

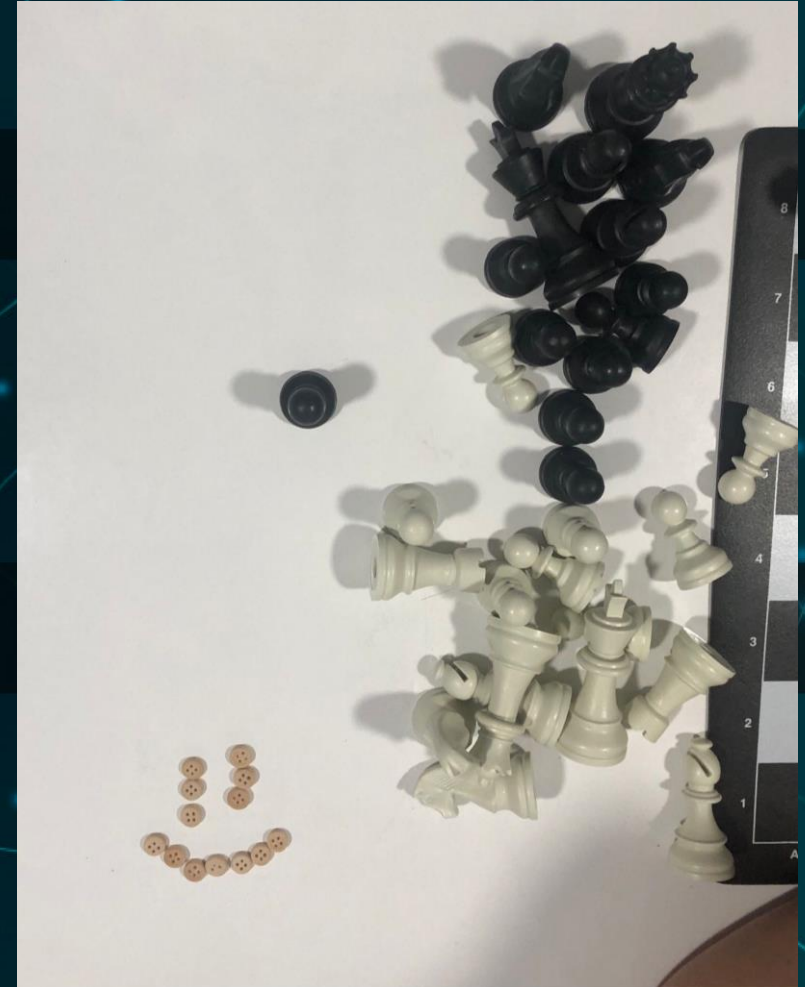


INFINITE CHESS – TURKEY

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Flowchart

- **Aim**
- **Autism Spectrum Disorder**
- **Students Characteristics**
- **Challenges**
- **Case Examples**
- **Experience with Online Lessons**
- **Take-Home Messages**



TEAM

Special thanks to Özgür Solakođlu

Melodi Dinçel - Trainer, coordinator

MD, Child and Adolescent Psychiatrist
Former national chess player



Handenur Şahin - Coordinator

Political Scientist – Strategic Planning Specialist
WCM – Professional chess player/ Captain of Turkish
Disabled National Chess Team



TEAM

Sinem Çağla Gündoğan - Trainer

Psychologist / Former national chess player
Currently chess trainer



Milena Barsamyan - Trainer

Physical Education and Sports Instructor
Former Chess Player, Currently Chess Trainer



