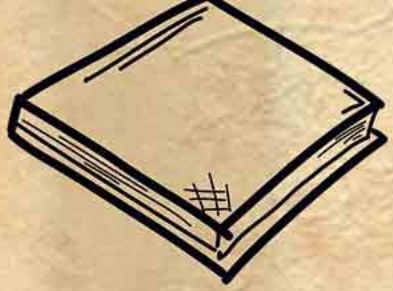




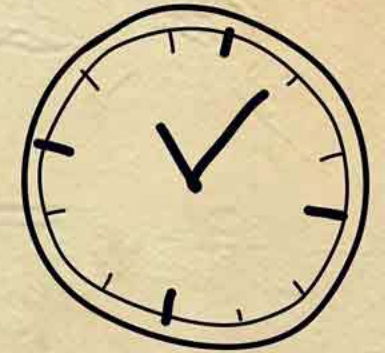
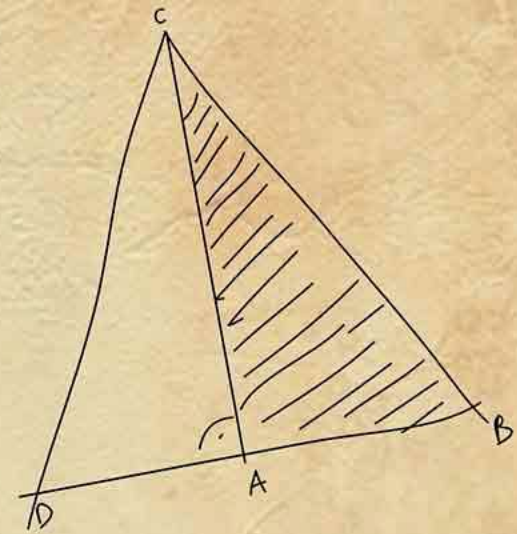
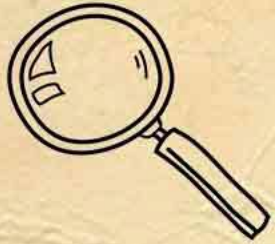
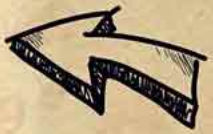
ADDHERE

AI screening Application and
pedagogical guidance to support
ADHD

v10 – Jan 2024



$$2 \times 2 = 4$$



$$\frac{65}{12}q = (1A + \frac{4}{8}) + (10 + \frac{2}{3}q)$$

$$2 \times 2 = 4$$

At least 5% of the world's children have
Attention Deficit Hyperactivity Disorder

**But 80% of them will never receive the
diagnosis and treatment they need**

21,000 people in the UK
are waiting...



Specialist access
Waiting time

1 – 5 years



ADDHERE

5 weeks

At schools

Addhere Team

EXECUTIVE AND DEVELOPMENT



Daniel Carvalho Melo
Innovation, Product and Business
Serial entrepreneur founded.
Senior Developer
CEO



Priscila Spadinger
Corporate legal, M&A,
advisor, business
Specialist in M&A and
capital markets. MBA in
Law



Guilherme Reis
Developer and Blockchain
specialist
Software Engineer with MBA in
Engineering and Innovation



Alessandra Alkmim
Training, Connections,
Content, Design
Master's student in Higher
Education Management

SCIENTIFIC AND MEDICAL



Dra. Débora Miranda
ADHD specialist doctor and teacher
**Pediatrician, MBA in Health
Management, Master and PhD in
Biological Sciences**



Dr. Marco Romano
Doctor / specialist professor ADHD
PhD in Biochemistry, also, Specialist
in Psychiatry. head of the Dept. de
Saúde Mental-FMUFMG,
Coordinator of the Psychiatry
Service of HC-UFMG



Dr Michael Brammer
Biochemical. PhD Neurochemistry at
Leeds University UK. He has worked at
Kings College London for 43 years in the
fields of Neurochemistry,
Neuropharmacology and Brain Imaging

UK TEAM



Liana
Project Manager



David
Business Development



Nabil
Software Developer



ADHERE

SCIENTIFIC PUBLICATIONS

Our scientific team published a hundred articles related with ADHD. Some of them:

Soares LS, Costa DS, Malloy-Diniz LF, Romano-Silva MA, De Paula JJ, De Miranda DM. Investigation on the Attention Deficit Hyperactivity Disorder Effect on Infatuation and Impulsivity in Adolescents. *Frontiers in Behavioral Neuroscience*, v. 13, p. 137, 2019.

