH commonly present consequences due to the particular characteristics in the social environment, as well as because of the conditions of abandonment, separation, abuse and mistreatment; circumstances that are detrimental to the proper emotional development of children. Aspects depicting mental health risks in children living under vulnerable conditions have been identified by other studies [14], which states that these circumstances can result in a lack of security, affection, trust, aggressive behavior, low self-esteem, anxiety [15,16], among other developmental problems, as well as school and behavioral problems. In other words, minors are affected both in personal and social development, due to their low levels of self-esteem and poor management of emotions that express an inability to solve problems, which makes it difficult to adapt to the social environment [17].

Even despite these adversities, children can develop strategies that allow them to adapt adequately to difficult circumstances. Children under difficult circumstances can develop, among other things, management and practical survival skills, independence, the ability to manage stress [18]. To improve the coexistence of infants in their different contexts both inside and outside the home it is necessary to develop in them emotional capacities and skills [19].

In this sense, intervention programs based on EI methods has demonstrated good results to reduce adverse mental health results. According to previous research, emotional intelligence in the life of infants, encompasses elemental aspects that intervene in the life of a child, improving how the child faces and solves problems in daily life, whether in the school, family or social environments [20–22].

EI also plays an important role since through it, children can develop strategies and skills that allow them to recognize and express their own emotions in themselves how and in others, and maintain satisfactory interpersonal relationships [22–25]. Within components mentioned by Bar-On's mixed model to describe emotional intelligence, benefits such as, successful adaptation to the environment, and prevention of negative behaviors such as aggressiveness or disruptive behaviors, stress, antisocial behaviors, depression, harmful behaviors, as well as negative emotions that can affect the integrity of children [26,27]. Developing emotional skills in early stages of life, works as a strategy that optimizes the child's resources in the face of adverse situations [28].

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On the other hand, social distancing measures implemented as prevention for the COVID-19 pandemic have transformed the dynamics of life in childhood, and it has been pointed out that one of its consequences is the increased vulnerability of this population to present serious mental health problems [29]. Findings during the pandemic suggested that children and adolescents with anxiety, mood or stress-related disorders experienced an intensification in symptoms, while those diagnosed with neurodevelopmental disorders showed increased symptomatology, both of which have been associated with changes in routines and household structure, as well as fear of contagion or death of a close person [30]. These conditions prompted mental health professionals to implement novel strategies to continue providing their services so that remote psychological intervention has become increasingly prevalent. The implementation of remote interventions is framed within the concept of "telehealth" which refers to the remote implementation of services related to mental health or physical health for assessment, prevention and intervention [31]. In this regard both the APA and the National Association of School Psychologist (NASP) have published some recommendations for the implementation of distance psychological care services noting that it is important to maintain the validity and reliability of procedures when adapting them to the virtual modality [32,33]. Corresponding to the increase in the implementation of remote psychological services, there is an increase in research aimed at verifying their efficacy, however, studies aimed at exploring child care services are more scarce. Understanding the reliability, effectiveness, and self-reported aspects of childhood intervention is essential to evaluate and optimize the use of remote mental health services [34].

Recent findings identify advantages associated with accessibility, since a significant part of the population has electronic communication devices, reduced transportation times, especially in rural regions, and the inclusion of psychoeducation in treatments. Particularly in the young population, it has been pointed out that digital technologies may represent an attractive, inexpensive, accessible and clinically significant way to address mental health problems in children and adolescents [35,36]. Benefits achieved with the incorporation of programs which involve EI training, are increase of the social skills and satisfactory interpersonal relationships, decrease of self-destructive thoughts and better self-esteem. In addition, through the incorporation of programs, there could be a decrease in the rate of violence and aggression and less antisocial behavior, as well as improved academic performance. Other benefits are also described, such as a decrease in the initiation of alcohol, tobacco and drug consumption, a decrease in sadness and depressive symptoms [37]. And other problems such as anxiety and stress. However, currently there are only few programs based on EI training, and the number is even more limited for home care populations.

