RESPONDING TO THE MENTAL HEALTH NEEDS OF CHILDREN IN A PUBLIC HEALTH SERVICE IN BRAZIL: THE USE OF DANCE IN A PILOT GROUP PSYCHOSOCIAL INTERVENTION

RESPONDENDO ÀS NECESSIDADES DE SAÚDE MENTAL DE CRIANÇAS EM UM SERVIÇO DE SAÚDE PÚBLICA NO BRASIL: O USO DA DANÇA EM UMA INTERVENÇÃO PSICOSSOCIAL GRUPAL PILOTO

RESPONDIENDO A LAS NECESIDADES DE SALUD MENTAL DE LOS NIÑOS EN UN SERVICIO PÚBLICO DE SALUD EN BRASIL: EL USO DE LA DANZA EN UNA INTERVENCIÓN PSICOSOCIAL GRUPAL PILOTO

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ABSTRACT: The COVID-19 pandemic has further intensified the substantial demand for psychological treatment for children. However, in Brazil and various other nations, there is a lack of resources and evidence-based treatments focused on child mental health. Given this scenario, an evaluation of the efficacy of a pilot psychosocial group approach called "Operative Play Group" (OPG) was conducted within a public health service. This model aims not only to promote mental health but also to enhance equity through recognizing the social determinants of health. To measure behavioral problems, an analysis grounded in the principle of Intent-to-Treat was employed. However, this analysis did not demonstrate the effectiveness of the intervention. Nevertheless, through comprehensive research of cases, it was found that the program positively impacted the internalizing issues observed in children. The OPG model presents a distinctive feature as it stands out as one of the few methods incorporating dance. Dance can foster the expression of emotions and expand bodily perception. The findings of this study suggest the feasibility and relevance of utilizing body movement and dance as practical components in psychosocial interventions.

KEYWORDS: Child. Public health. Play therapy. Dance. Social determinants of health.

RESUMO: *A pandemia da COVID-19 intensificou ainda mais a já substancial demanda por tratamento psicológico destinado a crianças. Entretanto, no Brasil e em diversas nações, há uma carência de recursos e tratamentos direcionados à saúde mental infantil que se embasem em evidências empíricas. Diante desse cenário, foi realizado uma avaliação da eficácia de uma abordagem psicossocial grupal piloto denominada "Grupo Operativo Lúdico" (GOL) em um serviço público de saúde. Esse modelo visa não somente promover a saúde mental, mas também contribuir para o incremento da equidade por meio do reconhecimento dos determinantes sociais da saúde. No intuito de mensurar os problemas comportamentais, uma análise fundamentada no princípio da Intenção de Tratar foi empregada. Contudo, essa análise não evidenciou a eficácia da intervenção, no entanto, por meio de uma análise compreensiva de casos, constatou-se que o programa teve impacto positivo sobre as problemáticas internalizantes observadas nas crianças. O modelo GOL apresenta uma particularidade marcante, visto que se destaca como um dos escassos métodos que incorpora a dança em sua abordagem. A dança possui o potencial de fomentar a expressão de sentimentos e de expandir a percepção corporal. Os achados deste estudo sugerem a viabilidade e a relevância da utilização do movimento corporal e da dança como componentes eficazes em intervenções psicossociais.*

PALAVRAS-CHAVE: *Criança. Saúde pública. Ludoterapia. Dança. Determinantes sociais da saúde.*

RESUMEN: *La pandemia del COVID-19 ha intensificado aún más la ya considerable demanda de tratamiento psicológico para niños. Sin embargo, en Brasil y en varios otros países, faltan recursos y tratamientos dirigidos a la salud mental infantil basados en evidencias empíricas. Ante este escenario, se realizó una evaluación de la eficacia de un abordaje psicosocial grupal piloto denominado "Grupo Operativo Lúdico" (GOL) en un servicio público de salud. Este modelo pretende no sólo promover la salud mental, sino también contribuir a*

aumentar la equidad mediante el reconocimiento de los determinantes sociales de la salud. Para medir los problemas de conducta, se utilizó un análisis basado en el principio de intención de tratar. Sin embargo, este análisis no mostró la eficacia de la intervención, sino que, mediante un análisis exhaustivo de los casos, se comprobó que el programa tenía un impacto positivo en los problemas de interiorización observados en los niños. El modelo GOL tiene una particularidad llamativa, ya que destaca por ser uno de los pocos métodos que incorpora la danza en su enfoque. La danza tiene el potencial de fomentar la expresión de sentimientos y ampliar la percepción corporal. Los resultados de este estudio sugieren la viabilidad y pertinencia de utilizar el movimiento corporal y la danza como componentes eficaces en las intervenciones psicosociales.

