





#### The 12th National QA Convention

IMPROVING PARENTS' COMPETENCY IN HANDLING AUTISM SPECTRUM DISORDER CHILDREN WITH SOCIAL-EMOTIONAL PROBLEM IN HOSPITAL PUTRAJAYA

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# **OUR TEAM**

### Occupational Therapy Unit, Hospital Putrajaya













# **Problem Identification and Verification**

NO	PROBLEM					
1	Low referral of stroke cases to Occupational Therapy Unit	2% new stroke case referrals were received in 2022				
2	Long interval time of follow-up outpatient pediatric occupational therapy appointment	2 - 3 months of follow up appointment distance				
3	High default rate among pediatric outpatients in Occupational Therapy Unit	33% - 37% of defaulter rate from 2019 to 2022				
4	Low parent competency in handling ASD children with social-emotional problem	70% parents with ASD children were found to have low competency in handling ASD children with social-emotional problem				

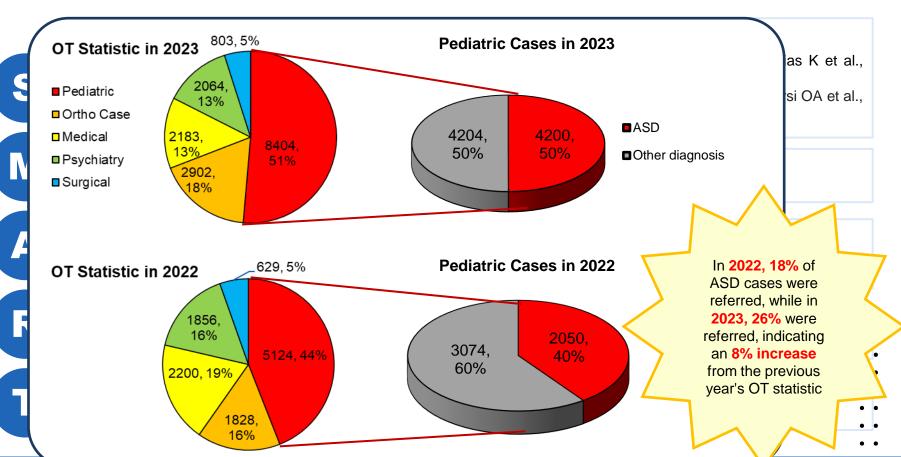
# **∵ Problem Prioritisation – "SMART Criteria"**

Rating scale: 1-Low 2-Medium 3-High



PROBLEM	S	M	Α	R	Т	SCORE
Low referral of stroke cases to Occupational Therapy Unit	5	6	5	5	7	28
Long interval time of follow-up outpatient pediatric occupational therapy appointment	6	7	7	5	8	33
High default rate among pediatric outpatients in Occupational Therapy Unit	7	8	9	5	5	34
Low parent competency in handling ASD children with social- emotional problem	11	9	12	10	9	51

# **Reasons For Selection**



### **Reasons For Selection**

- S
- In OT Unit HPj, 26% ASD case was referred in 2023, which makes it the leading case received.
- ASD imposes great physical, mental, and social pressures on families, particularly parents. (Ilias K et al., 2018)
- Low competency among parents with ASD children → risk of poorer developmental outcomes (Al-Farsi OA et al., 2016)
- M
- 2 Standardized assessments were used: PSOC & FEAS
- Self-developed survey questionnaire
- A
- Parent coaching intervention is an evidence based practice, safe and inexpensive
- Achieve optimal intervention outcome → promote the quality of life of parents and the child with autism
- R

It is **remediable** by appropriate strategies of change (individual parents coaching and OT training)

Individual parent coaching can be completed via periodic evaluation within specific time-frame (9 sessions within 6 months)

# Introduction

**ASD** 

In OT Unit HPj, 26% ASD case was referred in 2023, which makes it the leading case received. This represent an increase of 8% from OT statistic in 2022

Parents with ASD Child

In February 2023, based on OT Unit statistics, 70% parents with newly diagnosed with ASD children were found to have low competency in handling ASD children with social-emotional problem.

Parents Coaching

In Malaysia, the majority of OTs in government healthcare facilities are practicing child-oriented approach. Only few states who practice parents coaching intervention which is in Hospital Sultan Ismail (HSI) & Hospital Umum Sarawak (HUS).

