

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

The diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) at increasingly early ages has led to an exacerbated use of medications, despite the possible undesirable side effects. At the same time, the population is increasingly interested in integrative and complementary practices, such as acupuncture. The aim of the present study was to evaluate the effectiveness of acupuncture in the management of symptoms of agitation, impulsivity and inattention, in children aged three to six years. For that, they were evaluated before and after the intervention of the acupuncture sessions. The instruments used were the SNAP-IV questionnaire, the Ryodoraku device, in addition to the anamnesis with the parents, play time and interviews with the teachers responsible for the children. Subsequently, ten acupuncture sessions were held with each child. At the end of the treatment, the participants were again evaluated by parents and teachers. The results indicated an improvement in the assessed symptoms.

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 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

1 running”; talking too much and having difficulty waiting for your turn, among
2 others.

3 Pastor and Reuben (2008) point out that males are diagnosed with ADHD
4 more frequently. However, according to the National Health Surveillance Agency
5 (2014), the number of females affected by the disorder may be comparable to that
6 of males, with a prevalence rate ranging from around 3% to 16% globally. In the
7 Brazilian context, estimates of the prevalence of this symptomatology range from
8 0.9% to 26.8%, and in 2009 and 2010, 442,143 children and adolescents, between
9 five and nineteen years old, were diagnosed with ADHD.

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

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

18
19 [...] can cause many adverse reactions; its mechanism of action in humans has not yet
20 been completely elucidated and the mechanism by which methylphenidate exerts its
21 psychic and behavioral effects in children has not been clearly established, nor is
22 there conclusive evidence demonstrating how these effects are related to the
23 condition of the central nervous system; the specific etiology of this syndrome is
24 unknown and there is no specific diagnostic test; correct diagnosis requires medical,
25 neuropsychological, educational and social investigation; can cause physical or
26 psychological dependence (Laboratory Novartis SA, 2013).
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28 On the other hand, the strong presence of medicalization present in
29 contemporary times shows a growing interest in complementary integrative
30 practices, which consider the individual holistically, in their entirety and in
31 constant interaction with the environment (Nunes, Junges, Gonçalves & Motta,
32 2017). Among these, acupuncture stands out, as it can be useful for treating
33 various organic and mental imbalances, regardless of the individual's gender and
34 age group (Melo, Aguiar, Silva, Pereira, Silva & Caetano, 2020; Wen, 1989).
35 Furthermore, the technique causes a reduction in the use of medications, as
36 explained below:

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38 Currently, drug use is becoming abusive, with frequent intoxications, without
39 achieving ideal therapeutic results. Acupuncture regulates the body's balance,
40 improving blood circulation, increasing body resistance and being able to change the
41 body's constitution; therefore, it reduces the need for drugs to a minimum and
42 increases therapeutic efficacy (Wen, 1989, p. 12).
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44 Acupuncture is a specialty that emerged in China approximately 4,500 years
45 ago and, together with moxibustion, qi gong, diet therapy and herbal medicine,
46 constitutes Traditional Chinese Medicine (TCM) (Wen, 1989). The word
47 “acupuncture” is derived from the Latin roots acus and pungere, which denote,

1 respectively, needle and puncture. It is a set of theoretical-empirical knowledge
2 that aims to therapy and cure illnesses, through the insertion of needles into
3 specific points on the skin, called acupoints (Wen, 1989).

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

15 Pinto (2016) carried out a literature review on acupuncture and its role in the
16 therapeutic process of ADHD. Ten articles were found, with all studies showing
17 beneficial results from the use of acupuncture in the treatment of this disorder.
18 However, in general, it has become clear that there is not yet sufficient evidence to
19 corroborate the effectiveness of acupuncture in the treatment of ADHD. Liu
20 (2011) carried out research with eighty children diagnosed with ADHD and
21 obtained three essential conclusions: resolution of the symptoms of the pathology,
22 behavioral changes after six months of therapy and safety. Thus, acupuncture
23 appears to be a safe treatment, without undesirable effects (Niet al., 2015; Hong, &
24 Seung-Hun, 2011).

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

30 **Method**

32 *Participants*

34 Seven boys aged between three and six years participated in the study, five of
35 whom showed symptoms indicative of hyperactivity and/or impulsivity, one
36 showed symptoms of inattention and the other showed symptoms of hyperactivity
37 and/or impulsivity and inattention, measured through the questionnaire SNAP-
38 IV (Questionnaire as a psychopedagogic auxiliary in the preliminary diagnosis on
39 the attention deficit hyperactivity disorder, translated and validated by GEDA –
40 Attention Deficit Study Group of the Federal University of Rio de Janeiro and by
41 the Child and Adolescent Psychiatry Service of the Federal University of Rio
42 Grande do Sul), from a public children's institution in a city in the interior of
43 Minas Gerais.