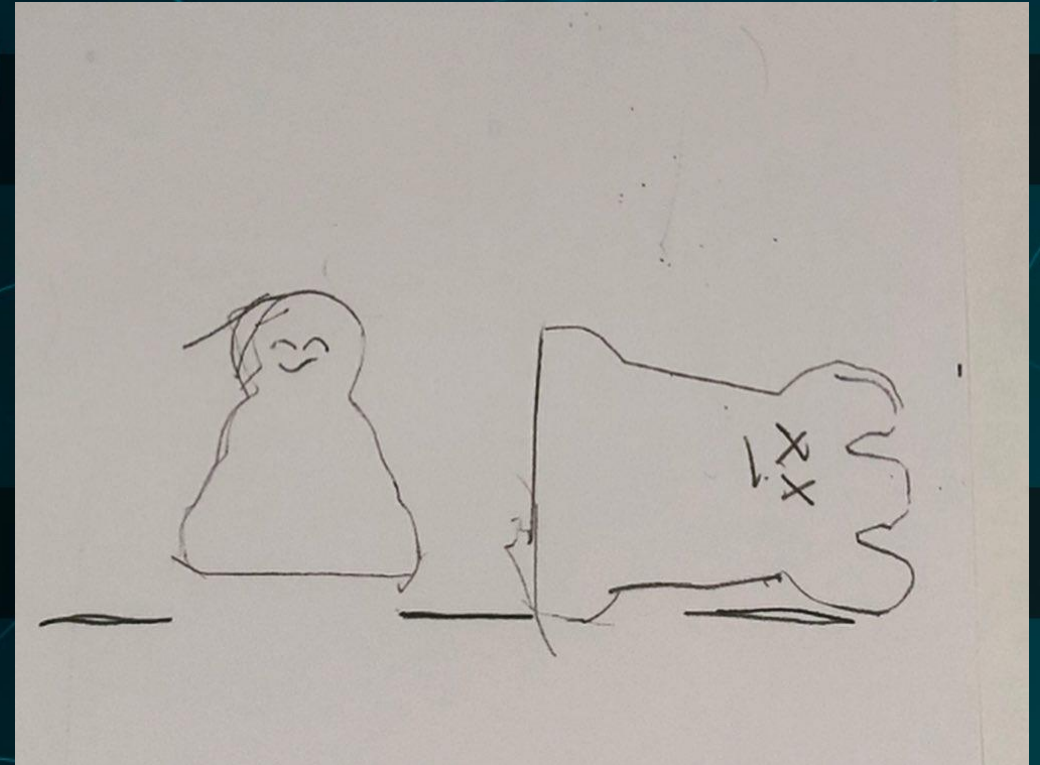
SUMMARY

- 4 education terms:
April 2022 / October 2022 /
March 2023/ **September 2023**
- Courses on Saturdays, 45 min for each group
- Two groups (3-3 students)
- **Summer Camp (Online)**



What do we aim for?

- **Peer interaction/Socialisation**
- **Understanding the Basics of Chess**
- **Joyful activity**