Link: <https://www.frontiersin.org/articles/10.3389/fnbeh.2019.00137/full>

DOI: <https://doi.org/10.3389/fnbeh.2019.00137>

Avelar BS, Mancini MC, Fonseca ST, Kelty-Stephen DG, Damian G, De Miranda DM, Romano-Silva MA, De Araújo PA, Silva PL. Fractal fluctuations in exploratory movements predict differences in dynamic touch capabilities between children with Attention-Deficit Hyperactivity Disorder and typical development. *PLoS One*, v. 14, p. e0217200, 2019.

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0217200>

DOI: <https://doi.org/10.1371/journal.pone.0217200>

De Castro GCCP, De Souza DC, Malloy-Diniz LF, De Marques DM, De Paula JJ. Temporal Reward Discounting in Children with Attention Deficit/Hyperactivity Disorder (ADHD), and Children with Autism Spectrum Disorder (ASD): A Systematic Review. *DEVELOPMENTAL NEUROPSYCHOLOGY*, v. 11, p. 1-13, 2019.

Link: <https://www.tandfonline.com/doi/abs/10.1080/87565641.2019.1667996?journalCode=hdivn20>

DOI: <https://doi.org/10.1080/87565641.2019.1667996>

Coutinho TV, Reis SPS, Silva AG, De Miranda DM, Malloy-Diniz LF. Deficits in Response Inhibition in Patients with Attention-Deficit/Hyperactivity Disorder: The Impaired Self-Protection System Hypothesis. *Frontiers in Psychiatry*, v. 8, p. 299, 2018.

Link: <https://www.frontiersin.org/articles/10.3389/fpsy.2017.00299/full>

DOI: <https://doi.org/10.3389/fpsy.2017.00299>

Mendes CG, Mancini MC, De Miranda DM. Participação doméstica de crianças e adolescentes com tdah: uma revisão sistemática da literatura. *Cadernos Brasileiros de Terapia Ocupacional*, v. 26, p. 658-667, 2018.

Link: <http://www.cadernosdeterapiaocupacional.ufscar.br/index.php/cadernos/article/view/1974>

DOI: <https://doi.org/10.4322/2526-8910.ctoAR1184>

Gomes AKV, Maloy-Diniz LF, Lage GM, De Miranda DM, De Paula JJ, Costa D, Albuquerque MR. Translation, Adaptation, and Validation of the Brazilian Version of the Dickman Impulsivity Inventory (Br-DII). *Frontiers in Psychology*, v. 8, p. 11, 2017.

Link: <https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01992/full>

DOI: <https://doi.org/10.3389/fpsyg.2017.01992>

Gomes-Tiago AP, Costa DS, Alvim-Soares JR, Antonio M, Malloy-Diniz LF, De Miranda DM.

Sleep duration and intensity of ADHD symptoms. *Revista Brasileira de Psiquiatria (Sao Paulo.1999.Impresso)*, v. 38, p. 348-349, 2016.

Link: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-44462016000400348&lng=en&tlng=en

DOI: <https://doi.org/10.1590/1516-4446-2015-1847>

Costa DS, Rosa DVF, Barros AGA, Romano-Silva MA, Malloy-Diniz LF, Mattos P, De Miranda DM. Telomere length is highly inherited and associated with hyperactivity-impulsivity in children with attention deficit/hyperactivity disorder. *Frontiers in Molecular Neuroscience*, v. 8, p. 111, 2015.

Link: <https://www.frontiersin.org/articles/10.3389/fnmol.2015.00028/full>

DOI: <https://doi.org/10.3389/fnmol.2015.00028>

Costa DS, Paula JJ, Alvim-Soares AMJ, Diniz BS, Romano-Silva MA, Malloy-Diniz LF, De Miranda DM. ADHD inattentive symptoms mediate the relationship between intelligence and academic performance in children aged 6-14. *Revista Brasileira de Psiquiatria (São Paulo. 1999. Impreso)*, v. 00, p. 000-000, 2014.

Link: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-44462014000500313&lng=en&tlng=en

DOI: <https://doi.org/10.1590/1516-4446-2013-1201>

School Benefits



Head Teacher

1. Pioneer neurodiverse tech education.
2. Spot potential ADHD early.
3. Boost school overall performance.
4. Enhance inclusive school reputation.
5. Engage parents/local authorities on neurodiversity.
6. Access special Government funds.



Local Authority

1. Champion neurodiversity transformation.
2. Offer local ADHD prevalence data, better resources allocation.
3. Prioritize ADHD student needs.
4. Foster ADHD support collaboration school/families/NHS.



Teachers / Assistant

1. Streamline ADHD identification to reduce the burn-out and isolation on this topic.
2. Tailor ADHD teaching strategies.
3. Enhance ADHD classroom management.
4. Boost ADHD staff awareness.

