

## Acupuncture in Children with Symptoms of Hyperactivity, Impulsivity and/or Inattention

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*The diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) at increasingly early ages has led to an increased use of medications, despite the potential for undesirable side effects. At the same time, there is growing interest among the public in integrative and complementary practices, such as acupuncture. The objective of this study was to evaluate the effectiveness of acupuncture in managing symptoms of agitation, impulsivity, and inattention in seven children aged three to six years who were identified with these symptoms, following evaluation using the Swanson, Nolan, and Pelham Scale, version IV (SNAP-IV). The instruments used for data collection included the SNAP-IV questionnaire, the Ryodoraku device, anamnesis with the parents, playtime observations, and interviews with the children's teachers. For the acupuncture sessions, non-invasive and painless silicon tablets were used to stimulate the selected points. Subsequently, ten acupuncture sessions were performed with each child. The participants were assessed using the aforementioned instruments before and after the acupuncture sessions to identify changes in energetic levels and in the acupuncture channels evaluated. At the end of the treatment, all participants were reassessed by their parents and teachers. The results indicated an improvement in the symptoms assessed, both in terms of the indicators evaluated during the acupuncture sessions and in the perceptions of parents and teachers. Although the sample size is limited, the study highlights the potential for using alternative techniques to manage ADHD symptoms, and further research with a larger number of participants may help validate the approach discussed here.*

**Keywords:** children; acupuncture; inattention; hyperactivity, impulsivity.

### Introduction

In contemporary times, competitiveness has become a significant value, intensifying families' desire to groom their children to be skilled, capable, and victorious. An effect of this situation is the apparent truncation of childhood. Nowadays, children are subjected to regimented routines and commitments at increasingly younger ages. This lifestyle mirrors that of adults and often disregards children's fundamental needs, such as free time and play, which are crucial for proper human development.

Scholars of childhood have expressed concern about prioritizing a child's performance over play activities (Leontiev, 1988; Lima & Santos, 2019). In this sense, Eidt and Tuleski (2010), when mentioning the issue of early schooling, consider that immobility of the body and the mastery of fine motor coordination

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may contribute to symptoms of agitation, impulsivity, and inattention, identified as symptoms of Attention Deficit Hyperactivity Disorder (ADHD), also known as Hyperkinetic Disorder.

In this context, the American Psychiatric Association (2013) points out typical behaviors of inattention: not paying attention to details when it comes to school and/or daily activities; present difficulties in maintaining attention in tasks or recreational activities; appearing not to listen when spoken to directly; not following instructions until they are finished; avoidance, reluctance to engage in tasks that require prolonged mental effort, and appearing easily distracted by external stimuli. On the other hand, behaviors indicative of hyperactivity and impulsivity: moving or tapping your hands or feet or squirming in your seat; getting up from a chair at times considered inappropriate; running or climbing objects or structures in inappropriate circumstances; act as if “the engine is running”; talking too much and having difficulty waiting for your turn, among others.

Pastor and Reuben (2008) point out that males are diagnosed with ADHD more frequently. However, according to the National Health Surveillance Agency (2014), the number of females affected by the disorder may be comparable to that of males, with a prevalence rate ranging from around 3% to 16% globally. In the Brazilian context, estimates of the prevalence of this symptomatology range from 0.9% to 26.8%, and in 2009 and 2010, 442,143 children and adolescents, between five and nineteen years old, were diagnosed with ADHD.

Jerusalinsky (2011) highlights the considerable increase in ADHD diagnoses in recent years, attributing it to the widespread use of medications like Ritalin and Concerta. The marketing strategies of pharmaceutical industries contributed to increased methylphenidate consumption (active ingredient of such drugs), generating a “bomb” of diagnoses and, subsequently, the inappropriate prescription of stimulant medications.