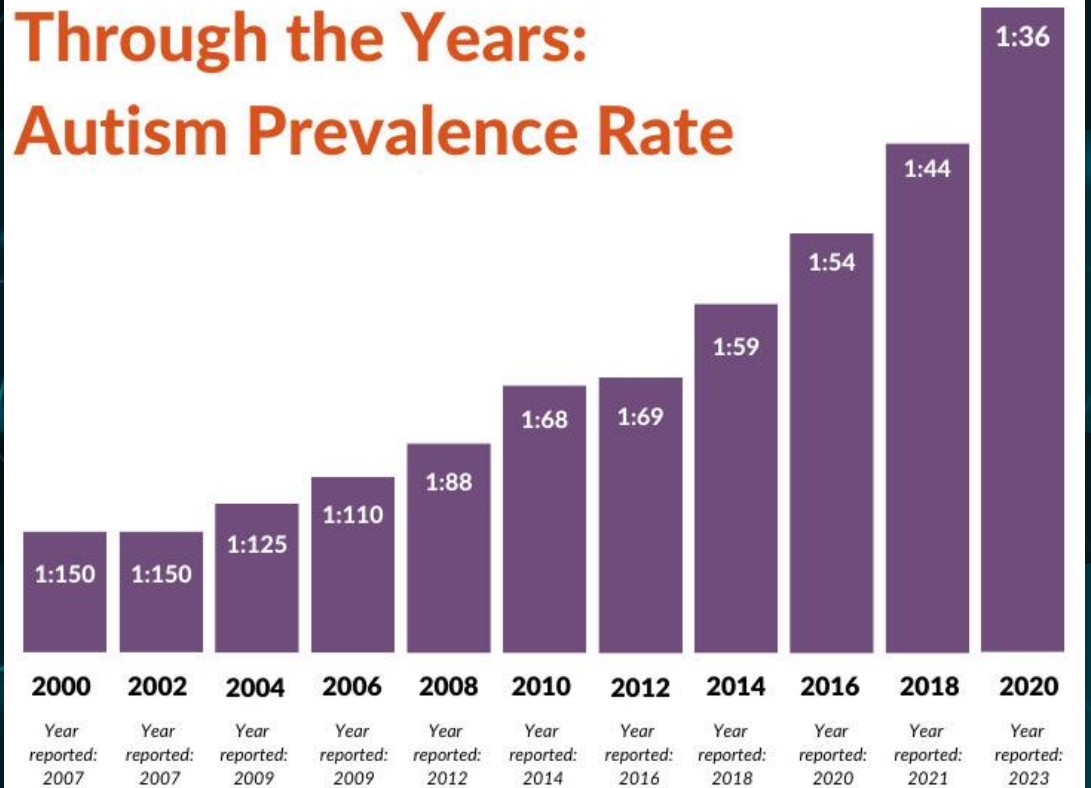


"Draw a picture of a pawn"

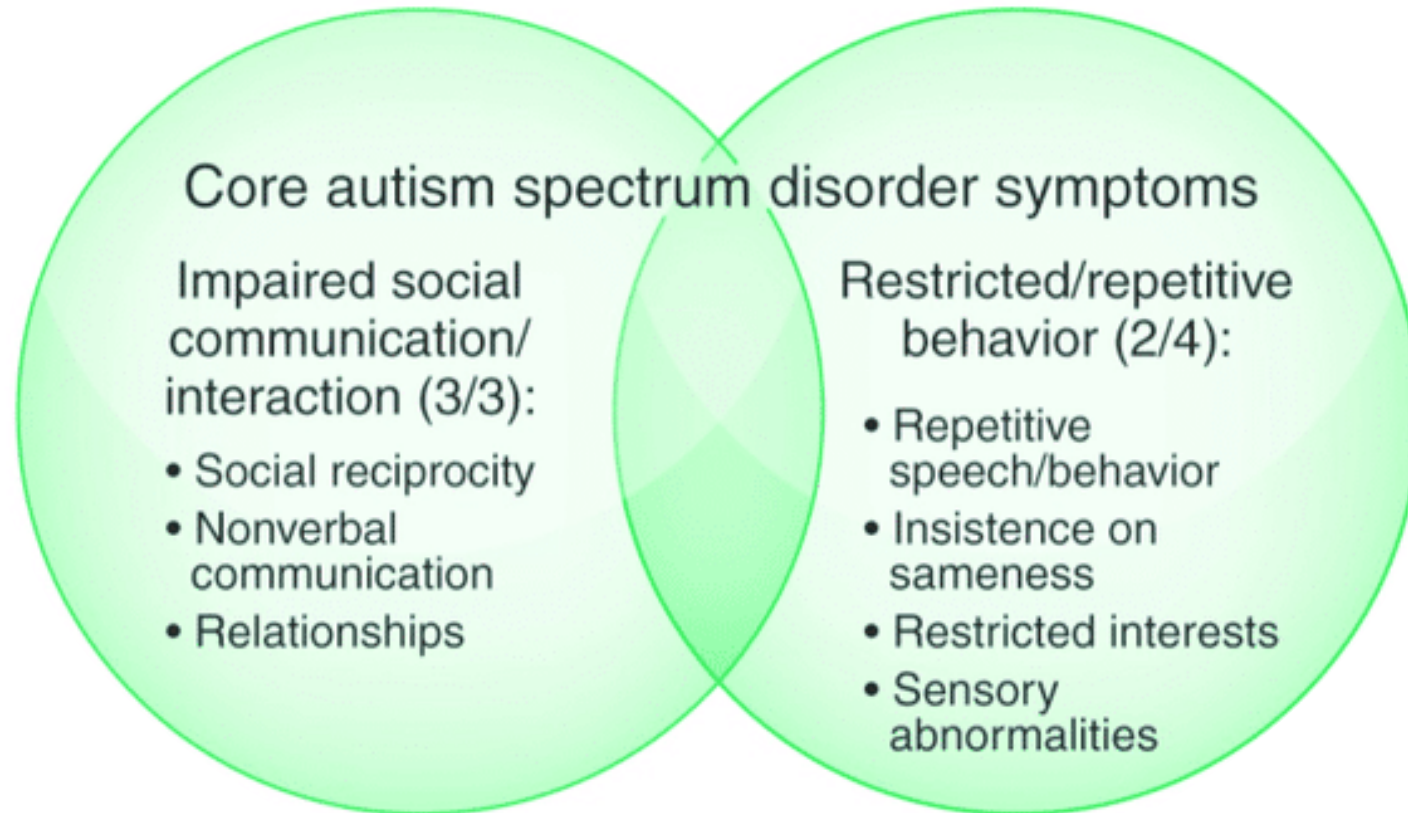
Autism Spectrum Disorder (ASD)

