

Flex Service Introduction

# AI Mental Care Solution

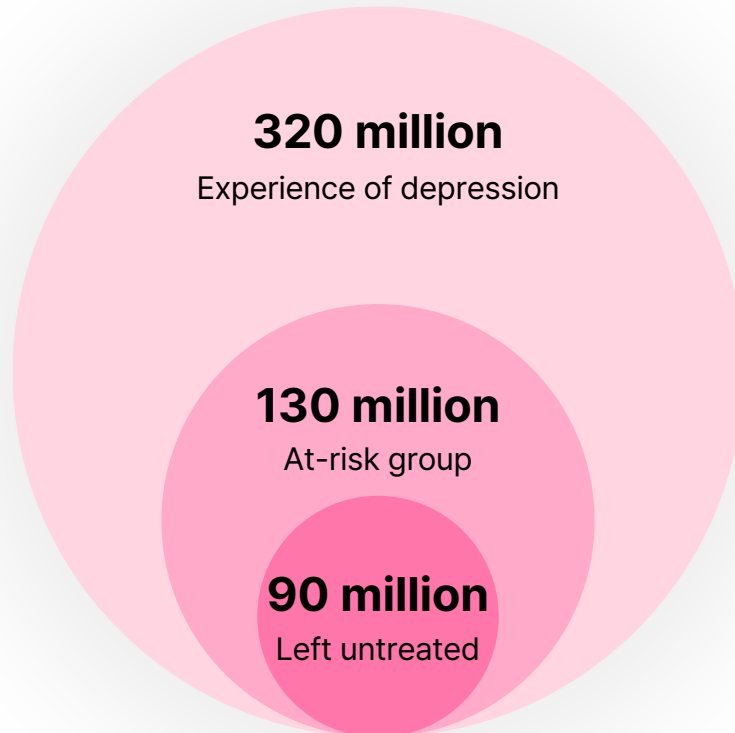


Flex

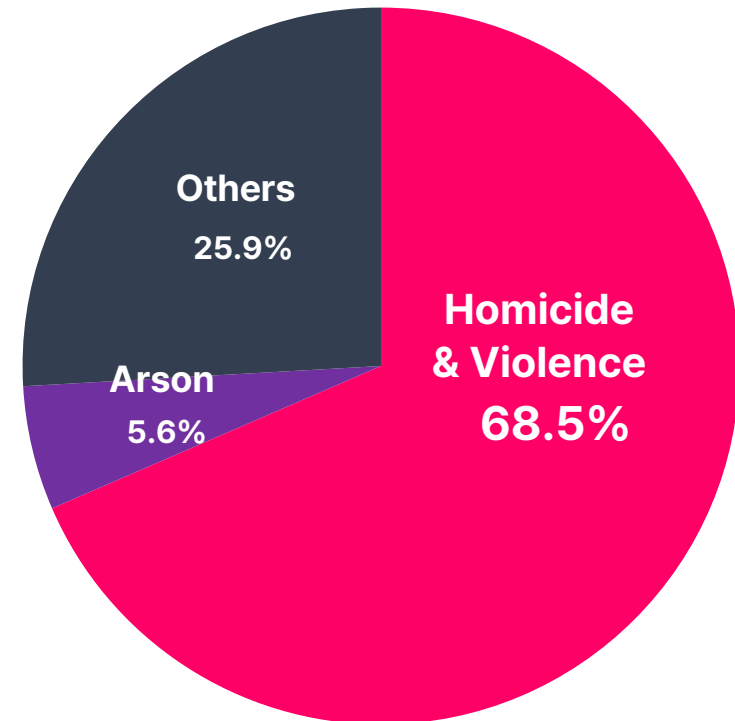
# Children worldwide are often left out of mental health care, facing emotional neglect.

Globally, child psychological testing and counseling are often carried out through parents or main caregivers, rather than the children themselves.

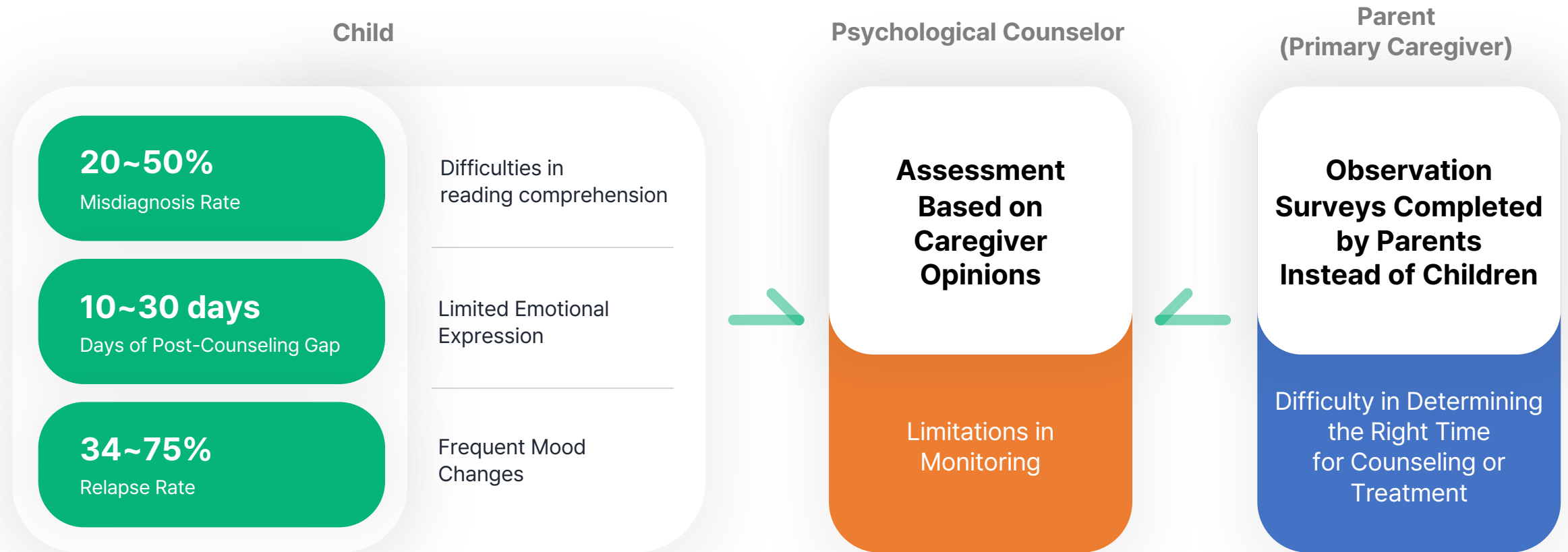
## Child Depression



## Crimes Linked to Adult Mental Disorders



# The mental health market continues to grow, yet there remains no screening system for depression and ADHD specifically designed for children aged 3 to 7.



- i. TM Capital, The Next Generation of Medicine : Artificial Intelligence and Machine Learning
- ii. MARKETS AND MARKERS, Digital Therapeutic(DTX) Market by Application, Sales Channel-Global forecasts to 2025
- iii. Fortune Business Insights, VR in Healthcare Market Size, Share & Industry Analysis

## Solution

# AI-Based Depression and ADHD Screening Where the Child Takes the Lead

An AI character engages children in interactive conversations based on items from child psychology and developmental assessments.



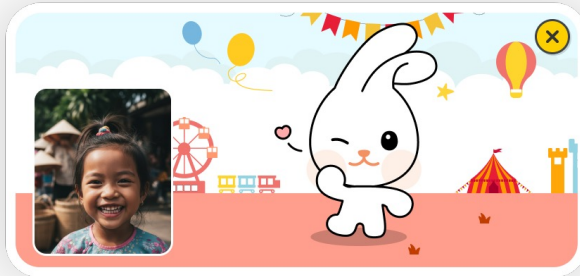


## Solution

# Early Detection of Depression and ADHD Through Child-Led Assessments

Psychological counselors or psychiatrists connect through an AI character to provide remote mental care — from initial assessment to in-depth sessions and mid-course interventions.