In the package insert of one of these medications, Ritalin, the following information is found:

[...] can cause many adverse reactions; its mechanism of action in humans has not yet been completely elucidated and the mechanism by which methylphenidate exerts its psychic and behavioral effects in children has not been clearly established, nor is there conclusive evidence demonstrating how these effects are related to the condition of the central nervous system; the specific etiology of this syndrome is unknown and there is no specific diagnostic test; correct diagnosis requires medical, neuropsychological, educational and social investigation; can cause physical or psychological dependence (Laboratory Novartis SA, 2013).

On the other hand, the strong presence of medicalization present in contemporary times shows a growing interest in complementary integrative practices, which consider the individual holistically, in their entirety and in constant interaction with the environment (Nunes, Junges, Gonçalves & Motta, 2017). Among these, acupuncture stands out, as it can be useful for treating various organic and mental imbalances, regardless of the individual's gender and age group (Melo, Aguiar, Silva, Pereira, Silva & Caetano, 2020; Wen, 1989). Furthermore, the technique causes a reduction in the use of medications, as explained below:

Currently, drug use is becoming abusive, with frequent intoxications, without achieving ideal therapeutic results. Acupuncture regulates the body's balance, improving blood circulation, increasing body resistance and being able to change the body's constitution; therefore, it reduces the need for drugs to a minimum and increases therapeutic efficacy (Wen, 1989, p. 12).

Acupuncture is a specialty that emerged in China approximately 4,500 years ago and, together with moxibustion, qi gong, diet therapy and herbal medicine, constitutes Traditional Chinese Medicine (TCM) (Wen, 1989). The word "acupuncture" is derived from the Latin roots *acus* and *pungere*, which denote, respectively, needle and puncture. It is a set of theoretical-empirical knowledge that aims to therapy and cure illnesses, through the insertion of needles into specific points on the skin, called acupoints (Wen, 1989).

Ni, Zhang, Han and Yin (2015), when researching the advantages of acupuncture in the treatment of ADHD, analyzed five groups. One of them was made up of children diagnosed with the disorder, whose treatment was only acupuncture; in the other, it was associated with methylphenidate and, in the third group, acupuncture was applied together with psychosocial and behavioral therapies. There was also a group in which children only took methylphenidate and a group in which only psychosocial and behavioral therapies were used. The results of the study showed a significant reduction in ADHD symptoms in the acupuncture groups as opposed to the last two groups mentioned, in addition to acupuncture not having any adverse effects identified in the group that received the medication.

Pinto (2016) conducted a literature review on acupuncture and its role in the therapeutic process for ADHD. The review identified ten articles, all of which reported beneficial results from the use of acupuncture in treating this disorder. However, it was generally noted that there is still insufficient evidence to fully support the effectiveness of acupuncture for ADHD, and these studies did not suggest eliminating other therapies, such as medication and behavioral education techniques. Hoong and Cho (2011) and Rossi (2010) highlighted acupuncture as a complementary element in ADHD treatment, emphasizing the importance of combining it with pharmacological and psychosocial therapies. Liu (2011) studied eighty children diagnosed with ADHD and reached three key conclusions: resolution of the symptoms of the disorder, behavioral changes after six months of therapy, and safety. Thus, acupuncture has been shown to be a safe treatment with no undesirable effects (Ni et al., 2015; Hong & Seung-Hun, 2011). Rossi (2010) observed that after six acupuncture sessions, there were significant improvements in the behavior and attitudes of the children with ADHD, as well as in the attitudes of their parents, who appeared more calm and confident about their children's condition. Li et al. (2009) did not exclude the use of pharmacological treatments for ADHD but suggested their gradual replacement with complementary treatments, with acupuncture being a primary option. Additionally, Ni et al. reported that acupuncture does not cause severe side effects like those associated with methylphenidate, such as lack of appetite, dry mouth, nausea, and constipation. Given this information, can acupuncture be considered a viable option for treating ADHD symptoms?