The above mentioned emphasizes the importance of implementing strategies, among children's development and the creation and implementation of intervention programs, considering available resources under critical conditions and social isolation, as well as lack of access or availability to mental health services. The objective of this work was to evaluate the effectiveness of a remotely administered intervention program based on emotional intelligence in children living in residential care home under social isolation during pandemic lockdown.

2. Materials and Methods

2.1. Participants

Participants in this study were children between 7 and 11 years old four female and three male with a minimum of 7 and a maximum of 11 years old, the average age of the participants was nine years old (SD 1.41), all living in RCH located in a rural region of Mexico (Table 1). Due to ethical regulations from RCH services and institutions in Mexico no further clinical background or family history was provided.

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Table 1. Participants' demographics.

Participant No.	Age	Gender	Elementary school grade
Child 1	10	F	4th
Child 2	11	F	5th
Child 3	8	M	2nd
Child 4	9	F	3rd
Child 5	8	M	3rd
Child 6	10	M	3rd
Child 7	7	F	2nd

2.2. Instruments and materials

Evaluation of Neurological Soft Signs (ENSS) [38], this evaluation was applied in order to rule out the presence of neurological or sensory conditions that could impede basic psychological or sensory processes required for access to the assessment and intervention activities designed in the program. The evaluation consisted in delivering instructions to the child, tasks consisted in evaluating: gait (walking along a line on the floor), pencil grip, articulation (words repeating), visual acuity, right-left discrimination, dysdiadochokinesis (coordination of hand movements), and digital opposition movements, auditory discrimination was not evaluated because of sensitivity problems due to distance assessment; however, deficiencies in this sensory modality were ruled out by response to sound stimuli and the opinion of the caregiver.

To measure emotional intelligence, the Emotional Intelligence Questionnaire EQ-I by Reuven Bar-On [39] was used, translated into Spanish by Dolores Prieto [40] and considers 5 components of emotional intelligence: intrapersonal component, interpersonal component, stress management component, adaptability and general mood.

After each intervention session, a likert scale feedback questionnaire on the general well-being of the participants was administered. The questionnaire consisted of 5 questions related to subjective sensation of achievement of the session's objective, sensation of well-being and mood, follow-up to the administered tasks and attention.

2.3. Procedure

All procedures of the RA-EIBI were sequenced in three phases:
Phase I: Initial Diagnosis. A telephone link was made with one of the caregivers of the children's home 15 minutes before the application, in order to prepare the space and work materials for the child. Subsequently, a digital link was made with the child, and the applicator introduced himself briefly. A computer was provided to the RCH for liaison with the participants. Subsequently, a digital link was made with the child and the application of the EQ-I Emotional Intelligence Questionnaire was delivered by using a Google Form. The application time of the questionnaire lasted approximately 40 minutes. For the application, the instructor requested the support of a caregiver to be available for any doubt of the child and to supervise that the child remains attentive to the instructions.

Based on this first evaluation, the intervention program was designed giving greater interest to the intrapersonal, interpersonal and stress management components of the Bar-On mixed model, where the lowest scores were obtained. This decision also took into account the breadth of the components and subcomponents that encompass emotional intelligence as well as the limited time available in the home for the application of the program.

RA-EIBI program was designed considering the following EI domains according to Bar-On:

- Intrapersonal component (IPC) - Area that brings together the following components: emotional self-understanding, assertiveness, self-concept, self-actualization and independence. - Emotional self-understanding (CM): The ability to notice and understand our feelings and emotions, differentiate them and know the reason for them. - Assertiveness

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(AS) - The ability to express feelings, beliefs and thoughts without hurting the feelings of others and to defend our rights in a non-destructive manner. - Self-concept (SC) - The ability to understand, accept and respect oneself, accepting our positive and negative aspects, as well as our limitations and possibilities. - Self-Realization (SR) - The ability to do what we can, what we really want, enjoying what we do. - Independence (IN) - The ability to be self-directed, feeling self-confident in thought, actions and being emotionally independent to make decisions.