For Children



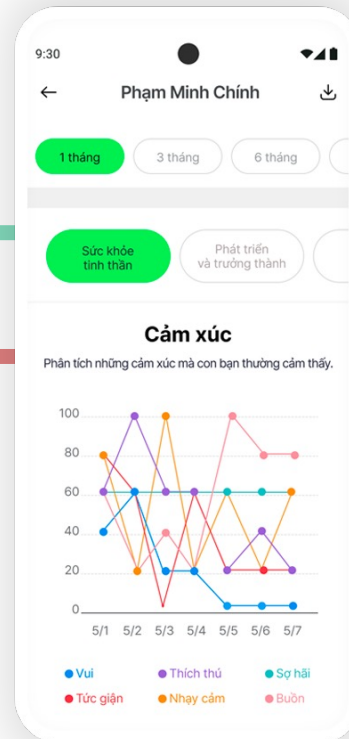
Conversation

Analysis

Character Access



For Parents



PTSD

ADHD

Depression

Counseling

Identifying the Causes of Emotional Anxiety Symptoms

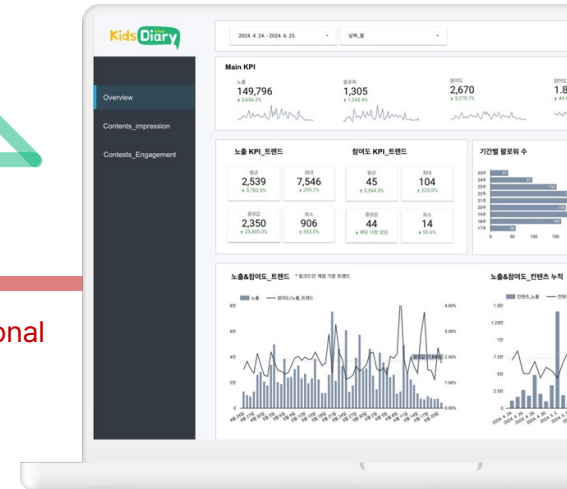
Counseling

Diagnosis

Prescription

Observation

For counsellor

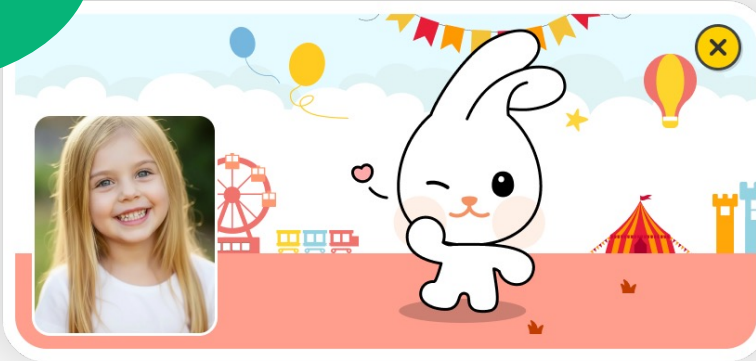


# Writing a Diary with a Character While Undergoing Psychological Assessment and Emotional Analysis

Depending on the diary type, psychological test items are personalized and transformed into conversational topics, leading to 1–3 minutes of empathetic dialogue.

I feel sad  
because Mom  
only loves my  
little brother

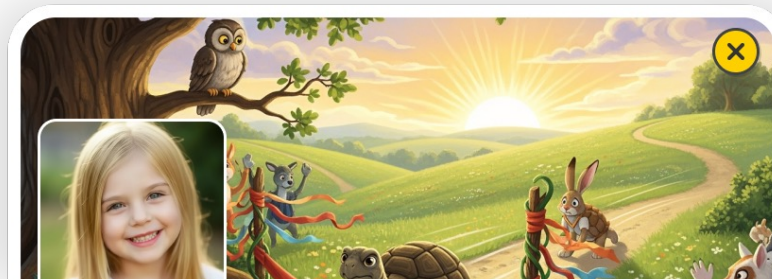
## Conversation Diary



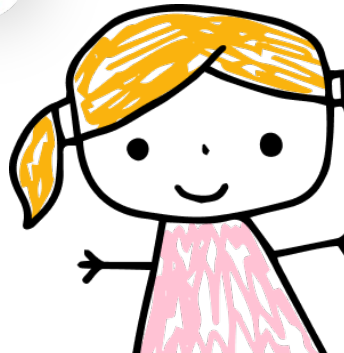
## Drawing Diary



## Story Diary



Why did you get  
angry with your  
mom today?

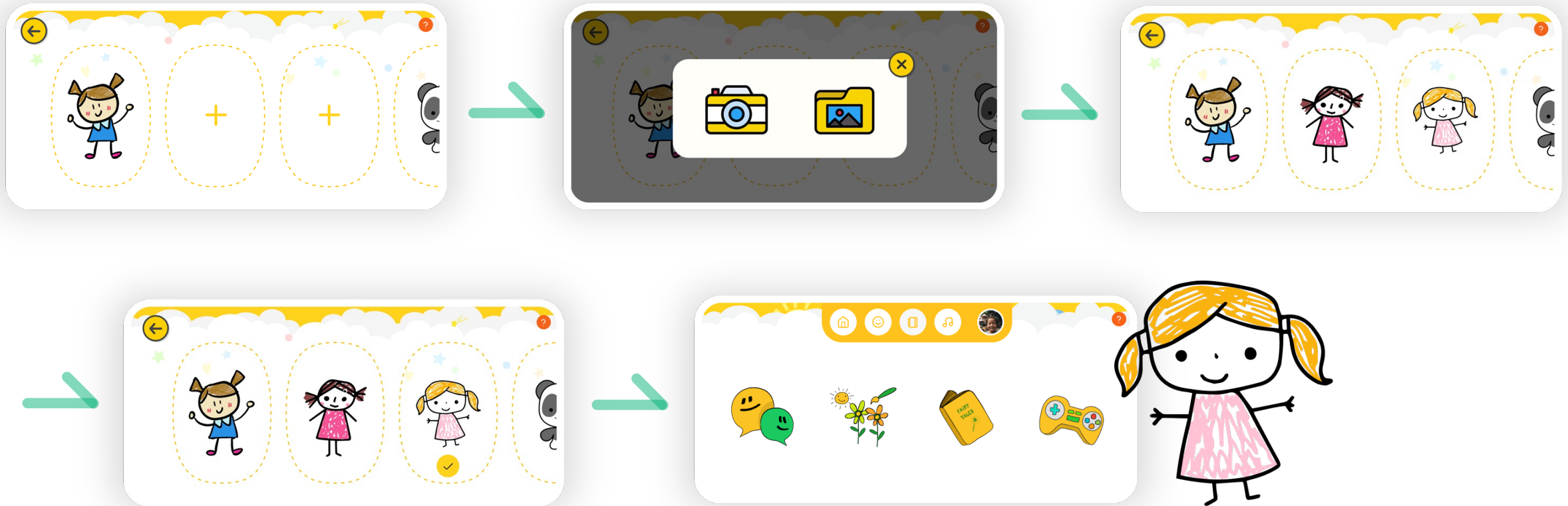


For Children

## Character Creation

**The child creates their own conversation friend.**

AI-generated animated characters created through recognition of body structure — head, body, legs, and arms.