PALABRAS CLAVE: *Infancia. Salud pública. Juegaterapia. Danza. Determinantes sociales de la salud.*

Introduction

A study by Polanczyk *et al*. (2015), conducted a systematic literature review using standardized assessment methods based on diagnoses according to the DSM or ICD. This study estimated that the global prevalence of mental health problems in children and adolescents was 13.4%. Therefore, the demand for child psychological treatment is high, but less than half of those in need receive any treatment. Additionally, in Brazil and other low- and middle-income countries (LMICs) there is a lack of empirically evidenced treatments, and financial and human resources are scarce. Paula *et al*. (2012, p. 337, our translation) highlighted that in Brazil, "[...] there is a gap in services for children and adolescents with less severe and more common mental illnesses (approximately 90% of cases)."

Mental health problems have been exacerbated during the COVID-19 pandemic, and a recent Brazilian study by the State Department of Education of São Paulo and the Ayrton Senna Institute (2022) found that 70% of surveyed middle and high school students (starting from 11 years old) reported symptoms of depression and anxiety. The results were obtained through twelve questions about mental health symptoms, addressing factors such as concentration ability, sleep, decision-making, or life satisfaction. The responsibility for treating these individuals falls upon Brazil's public health system, the Brazilian National Health System (SUS) (PEREIRA *et al.*, 2004).

The SUS is one of the largest and most complex public health systems globally. Its purpose is to ensure comprehensive, universal, and unrestricted access to all segments of the national population. The various levels of care and services offered by the SUS aim to mitigate

disparities and promote equity, grounded in recognizing the social determinants of health. Within the scope of the SUS, the provision of mental health services is realized through the Psychosocial Care Network (RAPS), an entity that seeks to guarantee the availability of excellent benefits, provide comprehensive care, and offer multi-professional assistance through an interdisciplinary model. The RAPS, guided by foundational principles, is primarily dedicated to providing support aligned with the needs of individuals affected by mental disorders, establishing various services corresponding to different demands.

The intervention mentioned in this context originated in response to a specific request from the *Centro Municipal de Atendimento Psicopedagógico e Fonoaudiológico[3]* (CEMAP *José Natal Capovila*, an organization assisting in child health located in the municipality of *Valinhos*, *São Paulo*, Brazil. This center is part of the RAPS/SUS network. CEMAP expressed interest in adopting a group-based psychological approach to expand treatment capacity and reduce the waiting list for confident children's mental health conditions. The lead author of this study had prior experience with a specific model of group-based psychosocial intervention, the details of which will be outlined in the course of this work. This group intervention, which incorporates an innovative approach to public health by utilizing dance as a resource, was named the Operative Play Group (OPG). This research focused on evaluating the efficacy of the OPG model in treating children facing psychological issues within the context of a public child health service.

The Operative Play Group (OPG) Model

The purpose of the OPG Model is to promote mental health and enhance equity by recognizing the social determinants of health within the context of public child care in Brazil. This psychosocial group approach draws inspiration from various perspectives in social psychology (CIAMPA, 1987; PICHON-RIVIÈRE, 2000), educational concepts (FREIRE, 2005) and principles of dance (LABAN, 1990). The organizational structure is grounded in the ideas of complex systems theory developed by Itala Lofredo D'Ottaviano and Ettore Bresciane Filho (2019), and colleagues at the Center for Logic, History of Science, and Epistemology at the State University of Campinas. This complex perspective is characterized by interdependent element relationships, categorized into three distinct types: 1 - internal, 2 - boundary, and 3 - external. Within our model, internal and boundary elements are interpreted as therapeutic

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[3] In English, the translation would be:Municipal Center for Psychopedagogical and Speech Therapy Services.

components due to their mechanisms' capacity to induce transformations in children's identities, thereby enhancing their autonomy and promoting improvements in their mental health.