Thus, the present study aimed to evaluate the effectiveness of ten acupuncture sessions in children aged three to six years, to minimize symptoms of agitation, impulsivity, and inattention.

## Method

### *Participants*

Seven boys aged between three and six years participated in the study. Five of them exhibited symptoms indicative of hyperactivity and/or impulsivity, one demonstrated symptoms of inattention, and the remaining boy displayed symptoms of both hyperactivity and/or impulsivity and inattention. These symptoms were measured using the Swanson, Nolan, and Pelham Scale, version IV (SNAP-IV), which was translated and validated by GEDA – Attention Deficit Study Group of the Federal University of Rio de Janeiro and by the Child and Adolescent Psychiatry Service of the Federal University of Rio Grande do Sul. The participants were from a public children's institution in a city in the interior of Minas Gerais. The inclusion criteria for participation in this study were: children aged between three and eight years, and a score of 6 or higher on the SNAP-IV in the hyperactivity/impulsivity section and/or the inattention section. The exclusion criteria were: children currently taking medication for ADHD.

The seven children completed all stages of the research. Of these, two (28.57%) had three years, three (42.85%) four years, one (14.28%) five years and one (14.28%) six years. Four teachers, seven mothers, a grandmother, a stepfather and four fathers also participated.

### *Instruments*

1) Swanson, Nolan and Pelham Scale, version IV (SNAP-IV), a North American questionnaire based on criteria established by the Diagnostic and Statistical Manual – IV edition (DSM-IV-TR) (2002) to survey possible symptoms of ADHD in children and adolescents. When six items are marked as "quite a lot" or "too much" in questions 1 to 9, there is an indication that there are more symptoms of inattention than usual in the child analyzed. If at least six items are marked as "quite a lot" or "too much" in statements 10 to 18, there are more symptoms of hyperactivity and impulsivity than expected (American Psychiatric Association, 2002 & Brazilian Association of Attention Deficit, 2015). It is worth emphasizing that in Brazil there is no specific validated instrument for the evaluation of this disorder, other than the instrument mentioned here.

2) Anamnesis with the parents, seeking to understand the child's history, as well as the onset and frequency of symptoms.

3) Semi-structured interview with the teachers responsible for the child in a school environment.

4) Play time with the child, with the aim of establishing a bond with the researcher. The games "Dominó das Sílabas", "Doctor's Game", "Pega Vareta",

“Memory Game” were used, as well as paints of different colors, brushes, glue, coloring pencils, crayons, A3 paper, scissors, modeling clay, wooden dolls, building toys and balls.

5) Energy history with children, according to the principles of Traditional Chinese Medicine, with the purpose of identifying possible energy imbalances (Appendix A).

6) Ryodoraku device that performs energy readings of acupuncture channels and generates a graph. This shows the energetic balances and imbalances of the meridians.

7) Interview with parents and teachers, in order to evaluate possible behavioral changes in children, after the intervention.

8) Materials used in the acupuncture intervention: paper towel, liquid soap, 2.5 cm x 4.5 m hypoallergenic micropore tape, 70% alcohol, cotton, scissors, specific tweezers for auriculotherapy, silicon tablet (for acupuncture systemic) and crystal spheres (for systemic acupuncture and auriculotherapy).

### *Procedure*

The project was approved by the Ethics Committee of the Federal University of Uberlândia (Opinion 1,990,240). After identifying children with symptoms, through the application of the SNAP-IV questionnaire by teachers, parents were contacted for clarification about the study and signing the Informed Consent Forms.

Next, the parents were interviewed to take an anamnesis to identify the onset of symptoms of agitation, impulsivity and/or inattention. At the same time, the signatures of the participating children's teachers were collected, who were interviewed to elucidate the students' symptoms and teaching-learning process. The interviews were recorded and transcribed.