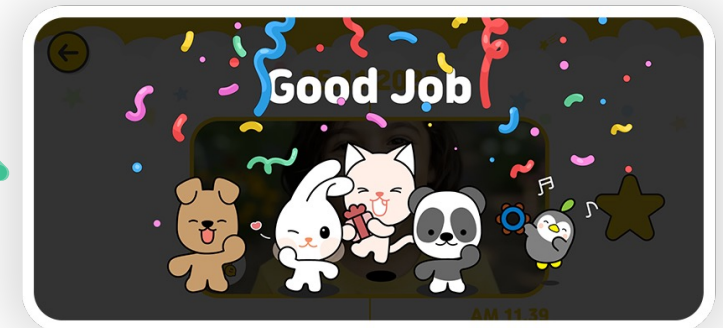
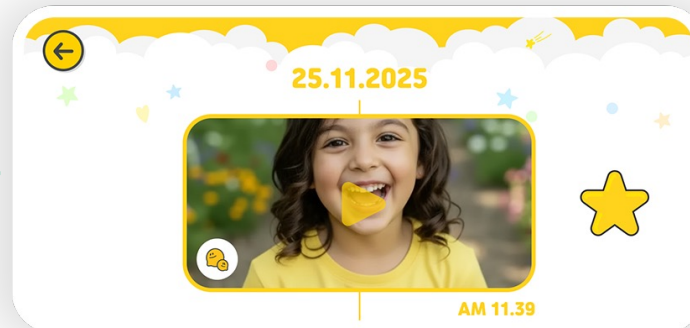
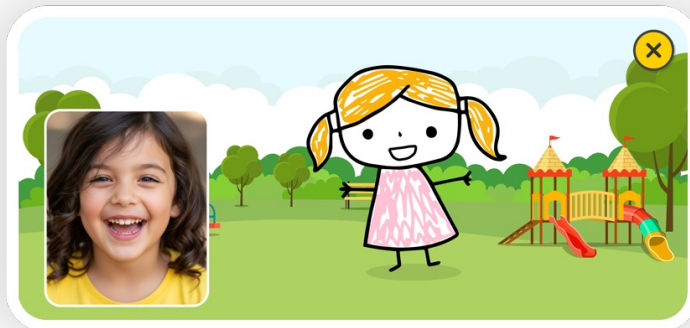
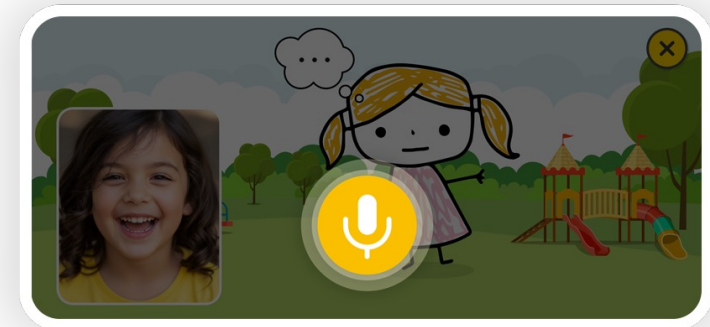
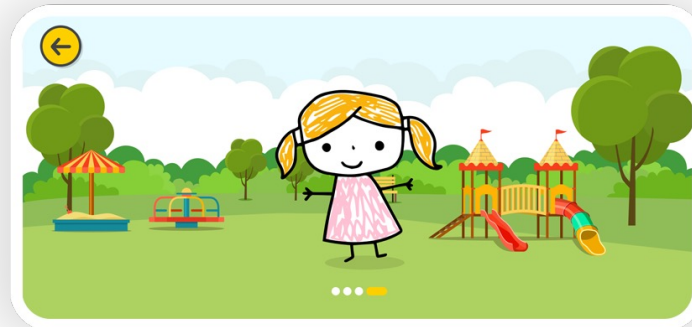
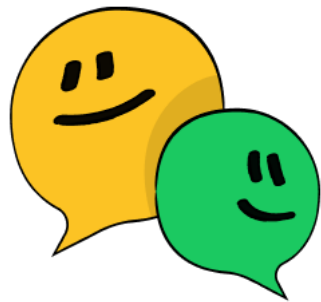


For Children

# Conversation Diary

**Writing a conversational diary on everyday life topics.**

Empathetic conversations based on child psychology and developmental assessment items.

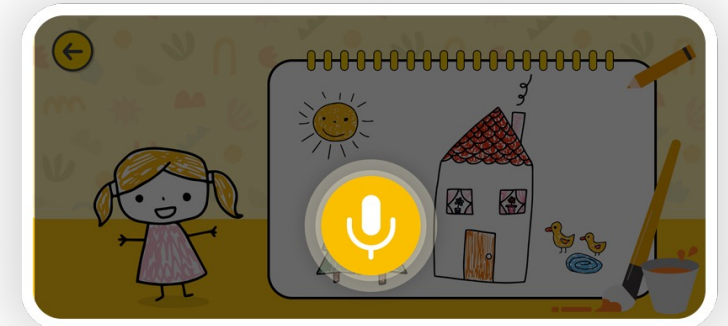
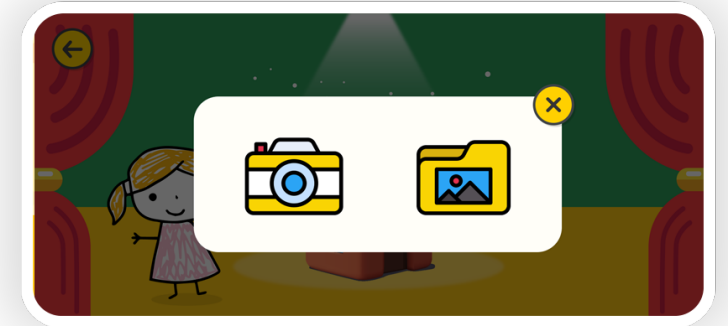
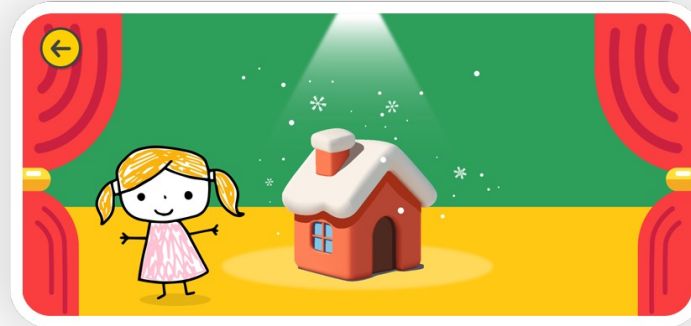