- ASD
- CDC: 1/36 - 4/1
- Global prevalence : 0,6 - 0,78 %

Through the Years: Autism Prevalence Rate



ASD SYMPTOMS



Hewitson, L. (2013). Scientific challenges in developing biological markers for autism.

SPECTRUM

Emotion/Interest Sharing

Language/Speech

Imitation Ability

Play Skills

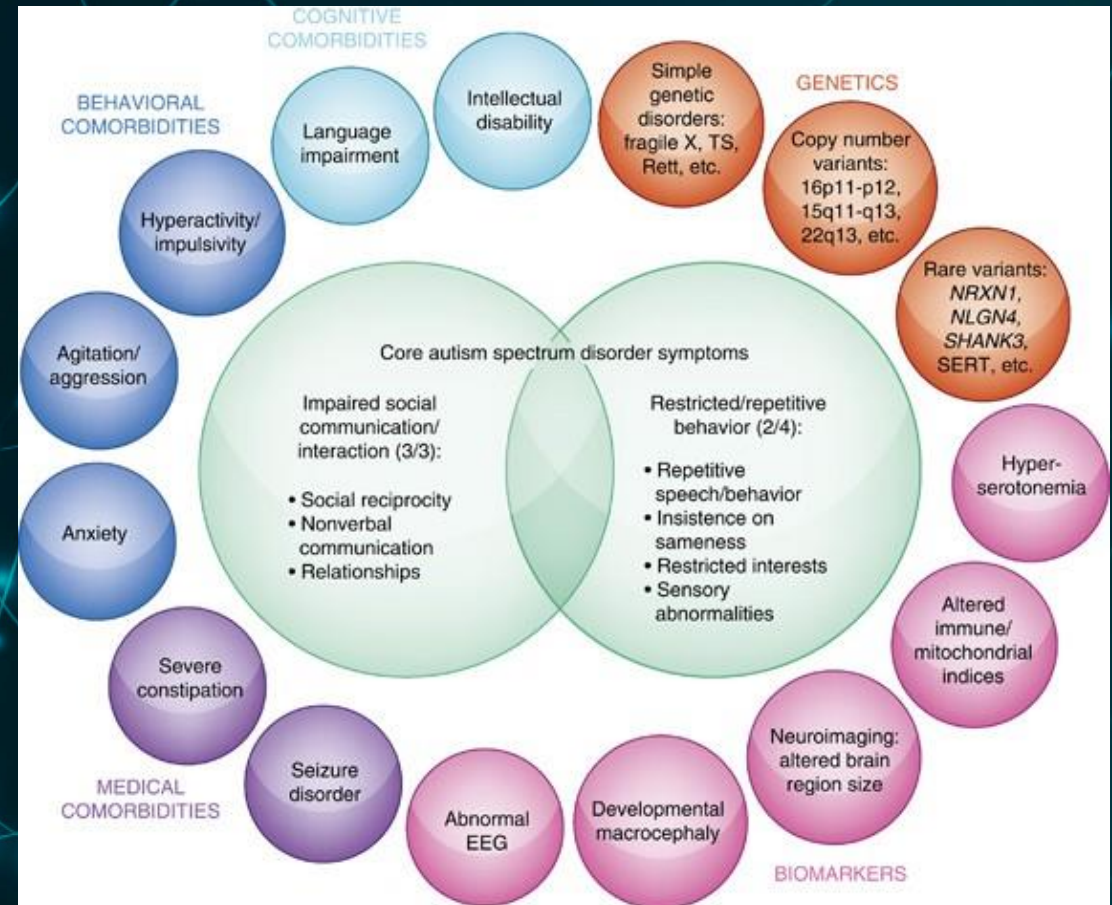
**Eye contact
Joint Attention**

**Social
Relationships**



Characteristics of Students

- IQ>70
- Sound hypersensitivity (1)
- Restricted interest to geography (1)
- Receiving treatment for ADHD (4)



Veenstra-VanderWeele, J., Blakely, R. Networking in Autism: Leveraging Genetic, Biomarker and Model System Findings in the Search for New Treatments. *Neuropsychopharmacol* **37**, 196–212 (2012).