To establish rapport between children and the researcher in an one-hour play session was scheduled for each child. At this time, the researcher observed some cognitive aspects of the participants, such as the notion of quantity, recognition of colors, letters and syllables. This action aimed to explore the adequacy of children's behaviors in relation to expected development. Furthermore, behaviors indicative of agitation, impulsivity, and/or inattention were observed, such as ending games prematurely, displaying little resistance to frustration, and giving up when faced with a problem. At the end, it was explained to the child what the acupuncture sessions would be like. Then, the researcher showed the maps with the acupoints and informed that those points were also on their bodies. The researcher took an ear model with the ear points delimited. Upon the child's agreement to receive acupuncture, the remaining sessions were scheduled to commence treatment.

The first session aimed to carry out an energy anamnesis with each child, which made it possible to identify unbalanced meridians and begin treatment with acupuncture, in the format of ten sessions. Each session began with the researcher asking, spontaneously, how the child was feeling and then the unbalanced meridians were assessed using the Ryodoraku device, which guided the selection of points to be stimulated. Stimulation was exclusively performed using non-invasive and painless materials, such as silicon tablets (for systemic acupuncture) and crystals (for auriculotherapy).

It is important to highlight that in the tenth service, only ear acupuncture was performed, as a strategy to complete the treatments. There were no losses in the students' pedagogical routine. After all the sessions held with each participant, the parents or guardians and teachers were interviewed again, in order to learn about possible behavioral changes in the children. Furthermore, teachers reapplied the SNAP-IV questionnaire, in order to enable comparisons with the results obtained at the beginning of data collection.

## Results

The results were organized into sections, corresponding to the instruments utilized. The first section focused on the pre-intervention findings for each child, including anamnesis conducted with their guardians, interviews with teachers, and playtime. The second block referred to energy diagnosis and acupuncture sessions. The third block elucidated the results from interviews with parents after the intervention and also comparisons between the scores on the SNAP-IV instrument before and after acupuncture.

### Block 1

#### Anamnesis with the Parents before the Intervention

In the anamnesis with the parents, the child's history was discussed in order to get to know them and questions were asked about the symptoms of agitation, impulsivity and/or inattention.

**Table 1.** *Aspects mentioned by the Parents in the Anamnesis, before the Intervention*

|                | <b>Pregnancy</b> | <b>Emotions</b>                  | <b>Hyperactivity</b> | <b>Impulsiveness</b> | <b>Inattention</b>    |
|----------------|------------------|----------------------------------|----------------------|----------------------|-----------------------|
| <b>Child 1</b> | Desired          | Anger                            | No                   | No                   | Yes                   |
| <b>Child 2</b> | Desired          | Anger and euphoria               | Yes                  | No                   | No                    |
| <b>Child 3</b> | Desired          | Anger, stress, fear and euphoria | Yes                  | Yes                  | Yes                   |
| <b>Child 4</b> | Desired          | Anxiety and euphoria             | Yes                  | Yes                  | No                    |
| <b>Child 5</b> | Desired          | Anger and euphoria               | Yes                  | No                   | No                    |
| <b>Child 6</b> | Desired          | Euphoria                         | Yes                  | No                   | Yes (only for father) |
| <b>Child 7</b> | Unwanted         | Anger and Euphoria               | Yes                  | Yes                  | No                    |
| <b>Total</b>   |                  |                                  | 6                    | 3                    | 3                     |

According to table 1, we have:

- Child 1 experiences worsened symptoms during climate changes due to heat allergies. Anger was cited as a frequent emotion. According to his parents, the boy is not hyperactive or impulsive, but they consider him inattentive.
- Child 2 was wanted and the boy has allergies and bronchitis. The following emotions are common in a boy's daily life: anger, fear and euphoria. According to his parents, the boy is hyperactive, but he is not impulsive or inattentive.
- Child 3 had allergies and bronchitis. Anger, fear and euphoria are frequent emotions in children's daily lives. According to his parents, the boy is hyperactive, impulsive and inattentive.
- Child 4 was wanted and the boy has allergies, rhinitis and bronchitis. Anxiety and euphoria are common emotions in children's daily lives. According to his parents, the boy is hyperactive, impulsive, but not inattentive.
- Child 5 was wanted and the boy has respiratory problems. Anger and euphoria are common emotions. According to his parents, the boy is hyperactive, but he is not impulsive or inattentive.
- Child 6 was wanted and no factors for illness were mentioned. Euphoria is a common emotion in a boy's daily life. According to his parents, the boy is hyperactive, but not impulsive. Only the father perceives the son as inattentive
- Child 7 was unwanted. The boy recently developed pneumonia. Anger and euphoria are common emotions in children's daily lives. According to his parents, the boy is hyperactive, impulsive, but not inattentive.

Therefore, according to the anamnesis with the parents, child 1 is inattentive, children 2 and 5 are hyperactive and child 3 is hyperactive, impulsive and inattentive. Children 4 and 7 are hyperactive and impulsive. Child 6 is inattentive and hyperactive and Child 7 is hyperactive and impulsive.

#### Interview with Teachers before the Intervention

The interview with the teachers aimed to understand how the child is perceived in the school context. It was carried out during times previously made available by the institution and lasted around 20 minutes.

The data in Table 2 summarizes the main findings for each child.

**Table 2.** *Aspects observed by the Teachers, before the Intervention*

|                | <b>Hyperactivity</b> | <b>Impulsiveness</b> | <b>Inattention</b> | <b>Emotions</b>              |
|----------------|----------------------|----------------------|--------------------|------------------------------|
| <b>Child 1</b> | Yes                  | Yes                  | No                 | Anger and euphoria           |
| <b>Child 2</b> | Yes                  | Yes                  | No                 | Jealousy, euphoria and anger |
| <b>Child 3</b> | Yes                  | Yes                  | Yes                | Anger and euphoria           |
| <b>Child 4</b> | Yes                  | No                   | Yes                | Euphoria                     |

|                | Hyperactivity | Impulsiveness | Inattention | Emotions |
|----------------|---------------|---------------|-------------|----------|
| <b>Child 5</b> | Yes           | Yes           | Yes         | Euphoria |
| <b>Child 6</b> | No            | Yes           | No          | Anger    |
| <b>Child 7</b> | No            | No            | No          | Anger    |
| <b>Total</b>   | 5             | 5             | 3           |          |

Therefore, according to the teachers, children 1 and 2 exhibit symptoms of hyperactivity and impulsivity, children 3 and 5 are hyperactive, impulsive, and also display symptoms of inattention, while child 4 exhibits symptoms of hyperactivity and inattention, child 6 exhibits only impulsive behavior and child 7 shows no indications of ADHD symptoms.

#### Fun Time

Based on the play time, carried out with each child, it can be stated that only child 7 did not interact in a way that provided a good bond with the researcher. Furthermore, behaviors indicative of hyperactivity and impulsivity were observed only in child 3. Finally, no behaviors indicative of the symptom of inattention were found in any participant.

#### *Block 2*

#### Energy Diagnosis

Carried out according to the items that make up the energy assessment to identify imbalances and through the use of Ryodoraku. The ear points were applied in all acupuncture sessions.

#### Systemic Acupuncture Service

Nine systemic acupuncture sessions were carried out with all the children, and in the tenth session only auriculotherapy was carried out, as a strategy to end the sessions. The acupoints were chosen using the graph generated by the Ryodoraku device. It is clear that, in systemic acupuncture, the points are found throughout the body, in the meridians, that is, energy channels.

#### *Block 3*

#### Comparison between the SNAP-IV pre-test and post-test

Below is a table with the sum of the “Enough and Too Much” criteria from the SNAP-IV questionnaire in the pre-test and post-test.