- Interpersonal Component (IC) - Area that brings together the following components: empathy, social responsibility and interpersonal relationship. - Empathy (EM): The ability to notice, understand and appreciate the feelings of others. - Interpersonal Relations (IR) - The ability to establish and maintain mutually satisfying relationships that are characterized by emotional closeness and intimacy. - Social Responsibility (SR) - The ability to demonstrate oneself as a cooperative, contributing, and constructive member of the social group.

- Adaptability Component (AC) - An area that brings together the following components: reality testing, flexibility, and problem solving. - Problem Solving (PS) - The ability to identify and define problems as well as to generate and implement effective solutions. - Reality Testing (RT): The ability to evaluate the correspondence between what we experience (the subjective) and what exists in reality (the objective). - Flexibility (FL): The ability to make an appropriate adjustment of our emotions, thoughts and behaviors to changing situations and conditions. Stress Management Component (SMC) - An area that brings together the following components: stress tolerance and impulse control. - Stress Tolerance (ET) - The ability to withstand adverse events, stressful situations and strong emotions without "falling apart," actively and positively coping with stress. - Impulse control (IC) - The ability to resist or delay an impulse or temptations to act and control our emotions.

- General Mood Component (GMC) - The area that brings together the following components: - Happiness (HA).- The ability to feel satisfied with our life, to enjoy ourselves and others, and to have fun and express positive feelings. - Optimism (OP) - The ability to see the brighter side of life and maintain a positive attitude, despite adversity and negative feelings.

Phase II. Intervention (see Appendix A for further details).

In this phase the intervention program was applied remotely, applying a total of 10 sessions per child over the course of three months from march 19th to may 21st, ach individual session lasted approximately 40 minutes. The RCH designated a caregiver to help monitoring the child during the session so that he/she could verify and assist the child during the application if necessary. In addition, a space was also located within the home, away from the rest of the children, free of noise and possible distractions.

For the application of this stage, prior to the sessions, resources and didactic materials were provided to the children, in order to make the application of the intervention program more efficient. Sessions were scheduled as shown in Table 2.

Table 2. Intervention schedule

Intervention session and objective	**Date**
Session 1. Introduction to intervention	March 19th-20th
Session 2. Emotional Identification	March 26th-27th
Session 3. Assertiveness	April 9-10th
Session 4. Self-concept (team-work session)	April 17th
Interpersonal Component	
Session 5. Empathy	April 23rd
Session 6. Interpersonal relations (team-work session)	May 7th-8th
Stress Management Component	
Session 7. Commend.	May 14th-15th
Session 8-10. Impulse control.	May 21th-22nd

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Phase III. Final diagnosis. In this phase a final evaluation of the Emotional Intelligence Questionnaire EQ-Il was applied. With this second application of the questionnaire, a comparison was made with the results of the initial and final diagnosis, in order to know if there is a favorable change in the emotional intelligence of the children in the children's home once the intervention program was applied. A telephone link was made with one of the caregivers of the home minutes before the application. Subsequently, a digital link was made with the child. The estimated time for this session was approximately 40 minutes per participant. For the application, the instructor also requested the support of a caregiver available for any questions the child might have and to ensure that the child remained attentive to the instructions.

2.4. Ethical considerations

Integral Family Development (DIF due to its initials in spanish) properly analyzed and accepted the implemented protocol in children. In addition, the assessment procedures and intervention project was sent to be evaluated by the Graduate Research and Ethics Committee of the faculty, which resolved to ethically validate the intervention project, registration POSG/020-2-01.

2.5. Data analysis

Descriptive statistics were performed to summarize the empathy coefficient measures. The Shapiro Wilk test for normality was applied Due to the sample size and measurement levels, the Wilcoxon nonparametric test for related samples was applied, using the empathy coefficient measures as the dependent variable and pre- and post-treatment as the independent variable.