For Children

## Drawing Diary

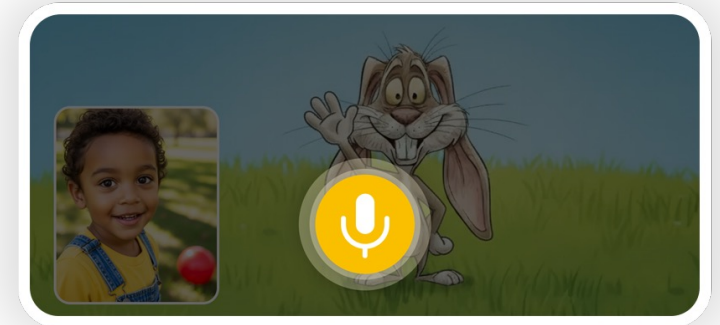
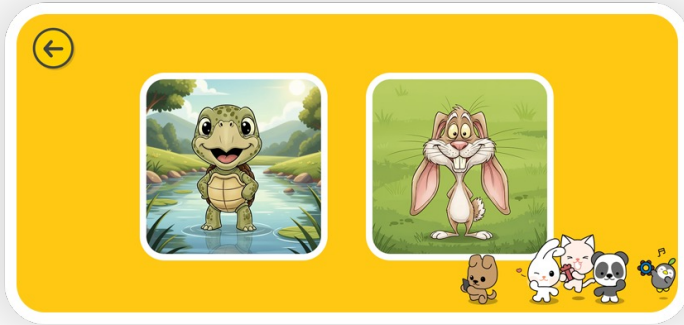
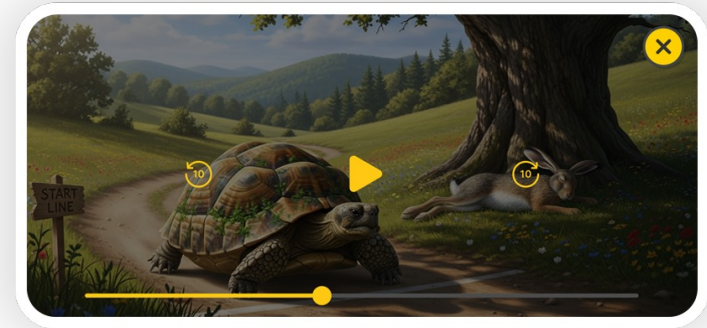
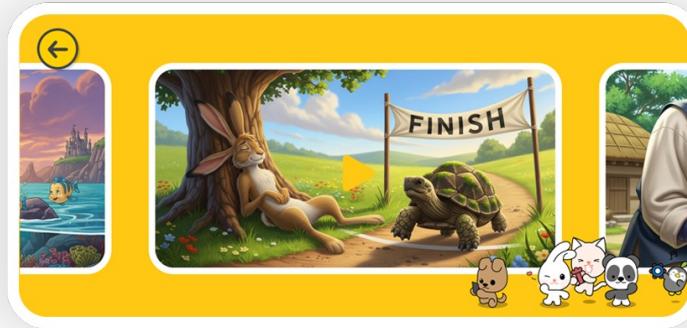
Art-based psychological assessment using the child's drawings of a house, a tree, and a person as conversation topics.



For Children

## Story Diary

After watching a fairy tale animation, the child expresses emotions through a conversation with the story's main character about specific scenes.





# Diary Analysis

AI analysis based on emotional expression and psychological assessment data.

Emotional and Behavioral Assessment	V	PEBL Battery	V	PHQ-9	V	Dynamic Emotion Wheel	V	SDQ	V
1 스스로를 좋은 점이 많은 사람이라고 생각한다.	1	1 걱정을 많이 한다.	1	1 기분이 가라앉거나, 우울하거나, 희망이 없다고 느낀다.	1	1 스스로를 좋은 점이 많은 사람이라고 생각한다.	1	1 나는 다른 사람들과 잘 하려고 노력한다. 나는 그들의 감정을 배려한다.	2
2 친구들과 새로운 계획을 실행에 옮기기 위해 노력한다.	1	2 친구를 쉽게 사귀다.	3	2 평소 하던 일에 대한 흥미가 없거나 즐거움을 느끼지 못했다.	1	2 친구들과 새로운 계획을 실행에 옮기기 위해 노력한다.	1	2 나는 친절부절 못 하고, 오래동안 가만히 있지 못한다.	2
3 기발한 생각을 자주 떠올린다.	0	3 생생한 상상력을 가지고 있다.	3	3 잠들기가 어렵거나 자주 깬다 / 혹은 너무 많이 잤다.	1	3 기발한 생각을 자주 떠올린다.	3	3 나는 자주 머리나 배가 아프거나 눈이 아프다.	3
4 Listens attentively to others' opinions.	1	4 다른 사람의 말을 잘 듣는다.	3	4 Eats noticeably more or less than usual.	1	4 Follows through well on plans made with friends.	1	4 나는 보통 다른 사람들과 별견을 잘 나눈다. (예, 음식, 게임 또는 연필 등)	3
5 한 번 하겠다고 마음먹은 일은 끝까지 한다.	1	5 과제를 잘 끝낸다.	3	5 혹은 너무 친절부절 못해서 친구와 사이가 좋지 않았다.	1	5 한 번 하겠다고 마음먹은 일은 끝까지 한다.	1	5 나는 매우 화가 나고 자주 폭발이 일어난다.	1
6 공동의 문제를 해결하기 위해 친구들과 함께 적극적으로 나선다.	1	6 Gets angry easily.	2	6 피곤하고 기운이 없었다.	2	6 공동의 문제를 해결하기 위해 친구들과 함께 적극적으로 나선다.	2	6 I want to play alone or be alone.	2
7 어떤 일을 할 때 끝까지 집중한다.	2	7 큰 짜증을 좋아한다.	2	7 내가 쓸모 없거나, 실망했다. 생각이 들었는데 막연한 걱정이나 두려움 때문에 자신을 잊었다.	2	7 어떤 일을 할 때 상대방의 감정을 고려하여 행동한다.	2	7 나는 혼자서 놀기를 좋아한다.	2
8 상상력이 풍부하다는 말을 듣는다.	1	8 예술의 중요성을 믿는다.	1	8 신문을 읽거나 TV를 보는 것과 같은 일상적인 일에도 집중할 수가 없었다.	2	8 상상력이 풍부하다는 말을 듣는다.	2	8 나는 걱정만 한다.	2
9 해야 할 일에 끝까지 집중한다.	3	9 내 목적을 위해 다른 사람을 이용한다.	1	9 해야 할 일에 끝까지 집중한다.	3	9 해야 할 일에 끝까지 집중한다.	3	9 나는 친구와 어울리는 것을 좋아한다.	3
10 자신의 속한 학급을 좋아한다.	3	10 정리정돈을 좋아한다.	1	10 자신의 속한 학급을 좋아한다.	3	10 자신의 속한 학급을 좋아한다.	3	10 나는 친구와 어울리는 것을 좋아한다.	3
11 다른 사람들과 친하게 지내는 것이 중요하다는 것을 안다.	3	11 자주 우울함을 느낀다.	1	11 다른 사람들과 친하게 지내는 것이 중요하다는 것을 안다.	3	11 다른 사람들과 친하게 지내는 것이 중요하다는 것을 안다.	3	11 나는 적어도 한 명 이상의 좋은 친구가 있다.	3
12 신중히 생각한 뒤에 말하고 행동한다.	3	12 주도적으로 이끈다.	1	12 신중히 생각한 뒤에 말하고 행동한다.	2	12 신중히 생각한 뒤에 말하고 행동한다.	2	12 나는 많이 싸운다. 나는 내가 원하는 것을 다른 사람에게 하게 만들 수 있다.	2
13 스스로를 소중한 사람이라고 느낀다.	1	13 감정을 강렬하게 느낀다.	1	13 스스로를 소중한 사람이라고 느낀다.	1	13 스스로를 소중한 사람이라고 느낀다.	1	13 나는 나의 한 사람과만 친하게 지낸다.	1
14 배려한 것을 배우고 감동하는 것을 좋아한다.	1	14 다른 사람을 돕는 것을 좋아한다.	1	14 배려한 것을 배우고 감동하는 것을 좋아한다.	1	14 배려한 것을 배우고 감동하는 것을 좋아한다.	1	14 나는 나의 주위 친구와 친하게 지낸다. 친구들과 잘 어울린다.	2
15 자존감과 자기 자신에 대해 만족한다.	3	15 약속을 지킨다.	3	15 자존감과 자기 자신에 대해 만족한다.	3	15 자존감과 자기 자신에 대해 만족한다.	3	15 나는 주로 긍정적인 사람이다. 나는 평상시 자신감을 보인다.	3