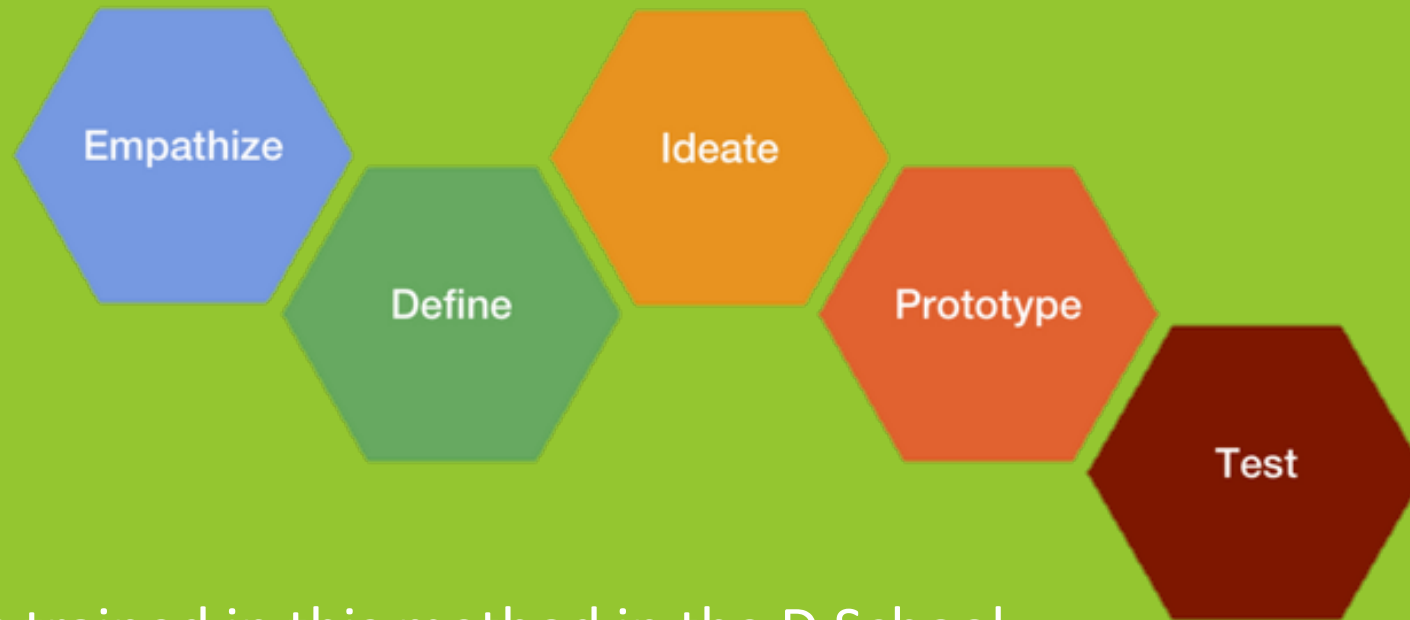


Parents

1. Boost early ADHD detection, better outcomes.
2. Inform parents about their children needs.
3. Strengthen communication with school staff.
4. Lower ADHD-related stigma.



Stanford Design Thinking Process



Daniel Melo was trained in this method in the D.School of the Stanford University/Palo Alto, USA. Additionally, he received training in equivalent framework in the Royal Academy of Engineering where he was selected as a regional talent in the Liverpool region.



Orcha Approval!

Addhere
Developer: Addhere Technologies

Web App version: 1
Paid reviewed on: 24/10/2023

View ID Copy URL Share this app: [Twitter](#) [Facebook](#) [LinkedIn](#)

ORCHA APPROVED

67%
Level 4

Developer description:
ADDHERE Technologies has developed an AI powered App, based on scientific evidence, to support the diagnosis of ADHD, and correlated neurodevelopmental disorders such as some autism spectrum, particularly in children. In partnership with the departments of Mental Health and Computer Science at UFMG (Federal University of Minas Gerais, Brazil) we built a TRL 4 (technology readiness level) AI model. The TRL 4 means that the technology works well in laboratory environment. The Application is easy to use and can be utilized by teachers, health care professional or even by the parents themselves in a self-driven healthcare approach, obviously, on behalf of their children to be assessed. In addition to the strongest predispositions detection, they will receive online training individualized by the findings. Our data was collected in a 10-year scientific study that evaluated, tracked and treated *1,500 children, all diagnosed with ADHD as defined by psychologists and neuropsychologists using traditional and established methods.
[Show more](#)

App details:
Categories: [Autistic Spectrum Disorders](#) [ADHD](#)
Released: 20/02/2023
Last Updated: 20/02/2023
Size: 0 Bytes
Country: GB

Summary
It was assessed as a Level 4 App. These Apps can be focused on general health or specific conditions and contain advanced and complex features that are subject to formal regulation. Where they collect data we assess their data use policies and compliance with relevant standards. Because they are health focused we also assess their compliance in the Clinical Assurance as well as the User Experience domains.