The internal therapeutic elements encompass the group process and the identity process of each group member, two processes that co-occur. To understand the group process, materialist and dialectical theory was incorporated based on the work of psychoanalyst Enrique Pichon-Rivière, who formalized the concept of the operative group. The term "operative" signifies the ability to instigate psychological changes. The operative group is a gathering of individuals brought together by shared time and space, united by their mutual internal representations, with an implicit or explicit goal of accomplishing a task.

The straightforward job involves stimulating group learning and thinking rooted in the existing teaching and learning process among participants while also engaging in a specific study (educational or therapeutic). The implicit job involves addressing communication obstacles and reducing fundamental fears, such as the fear of attacks or losses, that arise within the group context. In this regard, it is relevant to mention the work of Rosa Jaitin de Langer (1983) who utilized the operative group model to treat children with behavioral and learning problems in Argentina.

In the OPG model, the explicit task is generated through a process of collective instruction and learning, encompassing three socio-emotional competencies - group coexistence, psychosocial esteem, and creativity - and the expansion of awareness of individual identity within a group. These competencies are akin to the concept of socio-emotional skills outlined by Del Prette (DEL PRETTE; DEL PRETTE, 2013, GUIMARÃES; COSTA; LESSA, 2022). Group coexistence is characterized by the dynamic configuration of intrinsic and extrinsic relationships among individuals, encompassing different modes of communication and collective instruction-learning based on individual similarities and differences. Emphasizing this competence is relevant, as it is recognized that children facing significant mood changes, loss of interest in everyday activities, or difficulty in impulse control - traits associated with depression and anxiety - often encounter challenges in interpersonal interactions.

The capacity for self-esteem, previously highlighted in related studies, is embedded within the realm of psychosocial esteem, defined as a process of instruction-learning encompassing comprehensive self-management (mental, physical, and interpersonal) and the management of others. This concept has its roots in the ideas of Pichon-Rivière, based on the three spheres of conduct manifestation (mental, physical, and external environment). As

outlined by this author, creativity is intrinsically linked to mental health, as individuals strive to conceive solutions to everyday challenges through the dialectical interaction between the inner and outer worlds.

During OPG group sessions, children are encouraged to observe transformations in their identities and those of the group members. Drawing from Ciampa contributions (1987), identity construction is conceived as a continuous process of individual metamorphosis towards emancipatory opportunities. It is through social interactions that individuals establish unique ways of engaging with the world. In more direct terms, their identity is inherently linked to their social identity. In this complex process of building personal identity, intricate with various social factors such as class, race, and gender, similarities, and divergences manifest in interpersonal interactions (MEIRELLES-SANTOS, 1995).

The group process, whose primary objective is to foster children's identity development and enhance their mental health, is mediated through dialogues inspired by the work of the Paulo Freire Institute, in São Paulo, notably the concept of problem-posing dialogue. This concept involves perceiving reality as being conflictual and thus historical and fluid. The group process also employs welcoming dialogue, resembling the approach of Child-Centered Group Play Therapy (CCGPT) (SWEENEY; BAGGERLY; RAY, 2014) a system where the child is unconditionally accepted during group sessions.

This dialogical approach can be mediated through cognitive and playful resources and primarily through "bodily resources," such as dance. Developmental psychology has shown that addressing children is impossible without considering the bodily dimension and its connections with cognitive, emotional, and social dimensions. In the context of the OPG model, the primary physical resource employed is dance, inspired by Laban's conceptions (1990). In the model, dance - occupying a central position - plays a significant role, paving the way to stimulate the expression of emotions and deepen bodily awareness.

Within this child-focused approach, the innate drive of children to move their bodies is recognized as an inherent form of release. This perspective fosters a heightened perception of the body and emotions, presenting the following characteristics: 1- preservation of the spontaneity of movement; 2- acceptance of one's movement limitations and the limitations of others without labeling them as mistakes; 3- promotion of children's creative expression; 4- stimulation of the perception of the flow of bodily movement and its mastery; and 5- facilitation of grasping the interconnections between mental dimensions (feelings, thoughts, desires, fantasies, etc.) and physical ones.

Laban (1990) formulated four components of human movement: weight, time, space, and flow. These factors intertwine, with the body's or its parts' weight being propelled through space during a designated time interval, regulated by the flow of movement. It's crucial to emphasize that movement transcends the sum of these factors and should be experienced and understood as a coherent whole. Learning these movement elements can heighten bodily awareness and the expression of feelings, enabling integration between cognitive learning and motor development during group sessions with children.