Game Diary

Story Diary

Conversation Diary

Conversation Diary

Drawing Diary

Conversation Diary

Drawing Diary

Story Diary

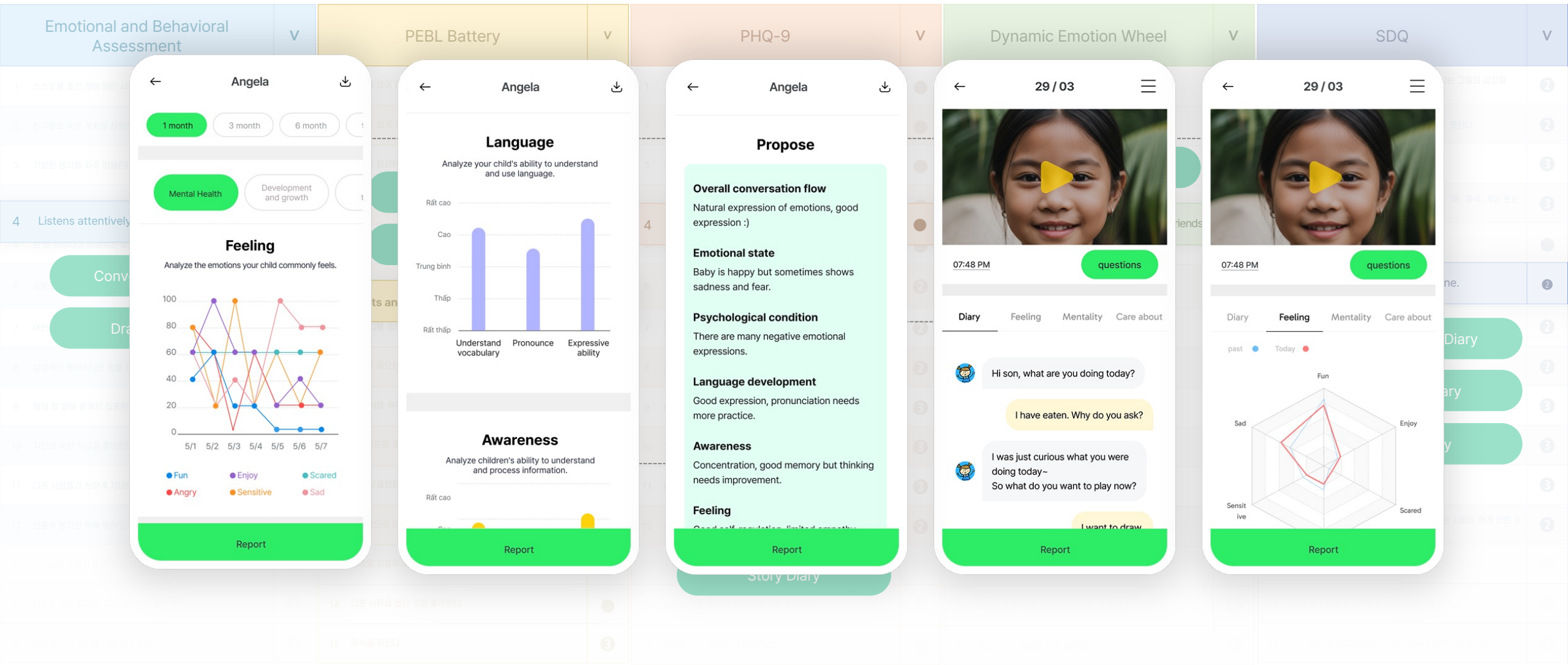
Conversation Diary

Story Diary

For Parents

# Diary Analysis

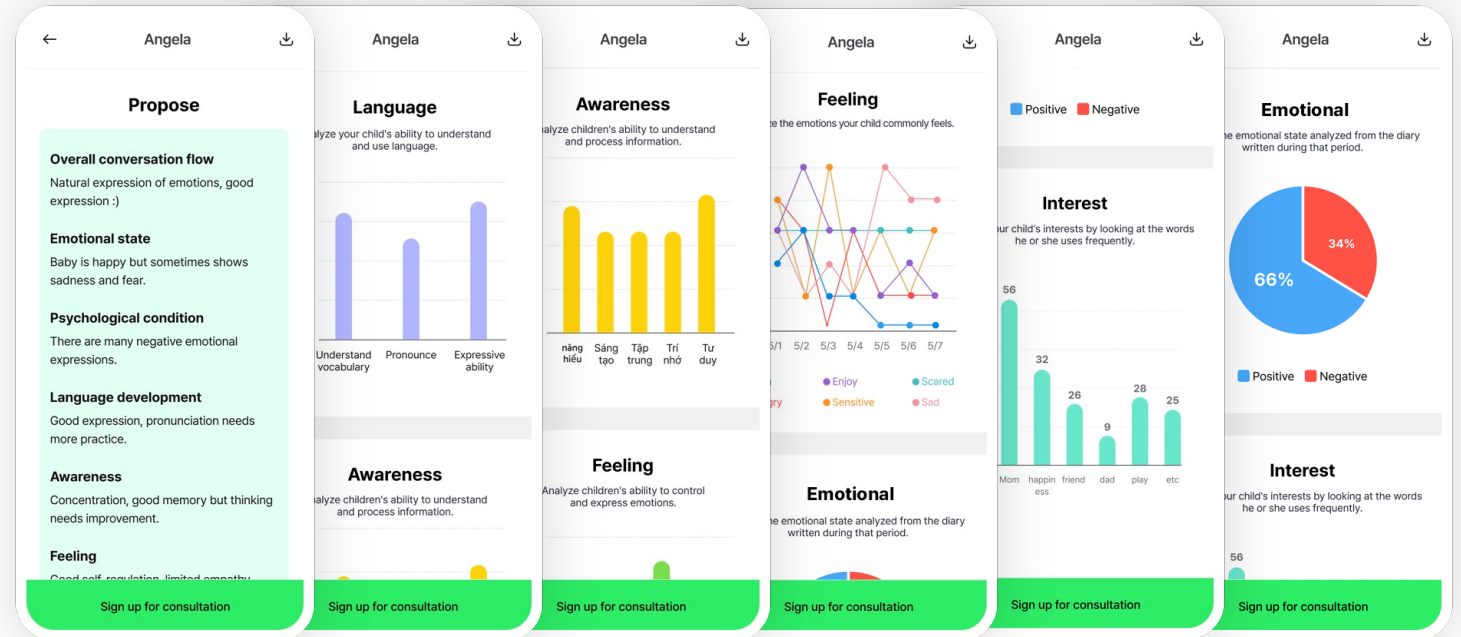
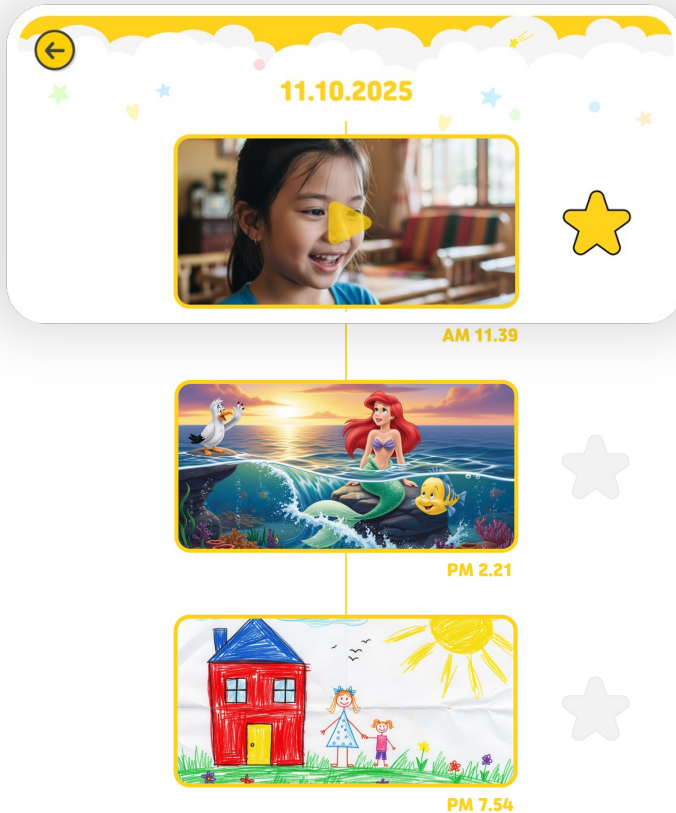
AI analysis based on emotional expression and psychological assessment data.