Data Professional Assurance Usability & Accessibility

App Design Standards
The app **does not** evidence compliance with recognised app design standards.

User Engagement
We were **not able** to find evidence that the app involved user feedback in the design process, but we **were able** to find evidence of user testing.



Innovate UK

Dear Daniel Melo,

We have accepted your signed grant offer letter for your project:
Digital Manufacturing Process Design for AI-Driven Customization
in Wearables Production: ADHD Pioneering Diagnosis and
Treatment Support

You can start your project on 1 September 2023.

You can also review the status of your project when you sign into
the
[Innovation Funding Service](#).

Please contact us if you have questions.

Yours sincerely,

Grants team
Innovate UK, part of UK Research and Innovation
Tel: 0300 321 4357
Email: grants_service@iuk.ukri.org



Addhere Headquarters



Our corporate HQ is located at the world-renowned Sci-Tech Daresbury Campus near Runcorn, Cheshire.

Sci-Tech Daresbury is a powerhouse of expertise and support in scientific, medical and technical development and is closely connected with local universities.



Addhere Technologies founded its HQ at this location to benefit from the services available at this and other leading-edge organisations, to develop unique applications and provide help and support to all our customer base.

Access link: <https://app.addhere.co.uk/>

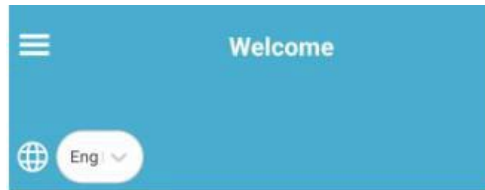
Select a language



Language | v

Login

Accept Privacy Policy

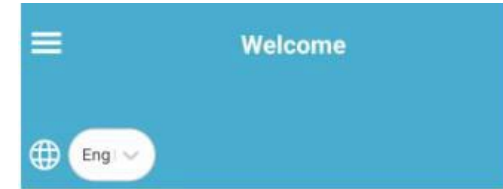


LOGIN

Log in through your Facebook/Google profile, or through a link that will be sent to your email.

- Do you agree with the [Privacy policy](#)
- I agree to receive notifications in my registration email.

Accept notifications



LOGIN

Log in through your Facebook/Google profile, or through a link that will be sent to your email.

- Do you agree with the [Privacy policy](#)
- I agree to receive notifications in my registration email.

There are two ways of authentication

The screenshot shows the ADDHERE app interface. At the top, there is a blue header with a hamburger menu icon, the word "Welcome", and a language selector set to "Eng". Below the header is the ADDHERE logo. The main content area is titled "Magic link" and contains the following text: "The Magic Link allows password-free login. Provide your email, receive a link, and click it to access the system." Below this text is an "Email" input field and a blue "SUBMIT" button. A horizontal line with the word "Or" in the center separates this from the second option. The second option is titled "Login and Password" and contains the text "Email" and "Password" above their respective input fields, followed by a blue "SUBMIT" button.

It is important to note that the option you choose when registering must be the same as the one you use when logging in to the App.

Magic Link


With this option, you will receive an e-mail that may be in your inbox or spam folder.

Login and Password

In this option, you register your e-mail account in the Login field and a password of your choice.

Create an account

Create



Magic link

The Magic Link allows password-free login. Provide your email, receive a link, and click it to access the system.

Email

SUBMIT

— Or —


Email

Password

SUBMIT

[Create an account](#) [Forgot your password](#)

Register




Subscription

SUBMIT

SUBMIT

[Create an account](#) [Forgot your password](#)

Login



Magic link

The Magic Link allows password-free login. Provide your email, receive a link, and click it to access the system.

Email

SUBMIT

— Or —

Email

Password

SUBMIT

[Create an account](#) [Forgot your password](#)

Roles

A role is defined for each user registered in the database with specific restrictions for each one of them.

GUEST

TEACHER

PARENT

PROFESSIONAL

RESTRICTED



Roles' restrictions

GUEST

- In your first authentication, you are considered as a “Guest”. You are registered in the database, but this role does not allow you to use the app yet.



TEACHER

PARENT

PROFESSIONAL

You can

- Register student
- Create an evaluation
- Fill an evaluation
- Add a professional to an evaluation
- Comment/access report
- Edit the profile of a student (except for the role “parent”)



RESTRICTED

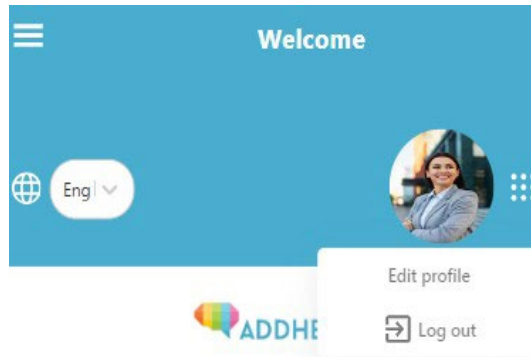
This role is specific to a user invited to evaluate a child on one specific evaluation.