### **Literature Review**

MOH (2020)	MOH (2021)
2020: <b>562 children</b> <18 years old being diagnosed with ASD	2021: 589 children <18 years old being diagnosed with ASD

Parents with ASD children has higher levels of anxiety, higher levels of depression, and more health-related problems



Ineffective parenting behaviours, putting these children at risk of poorer developmental outcomes.

(The Vibes, 2024; CodeBlue, 2022; Kassim, et al., 2019; Ilias, et al., 2018; Al-Farsi, et al., 2016; Weiss, et al., 2014; Bitsika, et al., 2004).

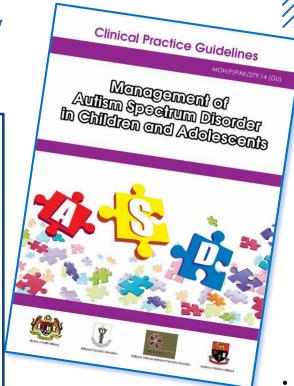




### **Literature Review**

# PARENTAL COACHING

- It should be offered to parents of children with ASD to improve parent-child interaction (CPG ASD MOH 2018)
- Rise in evidence supporting parent coaching for Autism Spectrum Disorder (ASD)
- Parent coaching can improve ASD children's cognitive ability, social functioning, functional behavior and daily living skills
  - Inexpensive & safe



Clinical Practice Guidelines Secretariat. (2018)

# **Terms & Definition**

Term	Abbreviation	Definition
Occupational Therapy/ Occupational Therapist	ОТ	OT focus on enabling people with their disability to do what they want and need to do in their everyday lives (Hammond, 2004; Dunton, et al., 1957).
Autism Spectrum Disorder	ASD	Autism spectrum disorder is a condition related to brain development affects how a person sees and interacts with other people, leading to difficulties with communication and social interaction.  (Lord, et al. 2020; DEd 2010; Lord, et al., 2018)
Social-emotional	-	Social-emotional skills are essential for connecting with others. They help us manage our emotions, build healthy relationships, and feel empathy.  (Reid, et al., 2020; Malik, et al., 2018; Malti et al., 2016)
Parent Coaching	PC	Refers to when an OT seeks to support their pediatric patient by teaching their caregiver on how to be their children's intervention provider.  (Althoff, et al., 2019; Nevill, et al., 2018; Kasari, et al., 2015).

# **Terms & Definition**

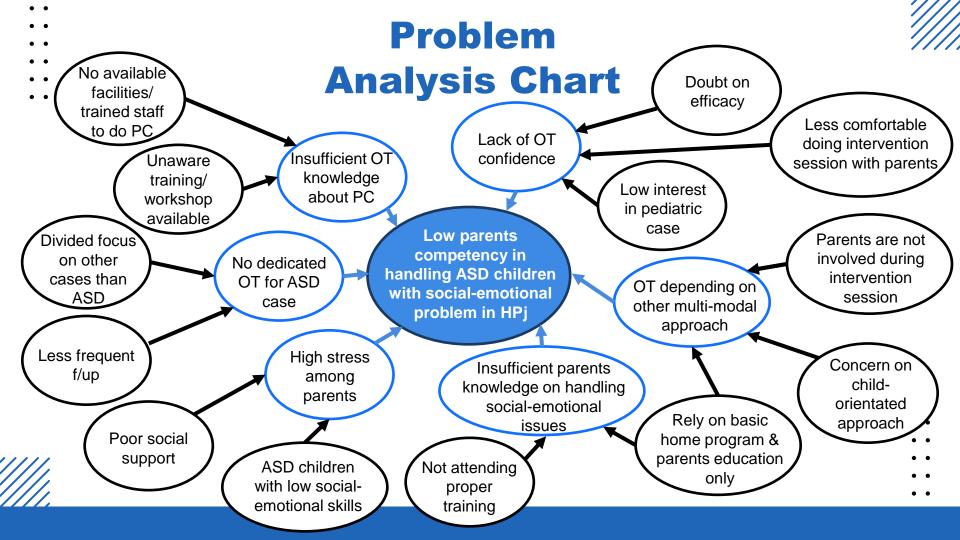
Term	Abbreviation	Definition
DIR Floortime	-	The DIR model provides a comprehensive understanding of human learning and development, emphasizing the crucial role of social-emotional growth in human development from birth to life. It highlights the role of emotional ties and relationships in fostering development, emphasizing the interconnectedness of individual experiences and worldviews.  (Boshoff, et al., 2020; Mercer, 2017; Greenspan, et al., 2007)
Parents Sense of Competency Scale	PSOC	It is a 17-item scale developed to assess parenting self-esteem. The scale includes two rationally derived scales, Skill-Knowledge and Value-Comforting, referred to as Efficacy and Satisfaction.  (Ohan, et al., 2000)
Functional Emotional Assessment Scale	FEAS	Provides a framework for observing and assessing a child's emotional and social functioning in the context of the relationship with his or her caregiver as well as the caregiver's capacity to support the child's functional emotional development.  (Greenspan, et al., 2001; Greenspan, et al., 1991).