**Table 3.** Comparison of the Sum of the Criteria "A lot" and "Too much" in the Pre-test and Post-test

| Child        | Pre-test<br>( $\Sigma$ Enough and Too Much) | Post-test<br>( $\Sigma$ Enough and Too Much) |
|--------------|---------------------------------------------|----------------------------------------------|
| 1            | 8                                           | 1                                            |
| 2            | 9                                           | 2                                            |
| 3            | 16                                          | 9                                            |
| 4            | 10                                          | 10                                           |
| 5            | 9                                           | 6                                            |
| 6            | 14                                          | 0                                            |
| 7            | 10                                          | 3                                            |
| <b>Total</b> | 76                                          | 31                                           |

Children 1, 2, 6, and 7 no longer exhibited symptoms indicative of the ADHD symptomatological triad in the post-test, as their scores decreased to values lower than six. Child 3 only showed improvement in the symptom of inattention, according to the teachers' responses. However, the improvements in hyperactivity and impulsivity symptoms were not significant. No changes were observed in child 4's scores. Despite being borderline in terms of symptoms indicative of the disorder, child 5 showed improved scores. Finally, high total scores were observed in the pre-test and an approximate 50% reduction in these values in the post-test.

#### Interview with parents after acupuncture sessions

The following table shows the aspects observed by parents after acupuncture sessions.

**Table 4.** Aspects observed by the Parents, after the Acupuncture Intervention

|                | Emotional Aspects              | Hyperactivity | Impulsiveness | Inattention |
|----------------|--------------------------------|---------------|---------------|-------------|
| <b>Child 1</b> | Calm and focused               | No            | No            | No          |
| <b>Child 2</b> | Anger and agitation            | Yes           | No            | No          |
| <b>Child 3</b> | Calm, with some angry episodes | No            | No            | No          |
| <b>Child 4</b> | Disobedience                   | No            | No            | No          |
| <b>Child 5</b> | Impatient                      | No            | No            | No          |
| <b>Child 6</b> | Calm and focused               | No            | No            | No          |
| <b>Child 7</b> | Calm and focused               | No            | No            | No          |
| <b>Total</b>   |                                | 1             | 0             | 0           |

Table 4 indicates that, according to the parents, child 1 is calmer and more concentrated and without behaviors indicative of hyperactivity, impulsivity and inattention, after treatment with acupuncture. The parents mention that child 2 is agitated, expressing a lot of anger, and displaying signs of hyperactivity. However, child 3 is calmer, but with some episodes of anger, but without behaviors indicative of hyperactivity, impulsivity and inattention. Child 4 is disobedient; however, there

were no behaviors indicative of ADHD symptoms. Child 5 is impatient, but does not exhibit symptoms of ADHD. Children 6 and 7 appear calmer, more concentrated, and show no behaviors indicative of hyperactivity, impulsivity, or inattention

#### Interview with Teachers after Acupuncture Sessions

The interviews with the teachers, after the acupuncture sessions, indicate that only children 3 and 4 were observed with signs of hyperactivity, while child 5 with signs of inattention.

### **Discussion**

It is interesting to note that the context in which one lives can influence the way in which children are identified as having problems or difficulties. Thus, the belief that boys are more agitated is often merely a result of the historical-social context, which ends up normalizing symptoms, behaviors, and labels, leading to the worrying phenomenon of medicalization (Meira, 2012). Additionally, the current labor and economic logic, which values multitasking, knowledge in various diverse areas, and a high degree of logical reasoning (Silva, Luzio, Santos, Yasui & Dionísio, 2012), can lead to children being diagnosed with disorders when these attributes are not present to a degree deemed appropriate, resulting in medication being prescribed.

According to Bauman (2005), accelerated and multiple mobility, that is, liquid modernity, moves quickly, where persistence dissolves, giving way to relationships and means of production that commence and unravel swiftly, is an existential condition. Could this be creating accelerated, overexcitable children? However, this same extremely short-sighted society labels children as hyperactive, impulsive, and inattentive, medicating them and placing the problem on the individual, neglecting the historical-social context (Meira, 2012).