He can only fill out the specific evaluation and access the report and comments on it (he cannot create patients' or others' evaluations).



Edit profile

Edit



Did you know that 5% of world children have ADHD, but 80% of them was never evaluated?

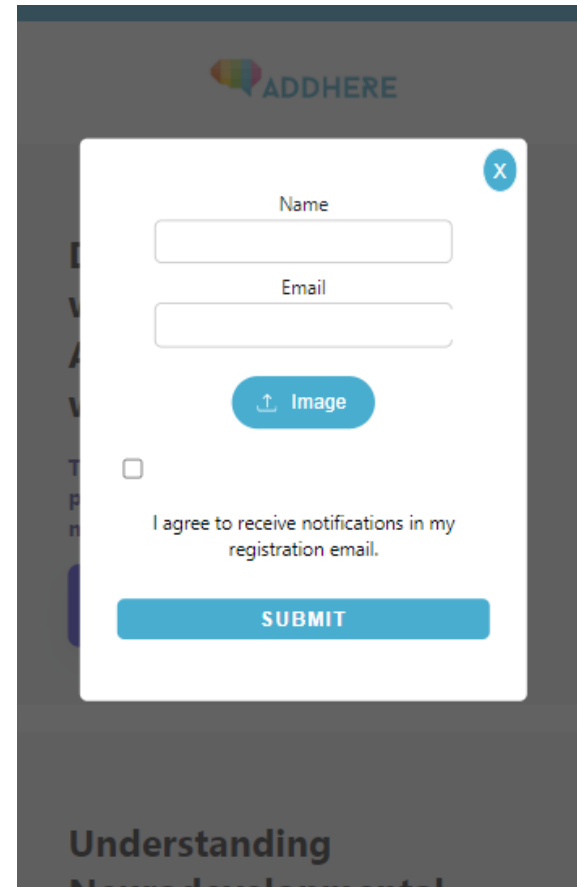
This app, can help you to detect predispositions to neurodevelopmental disturbances.

Start now

Know more

Submit

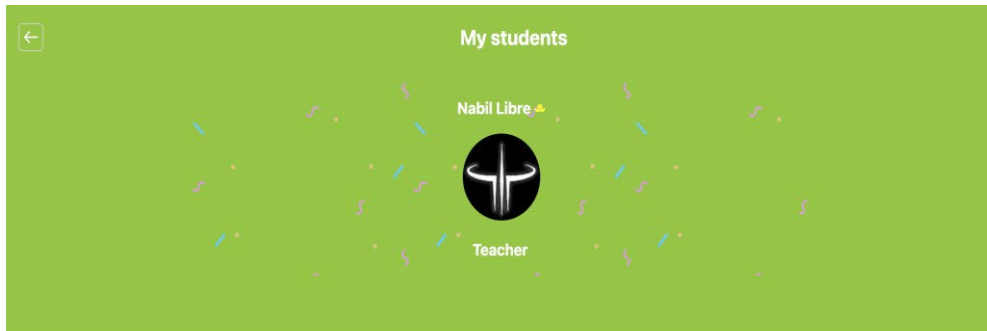
It allows you to edit the username and upload a photo of the user.



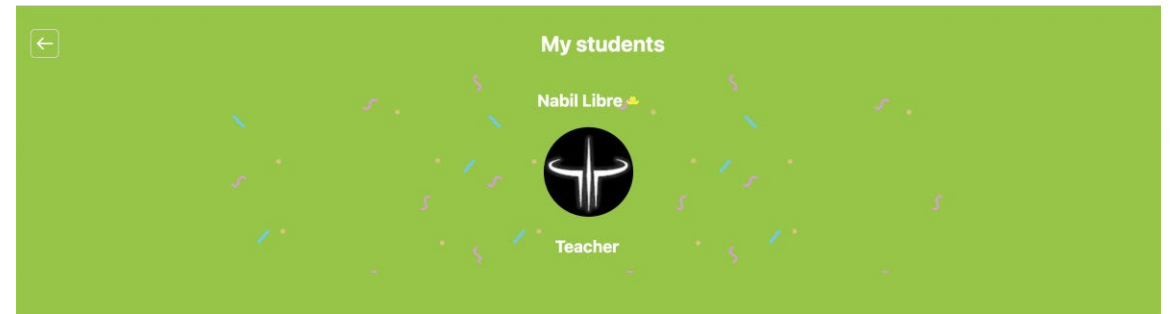
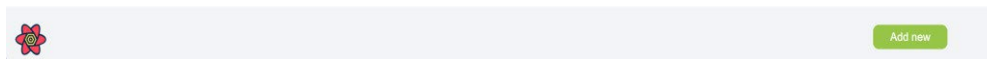
Students

Pages/students

Actions: create, filter students, edit student record and access to his evaluations (click arrow).