3. Results

During the intervention process, in the course of the sessions the children showed good adaptability to the activities. Sessions were delivered using Google Meets, most of the time and the caregiver regularly helped the child if he/she had difficulties with the computer. The administration of the ENSS showed adequate performance of soft neurological functions in children, ensuring adequate access to the interaction necessary for the evaluation of EQ and the administration of the RA-EIBI. Subsequently, results gathered from Google Forms were captured and it was corroborated that the database was saved within the minimum and maximum parameters established for each indicator and that there were no data outside the predicted ranges. Afterwards, the normality of the variables was evaluated using the Shapiro-Wilk test. The results of the normality test proved to be significant, indicating non-normal data; therefore, non-parametric statistics were used, and the Wilcoxon t-test for paired measures was chosen. Since it is the appropriate test to perform the corresponding analysis, looking to find if the RA-EIBI demonstrates differences before and after its administration to children living in a RCH, data was submitted to a non-parametric Wilcoxon t-test for comparison of paired samples, results can be seen in Table 3. Results of the test showed that the comparisons between each of the components in the pre and post evaluations showed no significant differences. Afterwards we looked for describing the level of EI of children living in RCH condition during social isolation pandemic period. The averages of the responses for the different components were obtained, as can be seen in Table 3. Average scores in the pre-test or first measure are 2.53 and in the post-test is 2.59, considering that the maximum response score is 4, average scores are considered in both measures.

Self-reported well-being after each session followup showed a particular decrease in five children in session number 7 (Figure 1), which took place on may 14th during a critique period of the social isolation implemented in the institution. However, for all children subjective well-being improved by the end of the intervention.

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Table 2. Comparisons of EQI scores before and after emotional intelligence treatment.

EI Domain	Pre Treatment		Post Treatment		
	Mean	SD	Mean	SD	p
Intrapersonal	2.38	.525	2.43	.659	.833
Interpersonal	2.11	.675	2.32	.450	.339
Stress Management	2.29	.970	2.62	.651	.553
Adaptability	2.71	.668	2.86	.556	.672
Mood	3.19	.813	2.76	.787	.203
EQ	116.8	5.01	117.85	4.14	.351

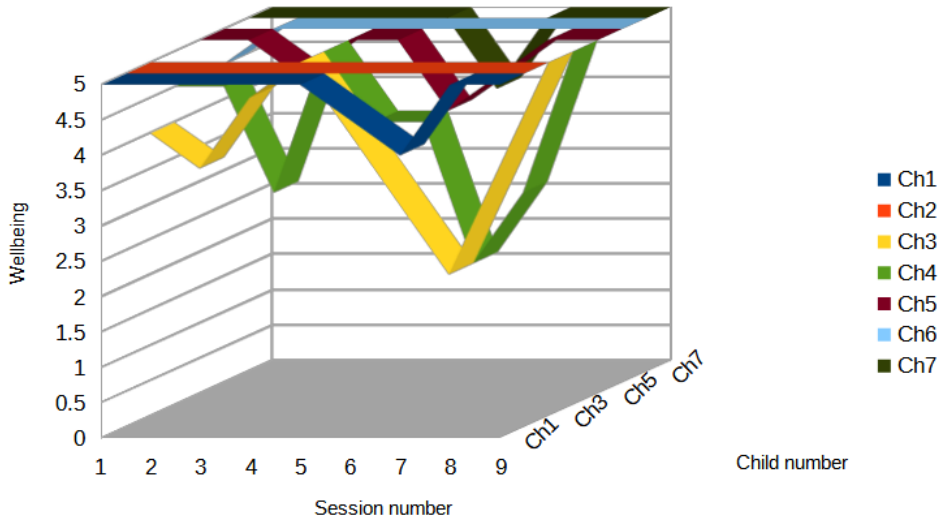

Figure 1. Means of self-reported followup session effect over general wellbeing (higher values in ordinal scale represent higher self-reported wellbeing).

4. Discussion

The results of this research deliver a development and application of an intervention proposal based on emotional intelligence to promote the development of emotional skills for children in vulnerable conditions. Considering that developing emotional skills in early stages of life will work as a strategy that will allow us to optimize the child's resources in adverse situations. Due to the voluntary social isolation established by the contingency derived from the COVID-19 pandemic, this program was developed under online distance administration criteria through video-calls and the administration of evaluation instruments by online forms. Considering the contingency derived from a health emergency in progress a decline in empathy and EI skills was expected according to previous research [17], including conditions of low social support or left-behind children[41]. As can be seen in the results obtained in the statistical tests of our study in children living in residential care, there are no significant differences between the samples, suggesting that emotional intelligence remained unchanged before and after the intervention during the period of social isolation by COVID-19.