## Report

**Provides emotional trend statistics based on accumulated diary entries.**

[Growth & Development Report] Psychology, Emotion, Interests, Cognition, Emotional Well-being, Social Skills

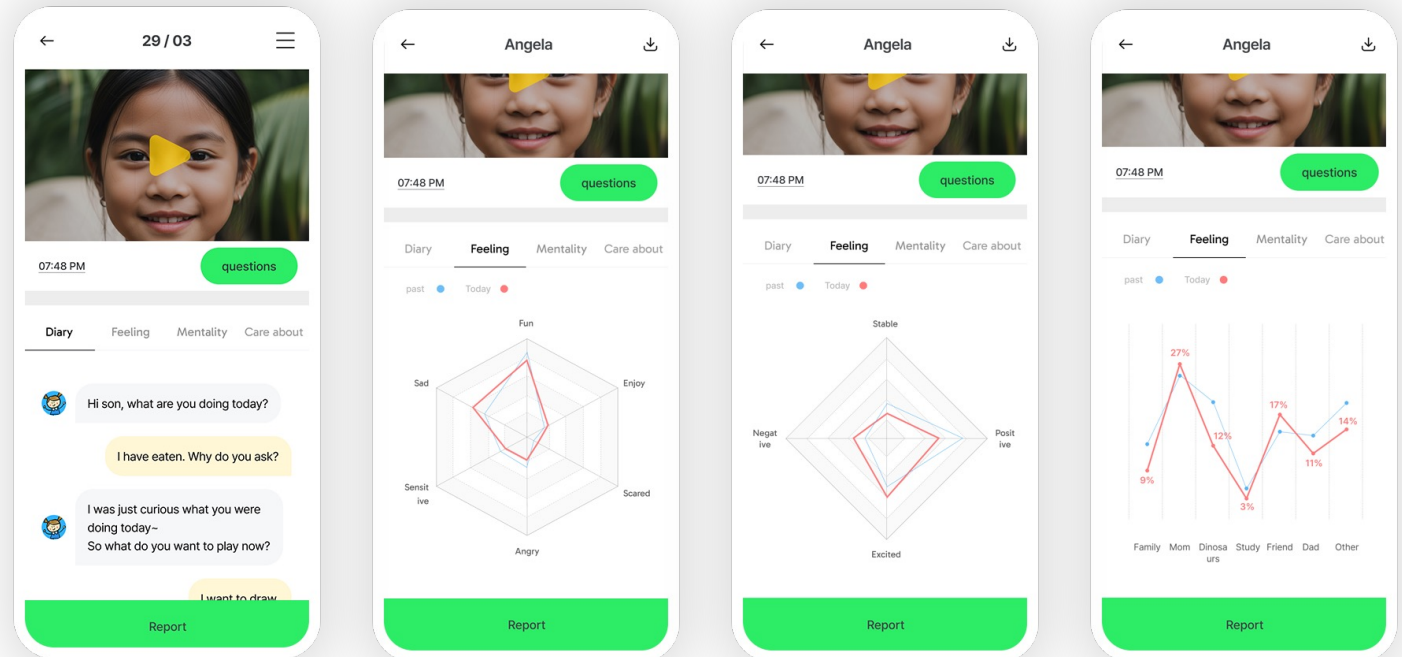
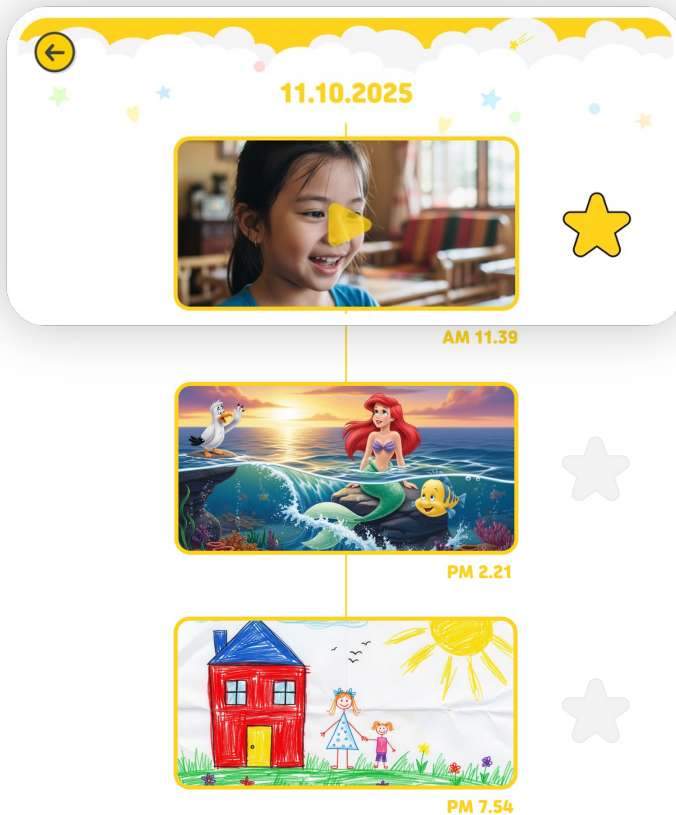


Comprehensively analyzes one month of diary entries to provide insights on psychology, emotions, interests, language (word comprehension, pronunciation, sentence formation, vocabulary size), cognition (understanding, creativity, concentration, memory, reasoning), emotionality (emotional expression, empathy, anxiety, self-regulation), and social skills (impulsivity, activity level, problem-solving, cooperation).

## Report

Provides emotional trend statistics based on accumulated diary entries.