In the dance-based OPG model, the development of bodily perception is realized through three distinct approaches: 1 - understanding the complexity of physical components, including the head, torso, limbs, the five senses, and their respective systems (such as muscular, circulatory, and skeletal); 2 - analyzing the impacts of bodily movement on the inner universe (intrapersonal relationships) and the external environment (interpersonal relationships) through discourse; and 3 - exploring the potential connections between the mind (feelings, thoughts, desires), the body, and interactions (with family members, school peers, or institutional figures, for example). This approach to dance exploration shares certain similarities with the Theraplay model (SIU, 2014), where self-regulation through physical movements is cultivated. This foundational developmental capacity in children establishes co-regulation experiences focusing on physical and emotional regulation.

To encourage the expression of feelings, we employ a dialogue centered around the emotions emerging during bodily movement, encompassing both intrapersonal and interpersonal dimensions. Webb (2003) also adopts this body movement to enable children to express their feelings in psychological interventions. Lastly, the underlying task of the OPG involves discussing communication obstacles and fears that may arise within the group. The approach of the boundary therapeutic element, whose dynamics lie between the internal and external realms of the group, represents another integrated responsibility in the group therapist's role. The therapist serves as a communication intermediary during group sessions with children and mothers and between the institution and other external components, acting as a connection among the distinct elements present in this approach.

The external elements are represented by the family, school, social media, CEMAP/RAPS/SUS, and social, economic, and political conditions. It is crucial to underscore that comprehending the dynamics of psychosocial groups necessitates understanding the characteristics of the society in which these groups operate. For this reason, this intervention

adopts a critical social perspective that incorporates the effects of social determinants of health (such as poverty, racism, homophobia, and violence) on children's behavior.

These themes are addressed during group sessions with the children. In this context, the OPG represents an effort to address and alleviate disparities in available resources for child mental health in a municipal public health scenario in Brazil. In summary, the OPG, whose central component is dance (as a bodily resource), aims primarily to promote child mental health through group sessions. The internal therapeutic elements manifest through the group instruction-learning process of the three skills (group coexistence, psychosocial esteem, and creativity) and potential modifications in the identity development of each group member.

Dance constitutes the central resource employed to encourage the expression of emotions and enhance bodily awareness, intending to promote child mental health and autonomy. It's possible to address communication barriers and fears that arise within the group through dialogues, which can be both problem-solving and welcoming. These elements, in conjunction, have the potential to enrich the network of meaningful associations in children, fostering a greater capacity for symbolization, awareness, and learning. Additionally, this psychosocial model can cultivate aspects conducive to promoting social justice, as throughout the group process, children can develop a heightened awareness of social determinants of health, such as racism and violence, which are experienced in everyday interactions.

Methodological Procedures

An exploratory randomized controlled trial was designed to assess the effectiveness of the dance-based OPG model. The sample comprised 54 children of both sexes, aged between 8 and 10 years (with 28 boys - 52%), residing in *Valinhos*, along with their mothers or legal guardians. These children presented internalizing and externalizing problems. Randomization divided the participants into two groups: the experimental group (EG, n=29) received the OPG therapy, and the waitlist control group (WLCG, n=25). The assessment of behavioral problems was conducted using the Child Behavior Checklist (CBCL/6-18) (ACHENBACH, 2001)- considering the perspective of mothers or legal guardians. Measurements were taken at the study's commencement (baseline) and after a 13-week program.

This study was authorized by the Research Ethics Committee of the Faculty of Medical Sciences-UNICAMP (No. 089/2009). The mothers or legal guardians of the children provided their informed and voluntary consent before participating in the study, allowing the inclusion

of their children or wards in the research. Additionally, authorization was obtained from the Health Department of *Valinhos*, a part of the RAPS/SUS network. This study **was registered in the Brazilian** Registry of Clinical Trials (*Registro Brasileiro de Ensaios Clínicos* [ReBec]; RBR-52y78f).