In the present work, the parents' reports seemed to be permeated by the magical desire that acupuncture could educate their children, as can be identified in the narrative of the mother of child 2: "He is not respecting rules [...]. He's really rude. I hope he becomes less agitated" with the acupuncture treatment. This hypothesis can also be seen in the following statement from the parents of child 4: "We hope he gets better. Let us speak and he obeys." There seems to be a confusion between hyperactivity, impulsiveness, and lack of limits. According to Lajonquière (1996), school and family have shared but distinct roles when it comes to establishing limits for children. Parents and teachers seem to demonstrate difficulties and a large number of doubts regarding the delineation of their roles and their actions related to setting limits and offering possibilities to children.

In this study, all parents stated that their children were hyperactive, and/or impulsive, and/or inattentive prior to the interventions carried out. The identification of such symptoms generated some questions: "Does my child have ADHD?" [parents of child 3], "That's what ADHD is, right?" [parents of child 4]. Are parents clear about the possibility of diagnosis and the effects of drugs on their children's bodies? How thin is the border between pathological and non-pathological?

The teachers also demonstrated difficulties in dealing with common events in early childhood education, such as children reacting aggressively towards their classmates because they do not want to share toys or do not know how to deal with their emotions. Such situations seem to favor the presence of inadequate diagnoses. In this sense, the need for parents and teachers to be properly informed about the implications of a diagnosis and the consequences of medication, if it is not absolutely necessary, is crystal clear.

It is important to consider the potential biases associated with the SNAP-IV instrument used to assess symptoms of Attention Deficit/Hyperactivity Disorder (ADHD). For instance, there was a change of teacher in one of the classes where the questionnaire was administered. One teacher observed signs of hyperactivity and impulsivity in a child, while the other teacher did not report such symptoms for the same child. This discrepancy raises questions about the extent to which the SNAP-IV meets validity criteria, as it seems to allow for subjective interpretations.

The subjectivity in assessment could lead to several consequences, including inconsistent diagnoses and variations in reported symptoms. Such variability can impact the reliability of the instrument and the accuracy of the ADHD diagnosis. These issues underscore the urgent need for psychometric instruments that are rigorously validated to minimize subjective biases and ensure more consistent and reliable assessments.

The fact that children became intensely involved with acupuncture deserves positive attention. They asked questions about acupoints and their functions, and these doubts were resolved by the researcher during the sessions. The school noted that one of the participants had removed the crystals from his ear and “administered acupuncture” to a classmate. When asked about what he was doing and the reasons for carrying out such an action, the child replied: “Ah auntie, he [the classmate] was scared, so I put the stitch in his ear!” (sic).

The present study sheds light on the misunderstanding of the concept and the origin of ADHD symptoms present among parents and teachers, which proved to be full of stereotypical, subjective views and not based on scientific knowledge about the behaviors expressed by children. Thus, the teachers blamed the family, and the family blamed the school. Furthermore, a certain anger towards the educational institution was noted in the speech of some parents, based on phrases such as “my son learned to swear here!” (Father of child 4). In this game of dispute and lack of clarity and confusion between what is indiscipline and what is a disorder, the person who can be harmed is the child, who, without the power to speak, is subjected to possibly erroneous diagnoses.

Despite the apparent disagreement about the very existence of the disorder and its origins, highlighted by different views of several scholars, such as Oliveira and Dias (2018), who range from understanding ADHD as having a neurobiological aspect, genetic nature, and caused by a scarce supply of brain neurotransmitters, especially dopamine and norepinephrine, which would influence behavioral inhibition, among other aspects, and others, such as Collares and Moysés (2011), who emphasize that ADHD is a process of pathologization of education, present in aspects of affective, socio-educational, pedagogical, linguistic, cultural, and political nature that are transferred to organic issues in the school institution and in the clinic, which constitute

controversies that are far from being resolved. However, it cannot be ignored that, regardless of the origin of the symptoms, a large number of children suffer the effects of actions perpetuated by adults on their bodies.