CHALLENGES

- **Generalisation**
- **Attention problems (Attention Deficit Hyperactivity Disorder)**
- **Emotion regulation problems**
- **Insistence on sameness and Hypo-hypersensitivity**
- **Abstract concepts and Visuo-spatial Skills**
- **Co-morbidity**

Generalisation

- **Ability to apply learned skills or behaviors to different situations, settings.**
- **May not understand or be able to generalize some basic concepts such as corners, edges, centers.**
- **For example: the corner of the board, the corner of the room, etc.**
- **Checking the knowledge in advance and repeatedly revisiting these topics can be very beneficial.**

Attention Deficit Hyperactivity Disorder (ADHD)

- **ASD - ADHD comorbidity**
- **Attention spans (15-20 minutes)**
- **Children can get bored very quickly, lose their focus, and want to walk around the class during the lesson.**



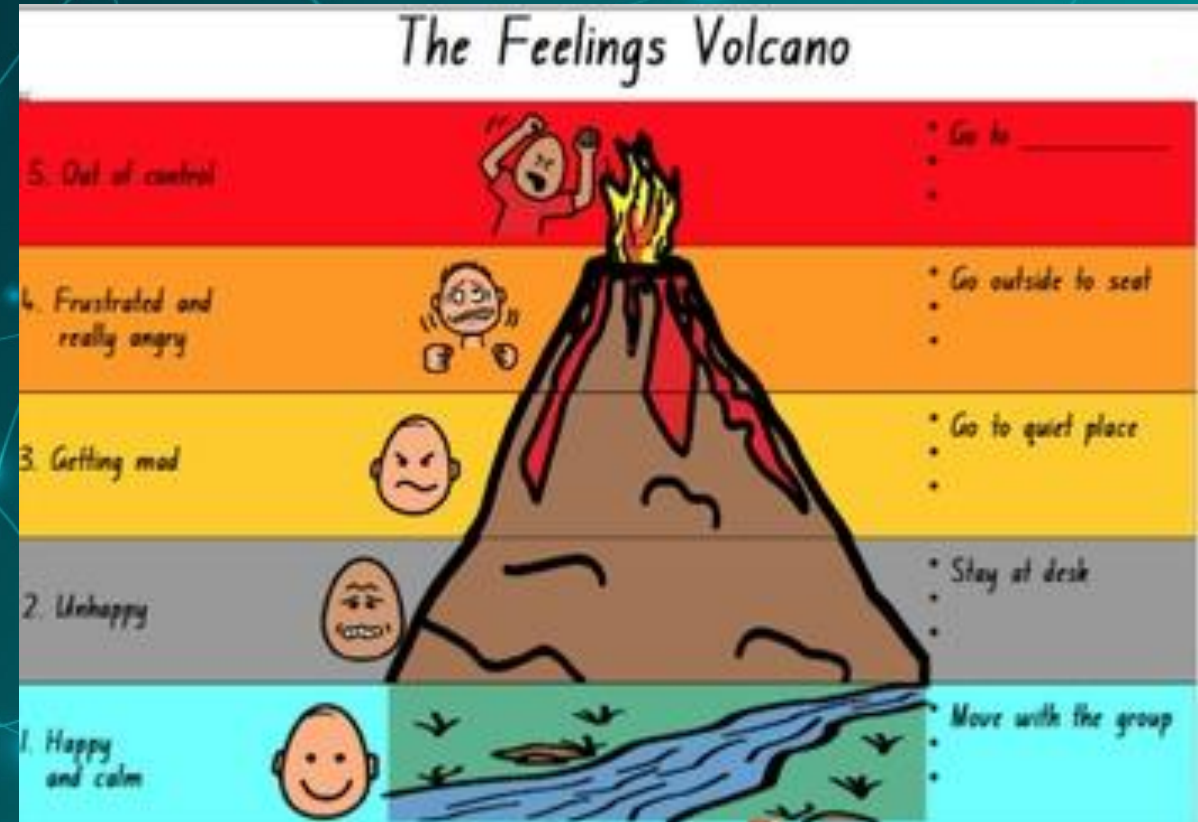
Attention Deficit Hyperactivity Disorder (ADHD)