Similar results report the effect of remote psychological intervention in a child population, as well as possible differences compared to an adult population [34]. Hoffnung and Collaborators analyzed data from 43,294 services provided during the first six months of 2020 at the beginning of the pandemic in a public mental health clinic in New York. Their results demonstrated significant differences between child and adult sessions, with a significant decrease in the number of child psychotherapy services compared to the

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pre-pandemic period, with a rapid increase in face-to-face services when they resumed, suggesting that the distance modality is less preferred by infants compared to adults. This pattern was not present in psychiatry services, which is interpreted as a greater ease of maintenance of care of a more pragmatic type.

Institutionalization is the first alternative for the care of children who, for various reasons, cannot be cared for by their families. However, government protection is not exempt from significantly impacting child development [42–44]. In a study conducted by Desmond et al. in 2020 [45], it was estimated that by 2015 in the world, there were about 5.37 million children under government care (95% CI 3.18-9.42 million), while in Mexico, a total of 188,246 cases were estimated (95% CI 185,853-190-639). Related literature has reported that children in conditions of institutionalization receive impersonal care that is often of low quality and have a high risk of exploitation and physical and emotional abuse, in addition to the fact that they may suffer from medical conditions that are not adequately attended to and face psychosocial deprivation. All these conditions, combined with other adverse experiences prior to institutionalization, can have consequences that affect their physical health (growth suppression, alteration in pathways associated with experiencing and regulating stress such as the hypothalamic-pituitary-adrenal axis), their development (cognitive, neurological and social) and their social development which significantly impacts their quality of life and has short, medium, and long term consequences related to school success, cognitive skills, personal and work opportunities, development of metabolic diseases, and constant relapse in mental health problems [45–47]. Social-emotional difficulties, bonding, and mental disorders are among the most persistent effects and may remain even after adoption, even if it occurs in early childhood. It is estimated that they have a five times greater risk of psychopathologies such as depression, schizophrenia, and post-traumatic stress disorder compared to children living with their families and three times greater than children coming from disadvantaged families [42–44,46,47] conducted a study in the central region of Sri Lanka with 259 children and adolescents aged 6 to 18 years, residing in institutions under government care for periods ranging from 6 months to 15 years. The Child Behavior Check List-S (CBCL-S) was applied to assess the presence of problematic behaviors. Among the causes of institutionalization, the most frequent were the unfavorable family situation, followed by sexual abuse, neglect, and legal custody proceedings. Several life conditions of children living in RCH, represent a challenge for improving and optimizing well-being and mental health, as well as EI skills. These children have usually been exposed to a large number of adverse situations, including neglect of care, maltreatment, and physical, psychological, or sexual abuse, which places them as the most vulnerable child population and suggests that their mental condition may result not only from institutionalization but from an interaction of this condition with pre-existing mental conditions, biological risks, exposure to maltreatment and generated resilience; furthermore, data suggest that the risk increases with the length of stay in the institution [42–44,46,48,49]. Our results showed that delivery of EI intervention during critical periods of development, can help maintaining EI skills and empathy.

Part of the variability in the presence of mental and emotional problems in the institutionalized child population can be attributed to the institutionalization experience itself [43,46,48]. In this regard, the absence of a stable primary caregiver has been referred to as parental deprivation or structural neglect. Structural neglect has a significant impact on the quality of interactions with caregivers since institutions are characterized by a low possibility of providing individualized care, high rates of staff turnover, a high proportion and heterogeneity of children in the care of a single caregiver, lack of training for staff to promote development, manage stress and improve feelings of support. Which significantly impacts their cognitive and motor stimulation and the possibility of establishing affective bonds with the adult [43,44,48]. Other research has reported high variability in the quality of care included a high frequency of caregiver turnover, high averages of children in caregiver care, and a lack of warmth, sensitivity, and responsiveness in child-caregiver interactions. Forty-two caregivers from these similar samples, on average, they dedicated