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### **Problem Statement**

**70% parents with ASD children were found to have low competency** in handling social-emotional problem.

This problem could leads to ineffective parenting behaviours, which put their children at **risk of poorer developmental outcomes** (Lin, et al., 2018).

Multiple factors including insufficient OT knowledge about PC, no dedicated OT for ASD case, OT dependence on other multi-modal approach, lack of confident among OT, high stress level and insufficient knowledge among parents may lead to this problem.

This study aims to improve parent competency in handling ASD children with social-emotional problem in Occupational Therapy Unit, Hospital Putrajaya.

# **Study Objectives**

### **General Objective**

 To improve parent competency in handling ASD children with socialemotional problem in Occupational Therapy Unit, Hospital Putrajaya.

### **Specific Objectives**

- To determine magnitude and severity of incompetent parent in handling their ASD child's social-emotional skills in Occupational Therapy Unit, Hospital Putrajaya.
- To identify contributing factors to the incompetent parent in handling their ASD child's social-emotional skills in Occupational Therapy Unit, Hospital Putrajaya.
- To formulate and implement proper remedial action
- To evaluate the effectiveness of remedial action

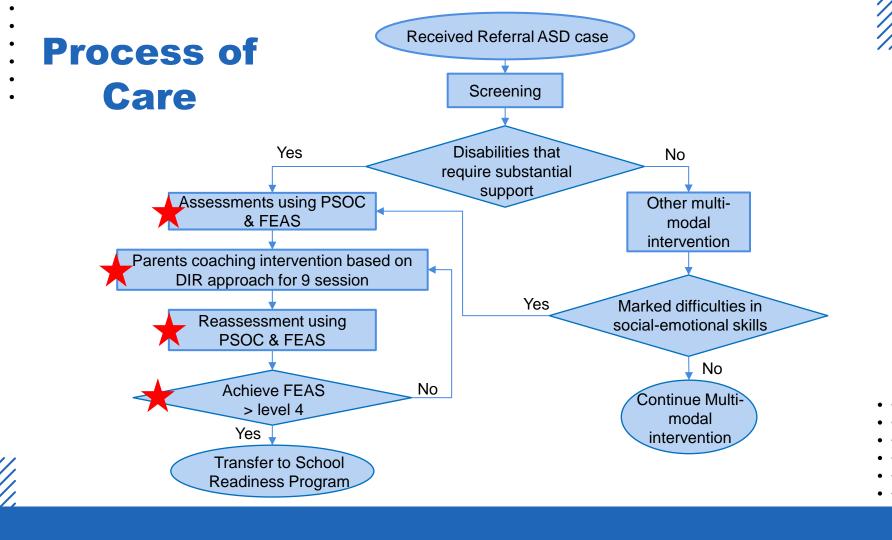












# **Model of Good Care**

No	Critical Step	Criteria	Standard
Assessments using		Assessments using Identify parents with high competency using PSOC assessment	
I	PSOC & FEAS	Determine whether ASD child has achieved > level 4 in FEAS assessment	100%
2	Parents coaching intervention based on DIR approach for 9 sessions	Ideally, OT should involve ASD child and their parents during treatment session. Using standardize intervention plan.	100%
3	Reassessment using PSOC & FEAS	OT administer PSOC & FEAS reassessment after 6 months to determined effectiveness PC & DIR	100%
4	Achieve FEAS > level	Transfer to SRP program when the child achieve FEAS level 4 & > 4 years old	100%