- To cope:
 - Dynamic lessons, switch exercise type
 - **Positive reinforcements**
 - Explaining the class rules in advance
 - Lesson durations of 15-25 minutes
 - **Treatment for ADHD**



Emotion Regulation Problems

- Irritability, crying, yelling, outbursts, self-mutilations..
- Children's lives outside of class (e.g., Impact of children's home environment)



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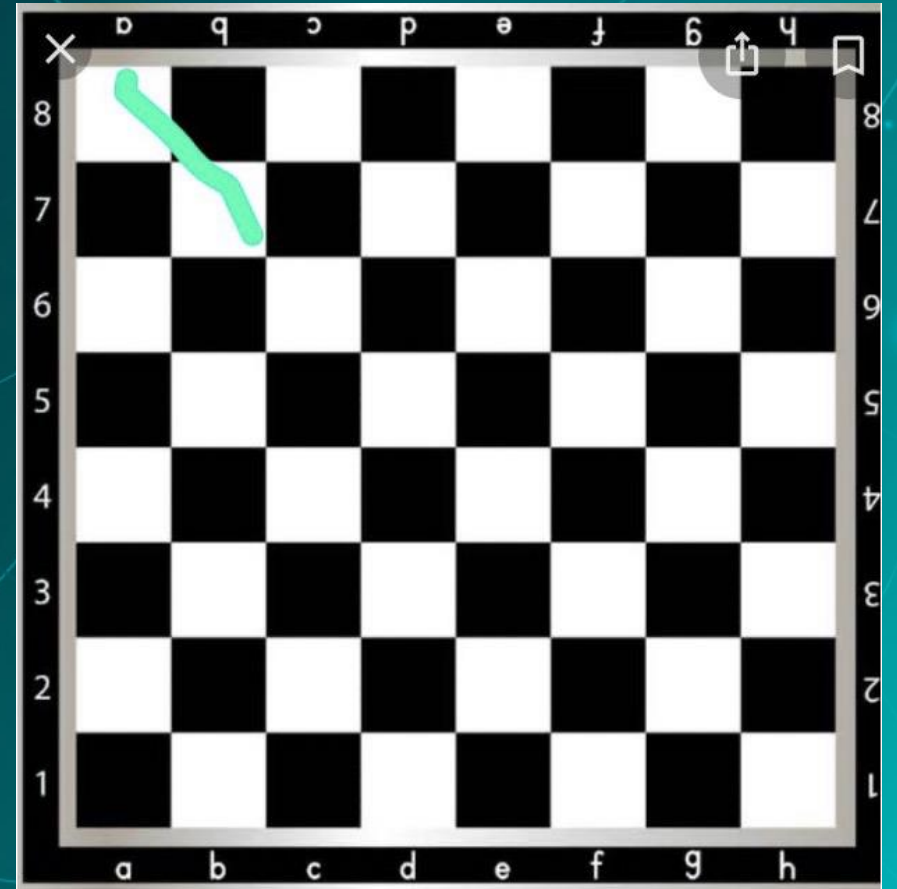
- **Multidisciplinary approach**
 - Arranging meetings (family/teachers or medical professionals)
 - Distraction techniques
 - Understanding and compassionate approach
 - Positive reinforcements (snack/colorful stickers)
 - Checking conditions outside of the class

CASE 1

- While our lessons were ongoing the father of one of our students passed away, and the child entered a period of mourning.
- The child exhibited serious behavioral problems in class. Frequently interrupting the class by talking, occasionally crying, screaming, or yelling when the teacher was attending to another student.
- The classroom interventions we implemented were not effective.
- **Multidisciplinary approach:** His medication was adjusted, and we arranged for him to have regular sessions with a child psychiatrist.
- **The child's behavior gradually improved over time with these interventions.**

Abstract Concepts and Visuospatial Abilities

- Concrete language
- Impossible moves, value of a king
- **The concept of 'sacrifice' in chess**
- Concept of Diagonal



A student's response to the task of identifying the 'shortest white diagonal.'