In this sense, it is considered appropriate to carry out an alternative intervention for children with ADHD symptoms, since it is a phenomenon with few possibilities for adequate management and, in this context, children continue to be frequently medicated. It is worth clarifying that, in TCM, ADHD was never mentioned, but rather mental agitation, irritability, and difficulty concentrating.

It is interesting to note that acupuncture is an approach that considers the subject intertwined with their social, emotional context, and lifestyle, which means that food, emotions, and everyday events directly influence the energetic balance of the meridians. According to Yamamura (2001), the appearance of symptoms occurs due to an imbalance of internal energy, caused by the environment, external origin, or disordered eating, retained emotions, and fatigue originating internally.

The results of this research, despite the limited number of participants, showed the positive effects of acupuncture in managing symptoms indicative of the disorder. In general, respondents observed improvements in children's behavior, sleep, and school performance. However, the mother of child 2 stated that her son was agitated after treatment and according to the teachers, children 3 and 4 were still considered hyperactive and child 5 inattentive. Therefore, new studies with a greater number of acupuncture sessions and participants can be undertaken to shed light on such an important topic.

## Conclusions

Based on the findings of this study, despite the limited number of participants, it can be concluded that integrating acupuncture with psychological knowledge about ADHD may be useful in managing symptoms of inattention, hyperactivity, and impulsivity. These symptoms are increasingly common in children who spend a lot of time in confined spaces, using smartphones, tablets, and other technologies for solitary and sedentary activities. Acupuncture represents an important resource for psychologists, as it combines insights from Traditional Chinese Medicine with various psychological approaches that emphasize understanding individuals as holistic beings connected to nature, the environment, and ultimately the universe (Yamamura, 2001).

Although the small sample size prevents definitive conclusions about the effectiveness of acupuncture for children with these symptoms, the study highlights a potential alternative that might be less harmful for managing ADHD. Further research with larger participant groups is needed, as well as the development of reliable psychometric instruments for this population. Additionally, it is crucial to explore the effects of acupuncture on children diagnosed with ADHD who are also undergoing pharmacological treatment.

Finally, it is important to address the widespread use of medication, which often seeks quick or immediate relief from both physical and emotional suffering. This issue should be included in public policy discussions and ongoing dialogue with

society, aiming to consolidate alternative coping strategies where medication, even legal ones, is not the first choice.

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## Appendix A

### Acupuncture Assessment, Diagnosis and Ear Treatment

Date:

1) Identification Data:

Name:

Address:

Telephone: Email:

Date and Time of Birth: Marital Status:

Profession:

2) Diagnostic questions:

History of Current Disease (H.M.A.) / Complaint:

Eating habits:

Desire at the moment of taste: sweet, bitter, salty, spicy, acidic. (✓)

Check the flavors ingested throughout the day. (Λ)

Preference (Λ) and Aversion (✓) for the Season: spring, summer, autumn, winter.

Preference (Λ) and Aversion (✓) Climate: wind, heat, humidity, dryness, cold.

Frequent emotions: anger, euphoria, worry, sadness and fear.

Frequent problems with:

- Muscles: if pain – excess wood.
- Pots: soil deficiency.
- Tendons: wood deficiency.
- Skin: metal deficiency.
- Bones: water deficiency.
- Hearing: water deficiency.
- View: wood deficiency.
- Hair loss: water deficiency. (Although hair is controlled by the Lungs – metal – maintaining hair on the scalp is a function of the Kidneys and its loss implies water deficiency).
- Canker sores on the tongue: excess of heart and small intestine.
- Canker sores in the mouth: excess of the Spleen-Pancreas and Stomach.