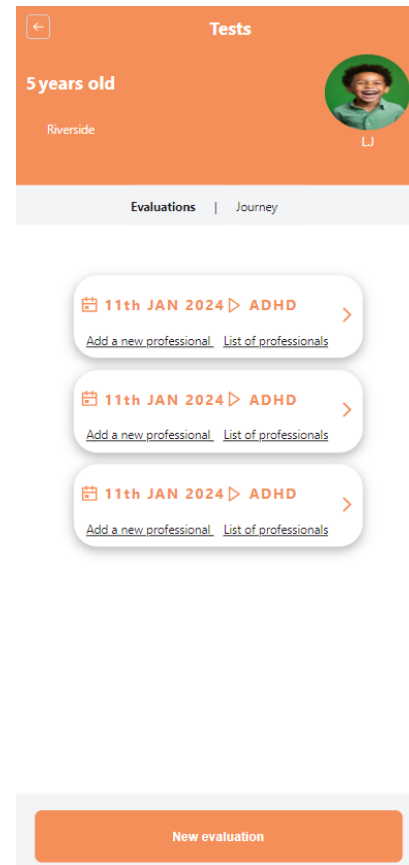
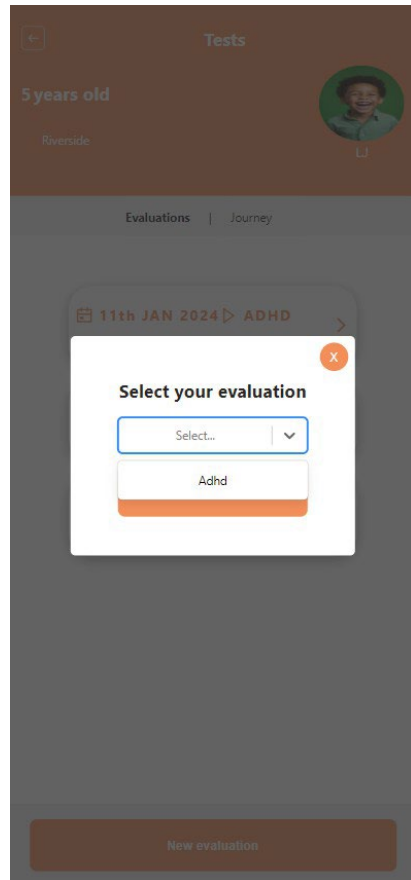


There are no patients at the moment

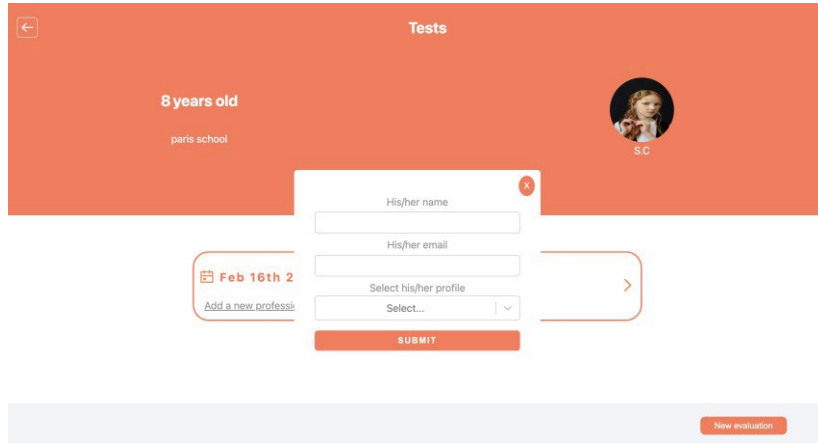


Students

Actions: add evaluations, add new professionals to an evaluation, consult the professionals on an evaluation list and consult the evaluation (click arrow).



Notifications



The user is already registered

ADDHERE

Hi ISADORA MAGALHÃES,

You have been asked to participate in an evaluation of patient "Lucas " in the ADDHERE App.

Use this link and access it with your email. Access link: <https://app.addhere.co.uk>

If you are facing difficulties, please do not hesitate to reach out to us. We will be happy to offer our assistance.

Please contact us by email: dpo@addhere.co.uk and we will respond shortly.

Thanks,

ADDHERE Team

New user

ADDHERE

Hello ISADORA MAGALHÃES,

You have been asked to participate in the evaluation of the patient "Lucas " in the ADDHERE application. To do so, you need to be registered in the system.