# **Indicator & Standard**



### **Indicator**

Percentage of parent with high competency in handling ASD children with social-emotional problem



#### **Formula**

Number of parents that scored high competency in PSOC x 100% Total parents undergo parents coaching program



#### **Standard**

60%

Based on Standard Operation Procedure (SOP)
Occupational Therapy for Mental Health Patient
2018



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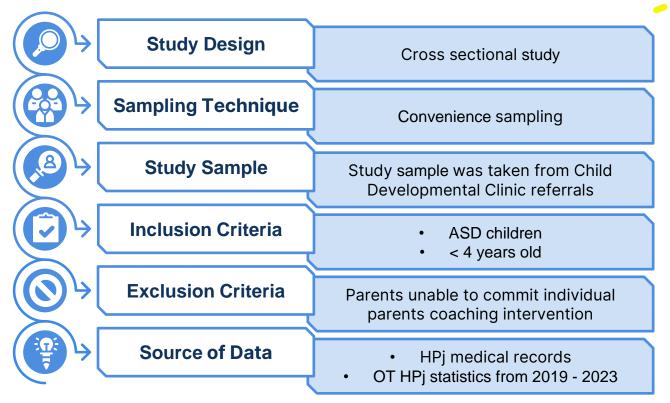
# PROCESS OF GATHERING INFORMATION

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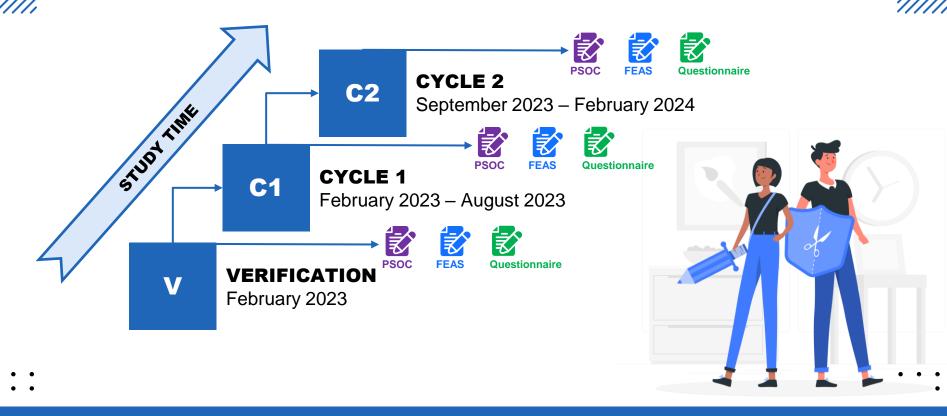
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# **Methodology**



# Methodology



## PSOC



#### Parenting Sense of Competence Scale

(Gibaud-Wallston & Wandersman, 1978)

Please rate the exter Strongly Disagree 1	nt to which you a Somewhat Disagree 2	gree or disagree Disagree 3	e with each of t Agree 4	he followin Some Agree 5	what			Str Agr	ong	.,
The problems of the how your actions					1	2	3	4	5	6
Even though being while my child is	•	-	am frustrated	now	1	2	3	4	5	6
<ol> <li>I go to bed the sa accomplished a v</li> </ol>		p in the mornin	g, feeling I hav	e not	1	2	3	4	5	6
I do not know wh control, I feel mo				e in	1	2	3	4	5	6
5. My mother was l	better prepared t	o be a good mo	ther than I am.		1	2	3	4	5	6
6. I would make a f learn what she w				-	1	2	3	4	5	6
7. Being a parent is	manageable, and	d any problems	are easily solve	ed.	1	2	3	4	5	6
A difficult proble doing a good job		nt is not knowi	ng whether you	ı're	1	2	3	4	5	6
9. Sometimes I feel					1	2	3	4	5	
<ol><li>I meet by own p for my child.</li></ol>	ersonal expectat	ons for experti	se in caring		1	2	3	4	5	6
11. If anyone can fir the one.	nd the answer to	what is troublin	g my child, I an	n	1	2	3	4	5	6
12. My talents and i	nterests are in ot	her areas, not b	eing a parent.		1	2	3	4	5	6
13. Considering how with this role.	v long I've been a	mother, I feel t	horoughly fam	iliar	1	2	3	4	5	6
14. If being a mothe motivated to do	er of a child were a better job as a	•	esting, I would	be	1	2	3	4	5	6
<ol><li>I honestly believ to my child.</li></ol>	e I have all the sk	ills necessary to	be a good mo	ther	1	2	3	4	5	6
16. Being a parent r	nakes me tense a	nd anxious.			1	2	3	4	5	6
17. Being a good mo	other is a reward	in itself.			1	2	3	4	5	6