Program Components

This psychosocial group intervention was a 13-week program directed towards the children and their respective guardians or mothers. The program was divided into three distinct cycles: Cycle 1 focused on information collection and included Sessions 1 and 2; Cycle 2 was dedicated to development and encompassed Sessions 3 to 11; finally, Cycle 3 was designated for evaluation, covering Sessions 12 and 13. Before the start of Cycle 1, the mothers or guardians participated in an initial meeting during which the informed and voluntary consent form was completed. Additionally, the pre-treatment assessment was conducted by administering the Child Behavior Checklist (CBCL) (ACHENBACH; RESCORLA, 2001), the results of which were also collected. Following the conclusion of Cycle 3, a post-treatment assessment was conducted through the reapplication of the CBCL to evaluate the effects of the intervention.

Nine children discontinued their participation in the experimental group (EG) throughout the study. The reported reasons were as follows: lack of specific information (7 cases), change of residence to another city (1 case), and scheduling conflict (1 case). In the waitlist control group (WLCG), four children discontinued the intervention due to the need for emergency care.

Most of these children belonged to families with an average monthly income of US$ 533. They all attended elementary school and were exclusively referred for psychological care offered by the local Mental Health Service (CEMAP). Referrals were made by primary health care units, public schools, private medical professionals, and the Guardianship Council, an autonomous institution responsible for protecting the rights of children and adolescents in the Brazilian context.

The same social psychologist, previously trained in the theoretical and technical aspects of dance-based OPG, was responsible for conducting the seven experimental groups. Each group had at least two children and four, subject to weekly variations. The program conducted three specific sessions (1st, 7th, and 13th) for mothers or guardians, following a common approach in child psychological care. The intervention's structure was characterized by weekly

sessions, each lasting 1 hour and 15 minutes. The sessions involving the children were organized into two components: a) reflection on the week's events and b) group instruction and learning about the three socioemotional competencies (group interaction, psychosocial esteem, and creativity).

The three sessions designated for mothers or guardians were divided into three distinct components: a) description of the children, analysis of their issues and strengths; b) discussion of challenges faced in the relationship with the children, exploration of potential support strategies, as well as celebrating their achievements; c) assessment of the children's behavioral progress and decision-making regarding the continuation or termination of treatment, including the possibility of referral to another service. An overview of the process and its cycles is presented in Table 1.

Panel 1 – Operative Play Group program: cycle, session number and title, session content, and session activity

Cycle	Session Number and Title	Session Content	Session Activity
1 - Information Collection	1- Describe and discuss about the children (M) 2- Children describe themselves and teaching-learning of the group interaction skill	Presentations, reflections, and guidance on children's issues and strengths Presentations, problems, preferences*, and powers of the children. Definition of the group interaction skill	Children's problems and solutions noted on the board Hand gestures and playing with a ball
2 - Development	3- Group interaction ability	How do you feel with your family and school group members? How do you handle similarities and differences among people?	Movement factors, body relaxation, and breathing
	4- Free session		Chosen activity and drawing about OPG experience.
	5- Psychosocial-esteem ability	Define psychosocial-esteem ability Psychosocial-esteem and the care with mind, body, and relationships Psychosocial-esteem questions	Questions and "mind+ body + relationships" game

	6- Psychosocial-esteem ability	Body elements Dialogue about the body care daily routine	Reading a book about the body and practicing different movements
	7- Support with children's problems (M)	Monitoring children`s problems and solutions. Shared guidelines and psychological guidance.	Children`s problems and solutions noted on board
	8- Free session		Activity chosen by the children
	9- Creativity ability	Define creativity ability	Dance and painting
	10- Creativity ability		Chosen activity
	11- Free session		Chosen activity
3- Assessment	12- Evaluation of group process and identity changes with children.	Monitoring psychosocial-esteem questions (5th session). How were the process and results of group play therapy for you? Discuss continuing or ending treatment	Questions and drawings about OPG experience.
	13- Assessment of children's progress (M)	Assessment of behavioral progress of children (continuing, ending treatment or referral)	Children`s problems and solutions noted on board

Note: (M) = mothers/guardians
* This topic was discussed only with the children. We asked about activities and the type of play they preferred.
Source: Prepared by the authors.

Examples from the group sessions

In this section, we will describe the elements of the group sessions to highlight aspects of the dance-based OPG intervention.

Is Renata's hair ugly?