Simply click on the provided link <https://app.addhere.co.uk> to sign up with this email by creating an account.

Once registered, you will be able to participate in the evaluation. If you have received this message in error, please ignore it.

If you encounter any difficulties, feel free to contact us. We will be happy to assist you.

Contact us via email: dpo@addhere.co.uk and we will respond to you promptly.

Thank you,

The ADDHERE Team

When a user add a new professional to an evaluation, the new professional will receive a notification in his email.

If he is already registered in the application: it will be a simple notification. If he is not, he will receive a link where he will have to indicate a code pin of the school where the patient is to allow us to grant him access with the role "restricted".

Security check for new user



ADDHERE

Evaluation

Action: fill out the evaluation.

Tests

0%

Total Of Questions: 26

[Profile Picture]

Tests

0%

Total Of Questions: 26

[Profile Picture]

How often the person does not seem to listen when spoken to directly?

| |
|---------------|
| Never |
| Sometimes |
| Frequently |
| Exaggeratedly |

SAVE

Tests

20- Often argues with adults ☆☆☆
Sometimes

21- Often actively defies or refuses adult requests or rules ☆☆☆
Frequently

22- Often deliberately does things that annoy other people ☆☆☆
Never

23- Often blames others for his or her mistakes or misbehaviour ☆☆☆
Exaggeratedly

24- Often is touchy or easily annoyed by others ☆☆☆
Never

25- Often is angry and resentful ☆☆☆
Frequently

26- Often is spiteful or vindictive ☆☆☆
Exaggeratedly

List of students Finish →

- ### Questions
- 1- Often fails to give close attention to details or makes careless mistakes in schoolwork or tasks. ☆☆☆
 - 2- Often has difficulty sustaining attention in tasks or play activities. ☆☆☆
 - 3- Often does not seem to listen when spoken to directly. ☆☆☆
 - 4- Often does not follow through on instructions and fails to finish schoolwork, chores, or duties ☆☆☆
 - 5- Often has difficulty organizing tasks and activities ☆☆☆
 - 6- Often avoids, dislikes, or reluctantly engages in tasks requiring sustained mental effort ☆☆☆
 - 7- Often loses things necessary for activities (e.g., toys, school assignments, pencils or books) ☆☆☆

- ### Questions
- 1- Often makes mistakes in schoolwork, homework, or assignments ☆☆☆
 - 2- Often has difficulty sustaining attention in tasks or play activities ☆☆☆
 - 3- Often does not seem to listen when spoken to directly ☆☆☆
 - 4- Often does not follow through on instructions and fails to finish schoolwork, chores, or duties ☆☆☆
 - 5- Often has difficulty organizing tasks and activities ☆☆☆
 - 6- Often avoids, dislikes, or reluctantly engages in tasks requiring sustained mental effort ☆☆☆
 - 7- Often loses things necessary for activities (e.g., toys, school assignments, pencils or books) ☆☆☆

Interpretation

←

Symptoms under evaluation...

As the assessments are completed, the algorithm makes adjustments to the perceptions of the most obvious symptoms. Please click on the circles to know more about each condition.

inattention

hyperactivity

opposition

Generate report →

By clicking on the results bulletins, an explanatory report will be displayed for you to read.

←

Symptoms under evaluation...

As the assessments are completed, the algorithm makes adjustments to the perceptions of the most obvious symptoms. Please click on the circles to know more about each condition.

Opposition

Alright! Let's discuss Oppositional Defiant Disorder (ODD), which is characterized by frequent and persistent patterns of anger, irritability, arguing, defiance, or vindictiveness towards authority figures. It's common for children and teenagers to show oppositional behavior at certain points. However, ODD involves a more continuous and disruptive pattern of behavior that can significantly interfere with a person's daily life. Here are the primary symptoms associated with Oppositional Defiant Disorder:

1. Frequent temper tantrums: Regular and more intense outbursts than what might be expected for the individual's age.
2. Arguing with adults or authority figures: Regularly challenging rules or refusing to comply with adults' requests.
3. Actively defying requests: Deliberately refusing to follow rules or directions from adults or authority figures.
4. Deliberate annoyance: Making efforts to upset or annoy others, or becoming easily annoyed by others.
5. Blaming others: Often blaming others for one's own mistakes or misbehavior.
6. Easily irritated: Having a short fuse and showing irritability more often than not.
7. Spiteful and vindictive behavior: Engaging in actions to get back at others, holding grudges, and being unforgiving.

Generate report →

←

Symptoms under evaluation...

As the assessments are completed, the algorithm makes adjustments to the perceptions of the most obvious symptoms. Please click on the circles to know more about each condition.