44 The seven children completed all stages of the research. Of these, two
45 (28.57%) had three years, three (42.85%) four years, one (14.28%) five years and

1 one (14.28%) six years. Four teachers, seven mothers, a grandmother, a stepfather
2 and four fathers also participated.

3
4 *Instruments*

- 5
6 1) SNAP-IV.
7 2) Anamnesis with the parents, seeking to understand the child's history, as
8 well as the onset and frequency of symptoms.
9 3) Semi-structured interview with the teachers responsible for the child in a
10 school environment.
11 4) Play time with the child, with the aim of establishing a bond with the
12 researcher. The games “Dominó das Sílabas”, “Doctor's Game”, “Pega
13 Vareta”, “Memory Game” were used, as well as paints of different colors,
14 brushes, glue, coloring pencils, crayons, A3 paper, scissors , modeling
15 clay, wooden dolls, building toys and balls.
16 5) Energy history with children, according to the principles of Traditional
17 Chinese Medicine, with the purpose of identifying possible energy
18 imbalances (Appendix A).
19 6) Ryodoraku device that performs energy readings of acupuncture channels
20 and generates a graph. This shows the energetic balances and imbalances
21 of the meridians.
22 7) Interview with parents and teachers, in order to evaluate possible
23 behavioral changes in children, after the intervention.
24 8) Materials used in the acupuncture intervention: paper towel, liquid soap,
25 2.5 cm x 4.5 m hypoallergenic micropore tape, 70% alcohol, cotton,
26 scissors, specific tweezers for auriculotherapy, silicon tablet (for
27 acupuncture systemic) and crystal spheres (for systemic acupuncture and
28 auriculotherapy).
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30 *Procedure*

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

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

42 To establish rapport between children and the researcher in an one-hour play
43 session was scheduled for each child. At this time, the researcher observed some
44 cognitive aspects of the participants, such as the notion of quantity, recognition of
45 colors, letters and syllables. This action aimed to explore the adequacy of
46 children's behaviors in relation to expected development. Furthermore, behaviors

1 indicative of agitation, impulsivity, and/or inattention were observed, such as
2 ending games prematurely, displaying little resistance to frustration, and giving up
3 when faced with a problem. At the end, it was explained to the child what the
4 acupuncture sessions would be like. Then, the researcher showed the maps with
5 the acupoints and informed that those points were also on their bodies. The
6 researcher took an ear model with the ear points delimited. Upon the child's
7 agreement to receive acupuncture, the remaining sessions were scheduled to
8 commence treatment.

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

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

24 25 26 **Results**

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

35 36 *Block I*

37 38 Anamnesis with the parents before the intervention

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

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1 **Table 1.** *Aspects mentioned by the parents in the anamnesis, before the*
 2 *intervention*

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

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According to table 1, we have:

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- 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.

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

5 6 Interview with teachers before the intervention

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

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

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12 **Table 2.** *Aspects observed by the teachers, before the intervention*

	Hyperactivity	Impulsiveness	Inattention	Emotions
Child 1	Yes	Yes	No	Anger and euphoria
Child 2	Yes	Yes	No	Jealousy, euphoria and anger
Child 3	Yes	Yes	Yes	Anger and euphoria
Child 4	Yes	No	Yes	Euphoria
Child 5	Yes	Yes	Yes	Euphoria
Child 6	No	Yes	No	Anger
Child 7	No	No	No	Anger
Total	5	5	3	

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

19 20 Fun time

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

26 27 *Block 2*

28 29 Energy diagnosis

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

33 34 Systemic acupuncture service

35 Nine systemic acupuncture sessions were carried out with all the children,
36 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 (Σ Enough and Too Much)	Post-test (Σ 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
Total	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
Child 1	Calm and focused	No	No	No
Child 2	Anger and agitation	Yes	No	No
Child 3	Calm, with some angry episodes	No	No	No
Child 4	Disobedience	No	No	No
Child 5	Impatient	No	No	No
Child 6	Calm and focused	No	No	No
Child 7	Calm and focused	No	No	No
Total		1	0	0

1 Table 4 indicates that, according to the parents, child 1 is calmer and more
 2 concentrated and without behaviors indicative of hyperactivity, impulsivity and
 3 inattention, after treatment with acupuncture. The parents mention that child 2 is
 4 agitated, expressing a lot of anger, and displaying signs of hyperactivity. However,
 5 child 3 is calmer, but with some episodes of anger, but without behaviors
 6 indicative of hyperactivity, impulsivity and inattention. Child 4 is disobedient;
 7 however, there were no behaviors indicative of ADHD symptoms. Child 5 is
 8 impatient, but does not exhibit symptoms of ADHD. Children 6 and 7 appear
 9 calmer, more concentrated, and show no behaviors indicative of hyperactivity,
 10 impulsivity, or inattention

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12 Interview with teachers after acupuncture sessions

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

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18 **Discussion**

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

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

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

1 difficulties and a large number of doubts regarding the delineation of their roles
2 and their actions related to setting limits and offering possibilities to children.