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approximately 25 minutes to individual attention. The presence of previous maltreatment, stability in caregiving, and behavioral problems were assessed. Multiple regression analyses showed that early maltreatment and low stability in care predicted externalizing behavioral problems, while this relationship was not present [48]. In addition, it has been described that these children have less positive relationships with peers, receive negative attitudes from their schoolmates, and experience a lack of individuality imposed by the conditions of the group in which they live and their previous negative experiences. Furthermore, it is suggested that these conditions prevail during later stages of their lives even when provided with a more favorable nurturing environment [42,43]. Other studies have shown that children in institutionalized conditions tend to have a poorer understanding of emotions and are less skilled at recognizing emotional facial expressions than children living with their families. They manifest hypervigilance to danger cues, have selective attention to nonverbal cues, and magnify them, which is related to difficulties in emotional regulation, tolerating unpleasant feelings, and experiencing positive emotions [46,47].

A potentially worrisome scenario according to literature [50], most of the studies have been conducted in other countries, and there are no reports from Mexico. Two-thirds of the studies were conducted with student participants, and only one intervention in the study focused specifically on Emotional Intelligence; in the reported intervention, participants attended a workshop, which included content on perceiving emotions, using emotions to facilitate thinking, understanding emotions in self and others, and managing emotions. Thus research in the literature shows that there is little or no intervention work on emotional intelligence in distance modalities and in pandemic situations. As mentioned at the beginning of this work, through the Social Assistance Law for the State of Baja California, we can find that the minors who enter the children's RCH have characteristics such as being abandoned, homeless, malnourished or obese, subject to abuse or exposed to being victims of exploitation or corruption; also in some cases they may be juvenile offenders or in many cases victims of domestic violence and vulnerable minors due to their continuous exposure to the street. Due to the aforementioned characteristics, it is important to emphasize that the role of parents, family or caregivers is crucial for the healthy development of children. Although this program has been designed for children in children's homes, it would be important to consider in future interventions the possibility of incorporating families or caregivers, since they play an important role in the development of children.

5. Conclusions

As mentioned in the previous sections, the implementation of this project had different challenges. Interventions based on emotional intelligence offer an advantage for the development and mental health of children living in RCH; their administration through the provision and use of resources in the face of critical conditions such as social isolation due to pandemics is challenging, however, the effective systematization of an intervention program can reduce the effects that such conditions have on children's mood. The program partially responds to the needs of a population that has very specific characteristics due to its family background and abuse/neglect experiences. A general emotional intelligence intervention program is not sufficient to equip them with the necessary tools to cope with such adverse circumstances and the impact on their emotional health.As possible future studies, it would be considered important to approach this problem from an integral perspective that considers not only evaluating emotional intelligence but also cognitive aspects in this type of population. Considering as a point of reference that children in RCH may present particular conditions due to the context in which they have developed. It would be vital to consider these aspects in future studies in order to rule out that the interventions really have a positive effect on the child. In addition to considering a control group to corroborate that regardless of the differences between the participating groups, the treatment is or is not effective. Regardless of the aforementioned challenges, there is a clear need for interventions or actions that promote the development of emotional intelligence,

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since as was observed in results from this study. Similarly, in the future we could consider the participation of the caregivers during the interventions, once it is the caregiver who is responsible for monitoring children in most of the activities and modeling behaviors and skills that are desired in the child, within the children's home.

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Institutional Review Board Statement: This research was conducted in accordance with the ethical guidelines for research involving human participants and considering the age of the participants. All national and international standards were considered, as well as the internal regulations of the participant institutions. In addition, the protocol implemented was satisfactorily endorsed by the Institutional Review Board of the Engineering and Business Faculty provided in supplemental materials.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study. Further details about informed consent can be revised in supplementary materials.

Data Availability Statement: Database release pending.

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Conflicts of Interest: The authors declare no conflict of interest.