[Diary Analysis] Psychology / Emotion, Interests

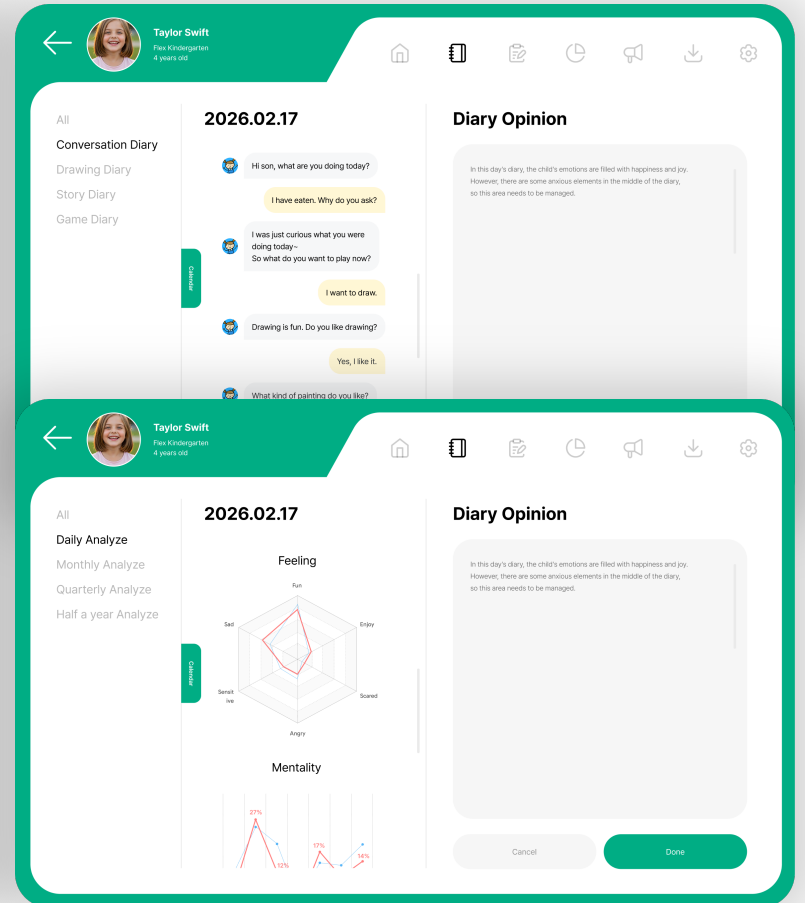
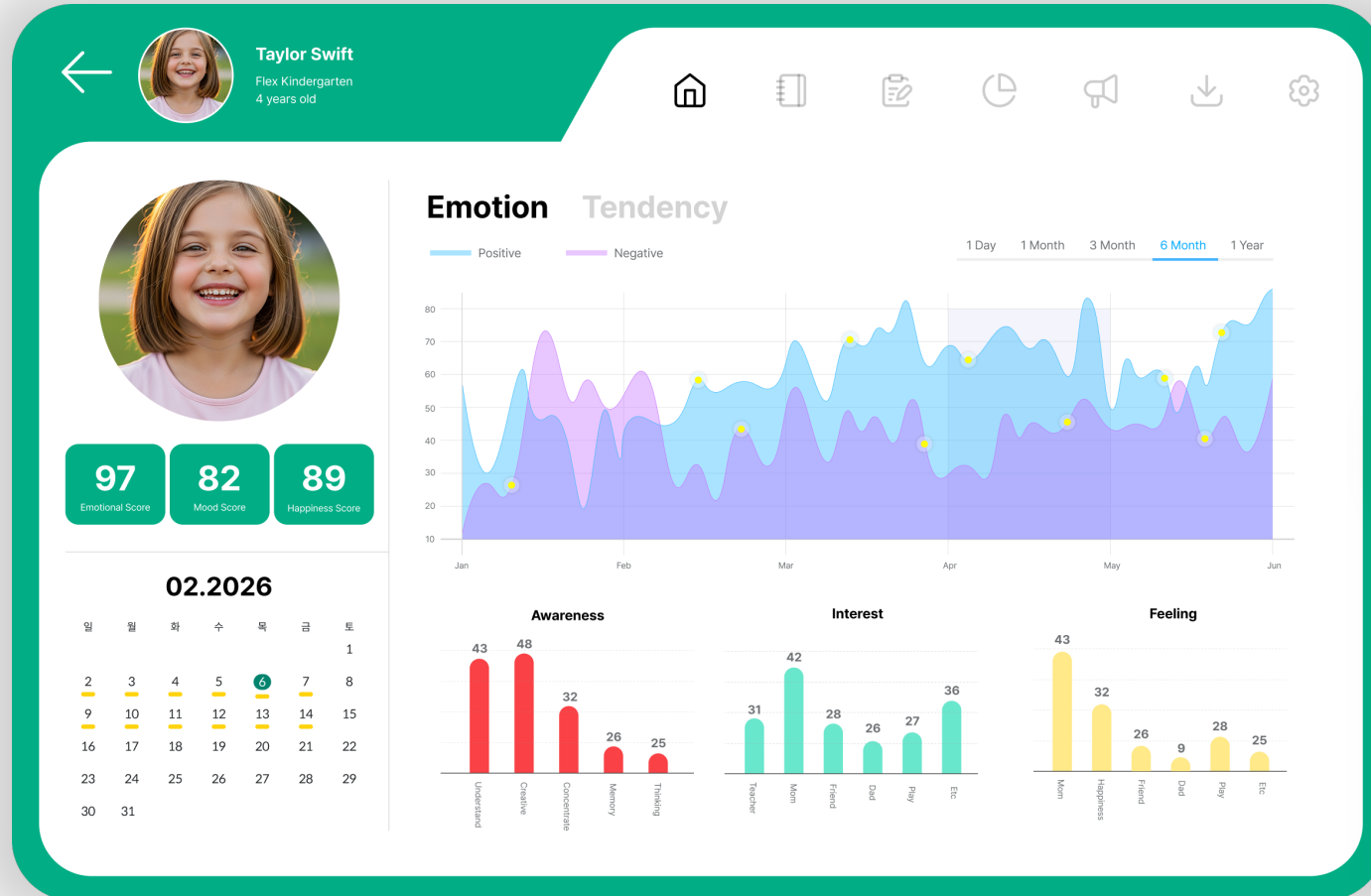


Provides real-time analysis of psychological state, emotional state, overall insights, and interests based on each diary type (conversation, drawing, and story).

For Professionals

# Dashboard

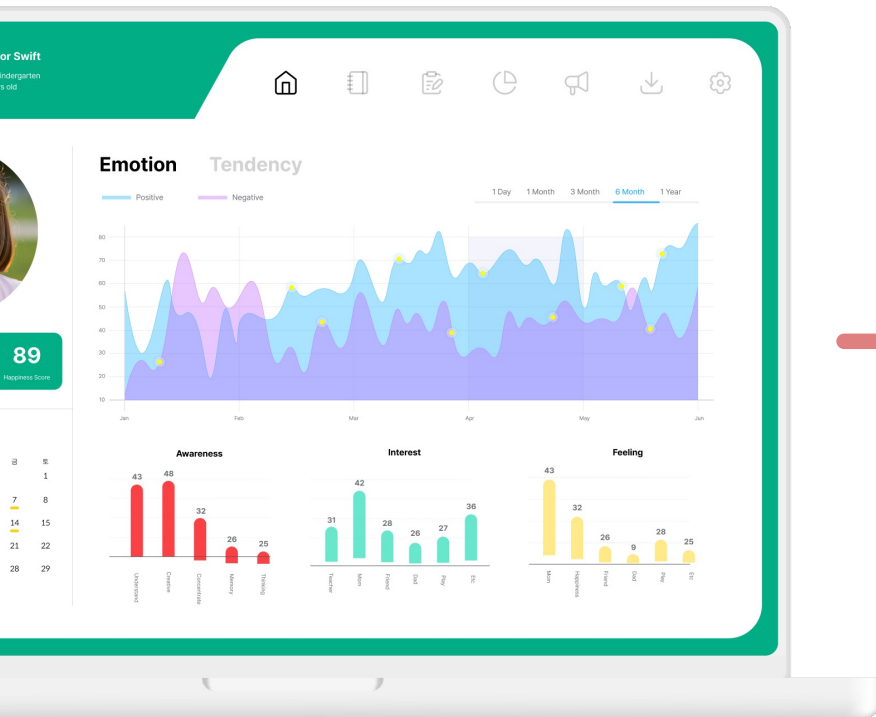
Integrated analysis of psychological assessment items and multimodal data.





## Objective Analysis

AI-based matching analysis between test results and conversational context.