CASE 2

- A student refused to enter the class, screaming and kicking the elevator door.
- Despite my efforts, he remained upset and wouldn't join the class.
- He eventually agreed to wait in the waiting room with his mother.
- In the second half of the lesson, when I asked him what happened, he said:

"They told me that I had to crack the password to use the elevator, and then I tried to crack the elevator but I couldn't."



Chess game, Salvador Dali - DALL·E

Insistence on Sameness/Hypo-hypersensitivity

- Prefer to use the same chess set and sit in the same chair each week
- Displays distress when presented with a different pencil



Chess game, Pablo Picasso - DALL·E

Comorbidity

- Attention Deficit Hyperactivity Disorder
- Anxiety Disorder
- Major Depressive Disorder
- Obsessive-Compulsive Disorder

...

When to refer to a medical professional?

- **Mood swings**
- **Severe irritability**
- **Regression in skills**
- **Sudden increase in restrictive or repetitive behaviours**
- **ADHD (Prevalence: 28-83%)**
- **...**

Positive Feedbacks

- **High willingness to attend the lesson.**
- High compliance with the rules in the lesson
- Stick to regular hours of lessons.
- Chess notation, values of pieces, immediately accepting strict chess rules
- They perceived chess lesson as an enjoyable activity rather than a school lesson
- **More socialization** intent among students who participated in chess lessons - observation of Center's manager
- **Very positive feedback from families**