The OPG intervention addresses the impacts of social determinants of health, such as racism, homophobia, violence, poverty, and oppression, on children's health behavior during the group sessions.

For example, in the sixth group session, the skill of psychosocial esteem was addressed, focusing on personal body care. During this session, a discussion about hair took place, exploring the fear of having a haircut deemed inappropriate and a comment about Renata, a girl of Black descent, having hair labeled as "ugly". Faced with this statement, the children were encouraged to reflect on Brazil's racial composition, resulting from the contributions of Indigenous, Portuguese, and African peoples, and to consider whether the observation "Renata has ugly hair" constituted a racist act that could potentially contribute to social risks associated with psychological distress.

Additionally, individual similarities and differences were addressed, related to aspects of body, race, gender, and social class. The negative feelings stemming from lack of recognition and appreciation were equally explored. By the end of the session, it was emphasized that the skill of psychosocial esteem promotes self-valuation and valuing others while enhancing awareness of the importance of caring for oneself and others in intrapersonal and interpersonal relationships. Thus, addressing psychosocial respect with a focus on the body contributed to developing bodily perception within intrapersonal and interpersonal relationships.

"Be stronger": identity changes during group process through dance

Throughout the group process (3rd, 4th, 12th, and 13th sessions), transformations in the identity of one of the children were observed. In the third session, which focused on the skill of group interaction, the concept of weight (as described by Laban) was addressed through an exercise aimed at sensitizing participants to light and heavy bodily movements, using balls to exemplify these variations. Initially, balls of different sizes (small, medium, and large) were employed to allow children to identify different degrees of weight. Subsequently, they were encouraged to throw the various balls against a wall. Such ball-related activities were used to develop an understanding of the concept of weight.

During this activity, one of the children shared that she felt the need to become stronger, as she identified with a minor child crying and also felt the urge to cry. The dance activity involving the balls had a significant impact, as it helped the child become aware of her fears related to "a crying child." This was evident in the subsequent session, where her drawing was titled "Be stronger." By the end of the group play therapy process (12th and 13th sessions), the child and her mother reported that she no longer harbored the fear of seeing a child cry. The child in question was considered ready to leave the experimental groups.

These two examples illustrate how group sessions contributed to the development of collective teaching and learning capacity related to psychosocial self-esteem, with a focus on body perception and group interaction. The children had the opportunity to express and analyze various feelings, such as the fear of getting a haircut, negative evaluations of the hair of a child of African descent, and identification with a crying baby. These examples also demonstrate that dance, especially when exploring the concept of weight, played a pivotal role in promoting the child's perception of their body about their internal and external world. Such dynamics within the context of the group process may have contributed to enhancing the child's ability to symbolize issues encompassing group and social awareness, including racism.

Assessment of effects of OPG: different statistical analyses, different results

The results of the first Randomized Controlled Trial (RCT) of the dance-based OPG model, conducted in a public mental health facility in Brazil, did not show significant differences in improvement scores related to emotional and behavioral issues between the Experimental Group (EG) and the Waiting List Control Group (WLCG). The analysis followed the Intent-to-Treat (ITT) approach, considered the gold standard in RCTs. In the context of an ITT, the effect is assessed for all participants, regardless of their adherence to treatment criteria.

The ITT study design guided the execution of 11 linear regression analyses to assess the efficacy of OPG therapy, considering the three CBCL scales and their eight subscales, after appropriate adjustment for baseline scores. The magnitude of effects was quantified using Cohen's *d* index. The Bonferroni correction strategy (ARMSTRONG, 2014) was employed to control the risk of detecting incorrect associations, mitigating concerns inherent in conducting multiple outcome analyses on a single data sample. Consequently, the established significance level was set at 0.004, calculated as 0.05/11 (i.e., α/number of outcomes).