- ☒ Syntactic-Semantic Comprehension    ☐ JTCI (Child temperament& character)    ☐ K-CDI (Child development)
- ☒ SELSI (Infant language development)    ☐ JTCI (Preschool temperament& character)    ☐ K-ECI-4 (Preschool emotion / behavior)
- ☐ PRES (Receptive / Expressive language)    ☐ SEBC (Student emotion / Social / behavior)    ☐ KPRC (Korean personality rating for children)



### ■ Syntactic-Semantic Comprehension

Item	Category	Question	Relevance	Answer	Evidence	Risk Group
1	Semantic Understanding	Mom is knitting while watching TV	40%	No(60%)	Show dislike towards mother	Concern
2		Suyeoung gave her brother the rema	30%	No(70%)	No similar sharing actions	Normal
3		I was alone in the playground	50%	Yes(80%)	Likes to play swings alone or with friends	Normal
4		You are whispering with your eyes	30%	No(70%)	No positive interaction with mother	Normal
5		Suyeoung is in a hurry	40%	Yes(60%)	Have a clear plan before going to bed	Normal

### ■ SELSI (Infant language development

Item	Category	Question	Relevance	Answer	Evidence	Risk Group
1	Receptive language	Seems to understand the speaker's emotions .	40%	Yes(80%)	Children can distinguish see their mother	Concern
2		React differently when others speak to other...	50%	Yes(80%)	Children show differences	Concern
3		Can focus on the story without getting dist...	30%	Yes(80%)	Children can chat and ans	Normal
4		Can understand different meanings of the...	30%	Yes(80%)	Children notice the differences	Normal

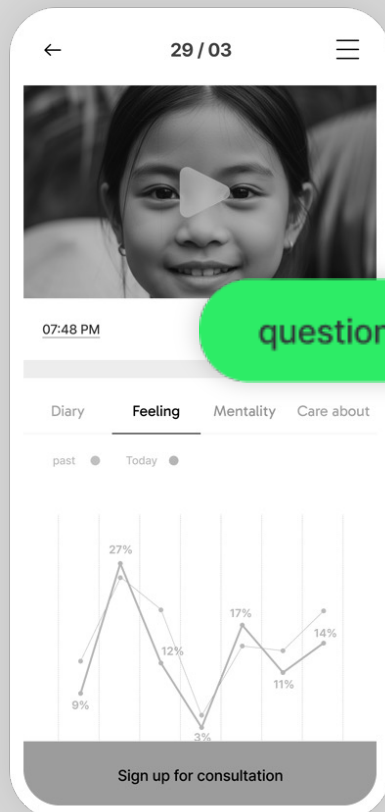


## Mid-Stage Intervention

In-depth evaluation and monitoring through character-based interaction.

When a professional inputs an in-depth question, the AI character presents it to the child as a diary topic for mid-stage intervention.

### Psychological Counselor / Child Psychiatrist



questions

#### Questions

Ask your child questions about anything

Do you sometimes feel angry at your mom and feel like hitting her?

Let's ask together

- ☐ I want to know the real reason behind kids answer.
- ☐ I want to know what kids having fun with these days.
- ☐ I want to know if you have any concerns.

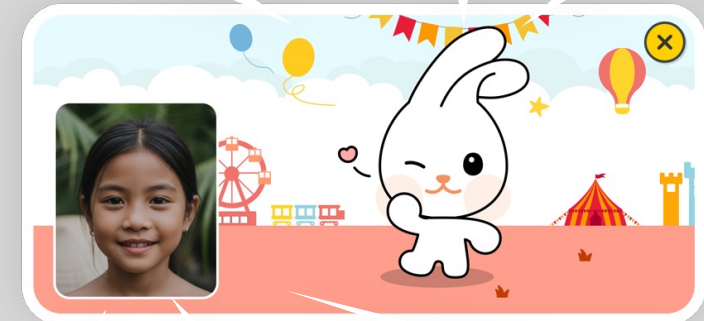
question

### For Children

When you see your mom, do you sometimes feel so angry that you want to hit her?

Why do you think your mom only likes your little brother?

I see. What do you wish your mom would say to you?



Yeah... I don't like it because Mom only likes my little brother

Because Mom only carries my little brother (or sister) and gives him all the tasty things.

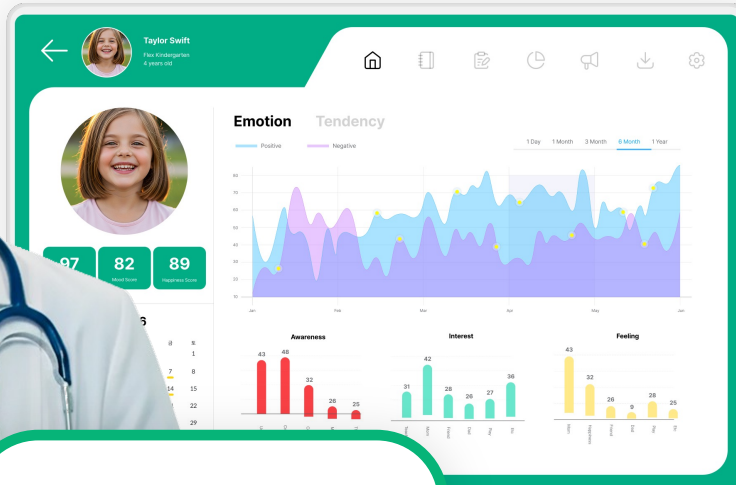
I wish Mom would tell me she loves me, too

**For Professionals**

# Monitoring

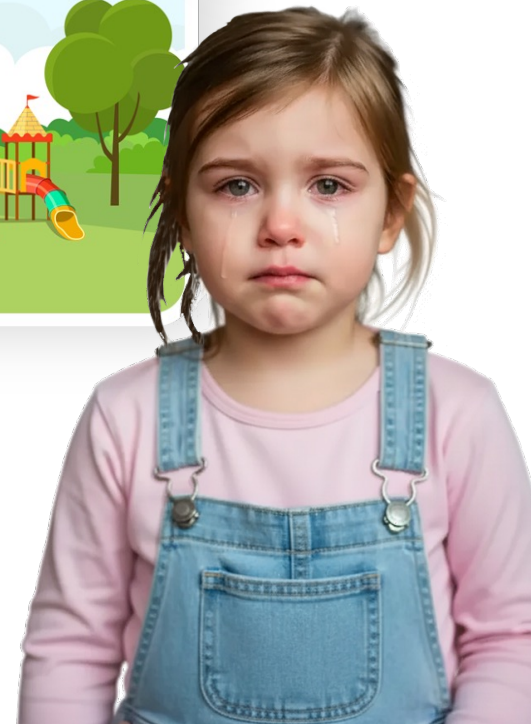
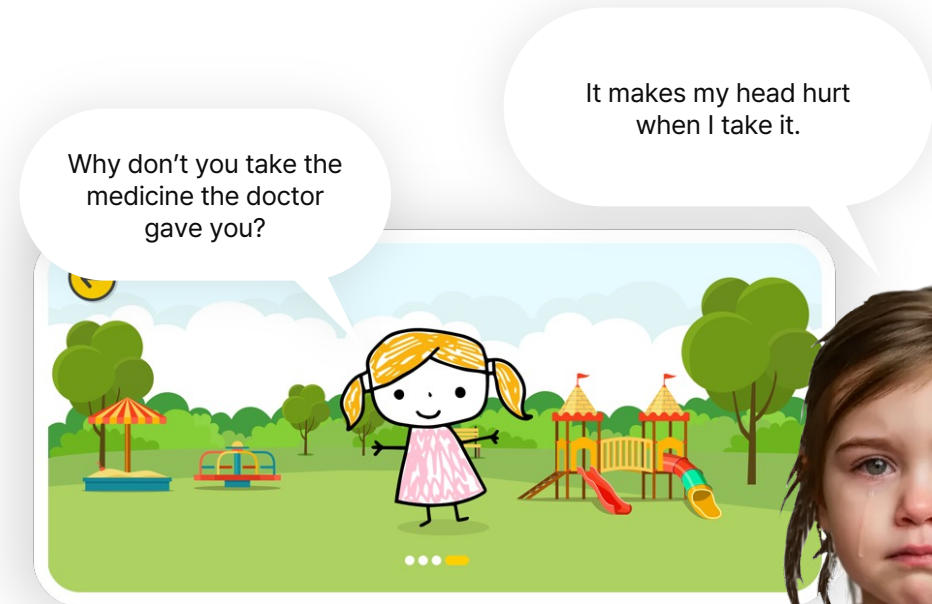
**Regular observation of emotional changes through remote counseling sessions.**

Regular character-based monitoring – observing improvement or deterioration in therapeutic symptoms.



**Monitoring**

**In-depth Counseling**





**An emotional traffic light  
that helps understand every child's feelings**



**Flex**