Abbreviations

The following abbreviations are used in this manuscript:

RA-EIBI	Remote-Applied Emotional-Intelligence-Based Intervention
RCH	Residential Care Home
EQ	Empathy Quotient
UNICEF	United Nations International Children's Emergency Found
ENSS	Evaluation of Neurological Soft Signs

Appendix A

Appendix A.1

Remote-Applied Emotional-Intelligence-Based Intervention consisted in a sequence of 10 sessions delivered by means of a video call by a psychologist professional, sessions objectives and tasks are listed below. Each session lasted 40 minutes followed by a final feedback survey.

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Table A1. RA-EIBI General description.

Program design
Program type: Primary preventive program Prevention type: Selective prevention program Administration procedures: remote video call
Target population
Selected population for the program: children aged 7-11 years old, excluding any neurological or sensory condition which may prevent treatment appropriate delivering.
General objectives
Knowing emotions and how they manifest themselves, where they come from and what they provoke, bearing in mind that emotions guide attitudes and are the protagonists of decisions.
Intervention general procedures
The intervention format is remotely administered individually and in pairs. Ten sessions.

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Table A2. Abstract of sessions objectives and activities.

Module	Session	Objective	Activities
1. Introduction.	Creation of links and establishment of rules.	To create a bond of trust and communication between the program instructors and the child, as well as to establish simple rules that allow them to carry out each of the activities in an optimal manner.	1. Know-me: general and personal presentation. 2. Personal features, preferences, and play simulations using fantastic heroes. 3. Game rules: Simple rule explanation for improving activities performance. Explanations which are needed to accept activities and guidance through the sessions.
2. Intrapersonal component.	Emotional identification.	Improve children's ability to identify, express or share their own emotions and feelings with others.	1. Emotion guess: emotion identification using facial expressions and guessing the correspondence to basic and complex emotional states. 2. Expression of the emotional states of self and others guided by the instructor. 3. The Feelings Mailbox: children use graphical materials to help identifying and expressing feelings and emotions, and delivering them by means of cards on each followup sessions.
	Assertiveness	Give feedback on the activity that the child developed during the week with the emotions mailbox.	1. Instructor gives feedback on the homework that was left for the child during the week (the emotions mailbox) 2. Three types of communication: explain to the child in an entertaining way the three types of communicative style we can find: passive, aggressive and assertive, using analogical fictitious characters (a turtle and a dragon). 3. Movie watch: The video illustrates a situation where the animals have not known how to solve conflicts and have not been able to communicate assertively.
3. Interpersonal component.	Self-concept.	Strengthen the ability to establish and maintain satisfactory relationships, by understanding the feelings of others and being responsible and cooperative with their environment.	1. Listen to the positive opinion and qualities that some of their peers identify in them. 2. That the child can identify and visualize new expectations for the future.
	Empathy	Identify emotions and put themselves in the place of the characters in the story.	1. The Emotion tales: Movie watching. 2. Conduct feedback on the emotion story to learn about the child's understanding.2. Conduct feedback on the emotion story to learn about the child's understanding.
	Interpersonal relations.	Learn the steps to perform the greeting in a simple way.	1. Through a talk, the child will be taught about the greeting. The child will be asked: Have you ever seen a greeting? What does it look like? The instructor will explain that the greeting consists of three simple steps. Children will use pictures to explain each step. 2. Practice.
	Commend	Know important aspects of praise in three simple steps.	1. Instructor will begin by explaining what praise is and guiding through key questions. 2. Practice: practice commends with one of their peers, supervised by the instructor.
4. Stress management.	Impulse control (three sessions).	Strengthen the child's ability to resist and control emotions in stressful situations.	1. Children identifies his or her own internal sensations prior to the "outburst" or anger and, thus, to be able to control it. 2. Identify children's physical sensations that he/she presents when he/she begins to feel nervous and/or lose control and at what times this occurs. 3. Identify children's reaction when loosing control. 4. Delivering strategies for anger management. 5.Identify and practice breathing techniques for impulse control. 6. Closing and farewell.

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