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

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

17 It is interesting to note the possible biases related to the SNAP-IV instrument
18 for assessing symptoms of attention deficit/hyperactivity disorder. There was a
19 change of teacher in one of the classes in which the questionnaire was
20 administered, and for a certain teacher, the child had signs of symptoms of
21 hyperactivity and impulsivity, while for the other teacher, this same child had no
22 signs of such symptoms. Thus, one can question the extent to which the instrument
23 meets the validity criteria, as it appears to allow subjective inferences. What are
24 the consequences that this subjectivity in the evaluation can cause? How reliable is
25 this instrument?

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

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

43 Despite the apparent disagreement about the very existence of the disorder
44 and its origins, highlighted by different views of several scholars, such as Oliveira
45 and Dias (2018), who range from understanding ADHD as having a
46 neurobiological aspect, genetic nature, and caused by a scarce supply of brain

1 neurotransmitters, especially dopamine and norepinephrine, which would
2 influence behavioral inhibition, among other aspects, and others, such as Collares
3 and Moysés (2011), who emphasize that ADHD is a process of pathologization of
4 education, present in aspects of affective, socio-educational, pedagogical,
5 linguistic, cultural, and political nature that are transferred to organic issues in the
6 school institution and in the clinic, which constitute controversies that are far from
7 being resolved. However, it cannot be ignored that, regardless of the origin of the
8 symptoms, a large number of children suffer the effects of actions perpetuated by
9 adults on their bodies.

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

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

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

31 **Conclusions**

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33 Based on the findings of this study, albeit with a limited number of
34 participants, it can be concluded that acupuncture, when integrated with
35 psychological insights into ADHD, holds promise for managing symptoms of
36 inattention, hyperactivity, and impulsivity. These symptoms are becoming
37 increasingly prevalent among children who spend prolonged periods in confined
38 spaces, engaging in solitary and sedentary activities with smartphones, tablets, and
39 other technologies. Acupuncture serves as a valuable tool for psychologists, as it
40 complements the diverse approaches within psychology by incorporating
41 Traditional Chinese Medicine's holistic understanding of the individual. This
42 holistic perspective emphasizes the interconnectedness of humans with nature, the
43 environment, and the universe (Yamamura, 2001).

44 Finally, it is worth highlighting that the over-medication prevalent in today's
45 society, observed by the significant volume of large consumption of medicines, in
46 which quick and even instantaneous answers are sought to alleviate both physical

1 and emotional suffering, is an issue that must be on the agenda of public policies
 2 and in continuous dialogue with society, in order to consolidate other coping
 3 measures, in which drugs, even legal ones, are not the first alternative.

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31
32

- 1 **Appendix A:**
2
3 Acupuncture Assessment, Diagnosis and Ear Treatment
4
5 Date:
6 1) Identification Data:
7 Name:
8 Address:
9 Telephone: Email:
10 Date and Time of Birth: Marital Status:
11 Profession:
12
13 2) Diagnostic questions:
14 History of Current Disease (H.M.A.) / Complaint:
15
16 Eating habits:
17 Desire at the moment of taste: sweet, bitter, salty, spicy, acidic. (√)
18 Check the flavors ingested throughout the day. (∧)
19 Preference (∧) and Aversion (√) for the Season: spring, summer, autumn, winter.
20 Preference (∧) and Aversion (√) Climate: wind, heat, humidity, dryness, cold.
21 Frequent emotions: anger, euphoria, worry, sadness and fear.
22 Frequent problems with:
23 - Muscles: if pain – excess wood.
24 - Pots: soil deficiency.
25 - Tendons: wood deficiency.
26 - Skin: metal deficiency.
27 - Bones: water deficiency.
28 - Hearing: water deficiency.
29 - View: wood deficiency.
30 - Hair loss: water deficiency. (Although hair is controlled by the Lungs – metal –
31 maintaining hair on the scalp is a function of the Kidneys and its loss implies
32 water deficiency).
33 - Canker sores on the tongue: excess of heart and small intestine.
34 - Canker sores in the mouth: excess of the Spleen-Pancreas and Stomach.
35
36