The occurrence of missing data is frequently observed in longitudinal designs, and the Consolidated Standards of Reporting Trials (CONSORT) provide techniques to address this issue. Based on this principle, the multiple imputation method was utilized as part of the ITT approach to estimate intervention effects. Multiple imputation is one of the primary procedures used to handle missing data in RCTs (KENWARD; CARPENTER, 2007). The estimation considered all participants, regardless of their adherence to treatment requirements. The multiple imputation approach enables the inclusion of all participants in the statistical analysis, even when there are missing data with one or more specific values (ENDERS, 2017; LI; STUART; ALLISON, 2015)

The multiple imputation procedure was executed through Bayesian estimation in an unrestricted variance-covariance model, where all variables in the dataset were considered dependent on each other. The adopted formulation to address missing data is presented below, based on the multiple imputation strategy: a total of 40 datasets were imputed (RUBIN,2004) and the variables incorporated in the unrestricted model encompass group analysis [control vs. intervention]; all 11 continuous baseline measures and post-intervention measures related to anxiety/depression, withdrawal/depression, somatic problems, social problems, thought problems, attention problems, rule-breaking behavior, aggressive behavior, internalizing, externalizing, and total problems scales.

The imputation technique was a wholly conditional specification without restrictions on the range of continuous values imputed for the outcomes. Following the multiple imputation approach, the provided estimates were aggregated from the 40 datasets. All analyses were conducted using Mplus software version 8.4 (MUTHÉN; MUTHÉN, 2017), through maximum likelihood estimation. It is essential to emphasize that most interventions in child mental health are generally characterized by their complexity and multifaceted nature, influenced by various situational factors, such as therapist competencies and knowledge, and the context in which the treatment was carried out. These aspects should be adequately considered in the interpretation of the results of any RCT.

In comparison to the statistical analysis based on the ITT approach, when interpreting the data concerning all children in the Experimental Group (EG) and comparing the initial results with those evaluated after the intervention, statistically significant effects were observed regarding internalizing problems (anxious/depressed and withdrawn/depressed). Although complete case analysis is not a gold standard method, the OPG method demonstrates efficacy for children facing these two specific emotional and behavioral problems, unlike children with externalizing problems (rule-breaking and aggressive behavior).

In future work, the intention is to include two therapists in each group, as proposed by Langer, in addition to adding five supplementary sessions to the program. Additionally, tests will be conducted with larger samples to determine whether the body/dance dimension in group therapy indeed promotes greater bodily awareness in the context of intrapersonal and interpersonal relationships, which would require the measurement of these two relational variables. It is also intended to investigate whether the reduction in internalizing problems (anxiety/depression and withdrawal/depression) is effectively associated with positive interpersonal interactions and if there are other examples of this association in the literature.

Further research would also be valuable to assess the therapy's effects on creativity and psychosocial esteem.

Summary and Conclusions

The demand for child psychological treatment, which was already substantial, is currently even higher due to the ramifications caused by the COVID-19 pandemic. In addition to this scenario, it is essential to highlight that in Brazil and other LMICs, the lack of evidence-based resources and treatments for child mental health is evident. To alleviate the extensive waiting lists for treatment, a public child mental health service in Brazil undertook a pilot group psychological intervention in response to these adversities and to lessen the comprehensive waiting lists for treatment. The Operative Play Group (OPG) based on dance was rooted in previous research and practices within the realm of public policies, aiming to enhance child mental health and promote equity by recognizing social determinants of health.

The analysis of the results, conducted based on the intention-to-treat principle, did not support the effectiveness of the intervention. However, a comprehensive analysis of pre-and post-treatment cases indicated that the program brought about improvements in the internalizing problems of the children, specifically in the domains of anxiety/depression and withdrawal/depression.

Even though the addressed sample represents only a limited portion of the child population, this study brings a unique contribution to the literature. This is due to the therapeutic model OPG being one of the few approaches incorporating dance as part of a group intervention. This intervention holds the potential to benefit children through a collective learning process aimed at enhancing group interaction skills, psychosocial esteem, creativity, as well as other aspects associated with identity formation. Within this framework, dance serves as a central resource, mainly directed at stimulating the expression of emotions and expanding bodily awareness in intrapersonal and interpersonal relationships. The dance-based OPG can also address the social determinants of health during group sessions.

In the context of this group process, there was a promotion of dialogues focused on exploring communication obstacles and identifying fears that need to be faced and overcome. Each distinct element intrinsic to the therapy operated synergistically, contributing to expanding the network of meaningful associations in children. Consequently, this approach facilitated the enhancement of symbolic capacities, awareness, and learning, resulting in

increased neuroplasticity and improved child mental health. This is particularly important, especially in the context of children facing challenges related to anxiety and depression. The present research underscores the relevance of therapies that incorporate bodily movement and dance as components of psychosocial interventions.

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