Inattention

Absolutely! Let's delve into the Inattention component of Attention Deficit Hyperactivity Disorder (ADHD). Inattention isn't simply about being distracted. It's a more pervasive difficulty in maintaining focus on tasks, particularly over extended periods or when the task at hand might be considered 'mundane' or 'repetitive'. For someone with ADHD, their inattentiveness isn't a choice; it's a characteristic of how their brain functions. Here are the main symptoms associated with Inattention:

1. Careless mistakes: Making frequent, small mistakes in schoolwork, at work, or during other activities because of overlooking or missing details.
2. Difficulty sustaining attention: Struggling to stay on task during lectures, conversations, or lengthy reading.
3. Not seeming to listen: Drifting off even when spoken to directly, not out of disrespect but due to distraction.
4. Not following through: Having difficulty in completing school assignments, chores, or duties in the workplace. This isn't out of rebellion or laziness but due to forgetfulness or being sidetracked by other things.
5. Difficulty organizing tasks: Struggling with tasks that require organization or long-term planning.
6. Avoiding or being reluctant about tasks that require sustained mental effort: This

Generate report →

←

Symptoms under evaluation...

As the assessments are completed, the algorithm makes adjustments to the perceptions of the most obvious symptoms. Please click on the circles to know more about each condition.

Hyperactivity

Hyperactivity/impulsivity is one component of Attention Deficit Hyperactivity Disorder (ADHD). ADHD is often characterised by inattention, hyperactivity, and impulsivity. For some, the primary challenge is inattention, whilst others might predominantly display hyperactive and impulsive behaviours. Let's break this down a bit:

1. Hyperactivity means being overly active. Imagine a friend who always seems to be on the go, as if driven by a motor. They might find it challenging to remain seated, constantly fidget, or tap their hands or feet.
2. Impulsivity refers to acting without thinking first. It's a bit like making a hasty decision to eat an entire chocolate cake without considering the consequences, rather than pondering whether it's a good idea.

Here are the main symptoms of Hyperactivity/Impulsivity:

1. Fidgeting and tapping: Constantly moving feet or hands, unable to sit still.
2. Unable to remain seated: Particularly in situations where it's expected, such as in a classroom or an office.
3. Running or climbing inappropriately: Children might run around in situations where it's not suitable. Adults might feel restless.
4. Unable to play quietly: Especially common in children, who might find it hard to

Generate report →



Perception

Action: consult report and add comments and observations.

← Predispositions report

5 years old

Riverside



LJ

Description

The current impressions of one or more individuals who have a relationship with the person being evaluated. Please note that this report is not intended to provide a definitive diagnosis but rather to highlight potential predispositions that warrant further assessment by a qualified professional. The insights presented here may serve as a starting point for productive conversations, focusing on the well-being of the individual in question.

It is important to recognize that the impressions captured in this report may be influenced by various factors, both pertaining to the individual being assessed and the evaluators themselves. As such, a comprehensive understanding of the situation may require additional perspectives and expertise.

The privacy of the individual and their family is of paramount importance. We kindly request that you treat the contents of this report with the utmost confidentiality and refrain from disclosing any information contained herein without the express consent of the individual's parents or guardians.

We appreciate your understanding and cooperation in this matter and hope that the information provided in this report can contribute to a thoughtful and supportive discussion aimed at promoting the best interests of the individual being assessed.

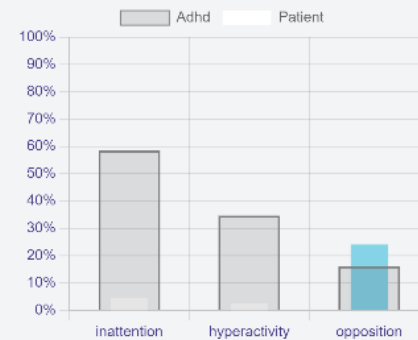
Should you have any questions or require further clarification, please do not hesitate to reach out.

Result

Evaluator: isadora Completed On: 11-01-2024

Status: teacher

Main symptoms



Detected predispositions for this individual:

No evidence for predisposition to disattention has been found.

No evidence for predisposition to hyperactivity has been found.

A predisposition to oppositional defiant disorder (ODD) has been detected.

A definitive predisposition to ADHD cannot be concluded; however, further investigation into the (hyperactivity/oppositional defiant disorder/distractibility) may be warranted.

It is recommended that this assessment be repeated after three months, and the results be compared.



Contact us



Presentation Video

<https://youtu.be/HwNtq9guK0w>

Daniel Melo

daniel.melo@addhere.co.uk

Tel: 07450 271 774

David Griffiths

david.griffiths@addhere.co.uk

Tel: 07816 223 129

<https://www.addhere.uk/>



MVP (Minimal Viable Product)

This is NOT MVP...



This IS MVP...