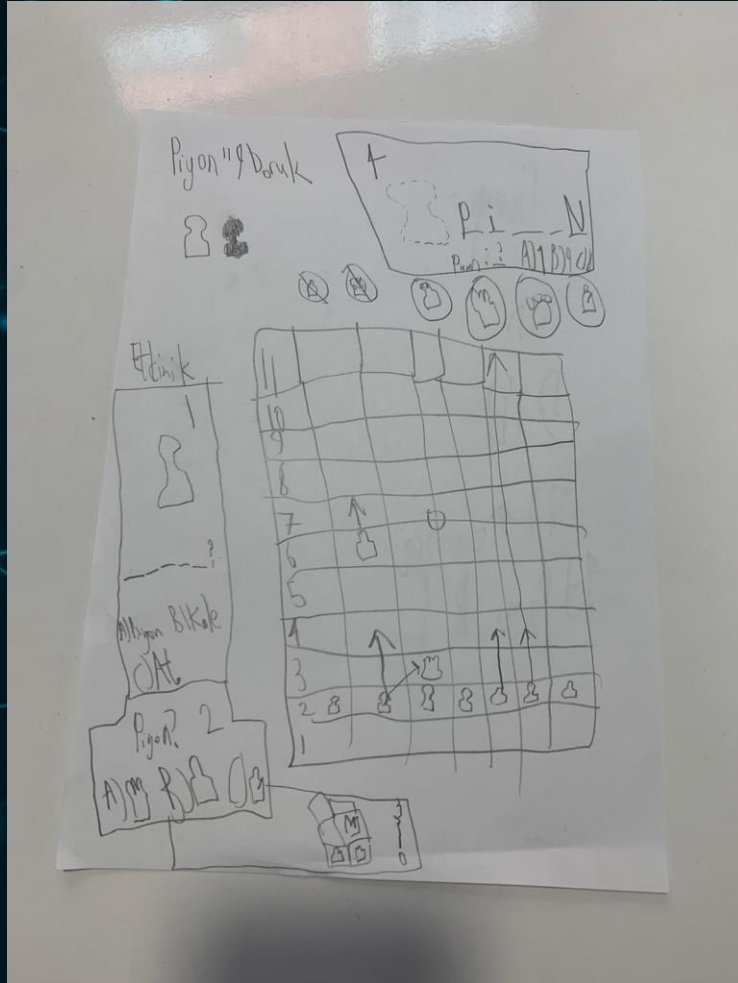
Positive Feedbacks

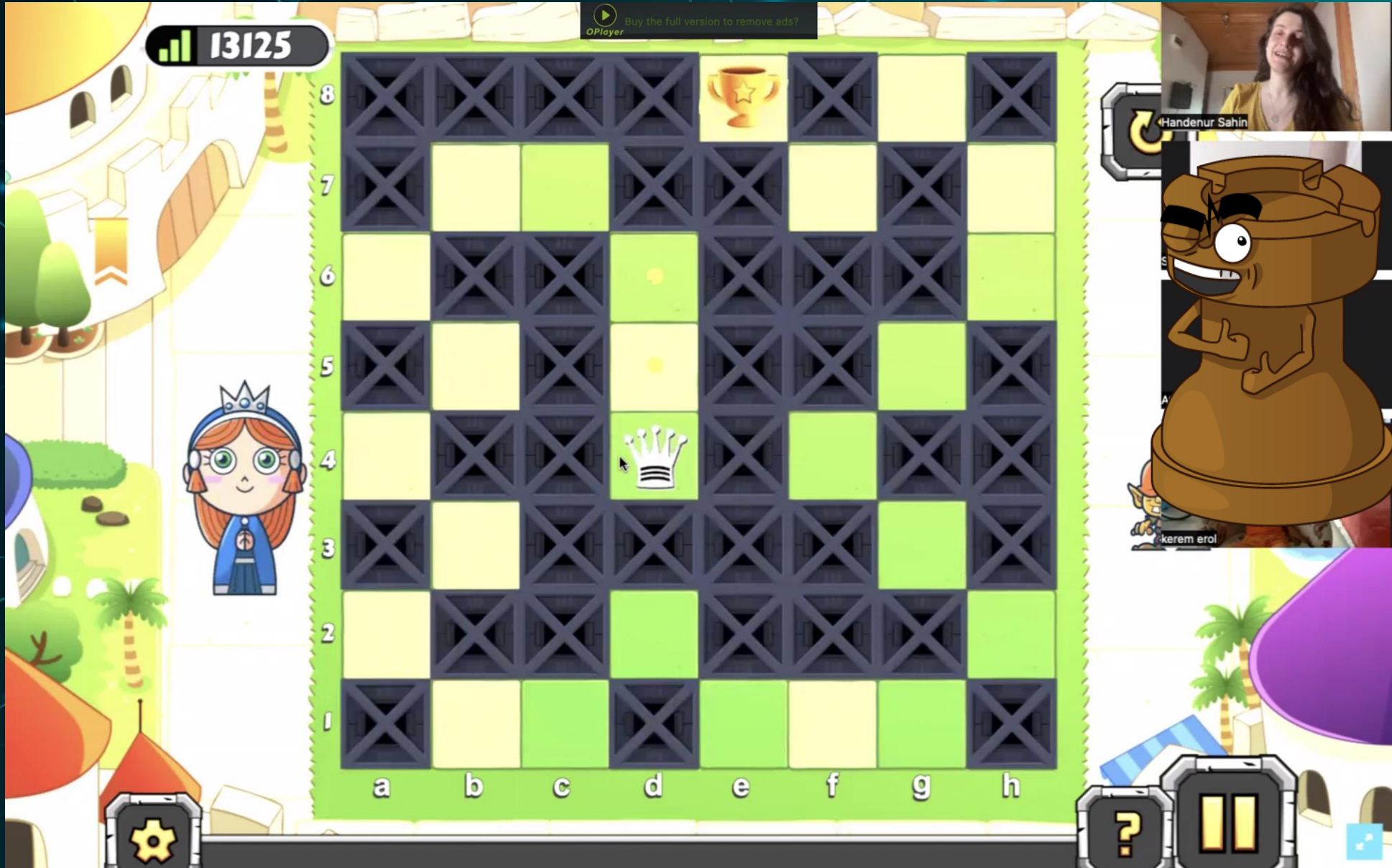
- FIDE guideline finished and repeated
- Basic chess rules learned
- **Double attack, pin**
- Online Chess Lessons



WHAT ABOUT STUDENTS FEEDBACKS ? They can express their feelings in different ways

Especially non-verbal language!





<https://www.chessmatec.com/>

Take Home Messages

- **Gathering comprehensive background information about children before lessons, including their academic levels, overall cognitive abilities, comorbid disorders, family histories, and so on.**
- **Use concrete, understandable, and simple language.**
- **Ensure the lessons are dynamic and engaging.**
- **There may be behavioral problems, but there will also be solutions.**
- **Adopt a multidisciplinary approach.**

Thank you for listening!