#### Parent Sense of Competency Scale (PSOC)

#### Scoring Instructions

The Parenting Sense of Competency Scale (PSOC) was developed by Gibaud-Wallston as part of her PhD dissertation and presented at the American Psychological Association by Gibaud-Wallston and Wandersman in 1978. The PSOC is a 17 item scale, with 2 subscales. Each item is rated on a 6 point Likert scale anchored by 1 = "Strongly Disagree" and 6 = "Strongly Agree". Nine (9) items (#\$ 2, 3, 4, 5, 8, 9, 12, 14, and 16) on the PSOC are reverse coded.

Nine items on the PSOC are reverse coded, this is important for accurate scoring. Reverse coded means that a high score on the individual item is not indicative of having a sense of competency; essentially, the item is worded negatively.

#### Scoring Instructions:

To aid scoring, the score / number for each item can be written in the in the right hand margin of the questionnaire once completed.

For items 1, 6, 7, 10, 11, 13, 15, and 17 simply write the number the participant indicated as their choice.

Reverse coding: For items 2, 3, 4, 5, 8, 9, 12, 14, and 16 substitute the following numbers and write in right hand margin for totaling:

Answer	Score
6	1
5	2
4	3
3	4
2	5
1	6



Total all numbers you have written in the right hand margin; this is participants PSOC score.

A higher score indicates a higher parenting sense of competency. There are no average scores or 'cut-off's' for this tool.

Interp	reting	the	PSOC:

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Low	Average	High
under 58	58 - 74	75 +



### **FEAS**



#### Functional Emotional Developmental Capacities Checklist

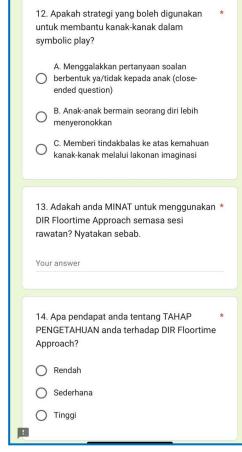
#### FM: Fully Mastered PM: Partially Mastered E: Emergent NM: Not Mastered

Functional Emotional Capacities	Description	FM (3)	PM (2)	E (1)	NM (0)	SCORE
Stage 1: Regulation and interest in world (0-3 months)	Attending to the sights and sounds of the world and some degree of calming and regulating?					
Stage 2: Engagement (2-4 months)	Falling in love- warm, emotional investment with joy and pleasure in the relationship?					
Stage 3: Two-way purposeful communication (4-9 months)	Two- way, purposeful interaction, completing at least 5-10 circles of communication in a row.			4.		
Stage 4: Shared social problem solving (9-18 months)	Continuous flow of back-and- forth interaction, shared social problem solving with 40-50 circles of communication in a row					
Stage 5: Creative and meaningful use of ideas (18-30 months)	Uses symbols in pretend play meaningful use of language instead of repetitive phrases, full engagement, back and forth communication and emotional investment?				C	
Stage 6: Creation of logical bridges between emotion and ideas (30-48 months)	Combining emotionally meaningful ideas together, thinking at the symbolic level, reasoning why they feel the way they do and connect feelings together?					
TOTAL SCORE						1

Level 1	Regulation and interest in the world
Level 2	Engagement (Forming relationships)
Level 3	Intentional two-way communications
Level 4	Shared social problem solving
Level 5	Creative and meaningful use of ideas
Level 6	Creation of logical bridges between emotion and ideas





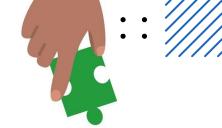


In our survey, a self-developed questionnaire consists 20 questions regarding occupational therapist's:

- Knowledge regarding PC & DIR
  - Inclusion PC into their practice
    - Interest in handling paediatric cases
  - Confidence in collaborating with parents during session





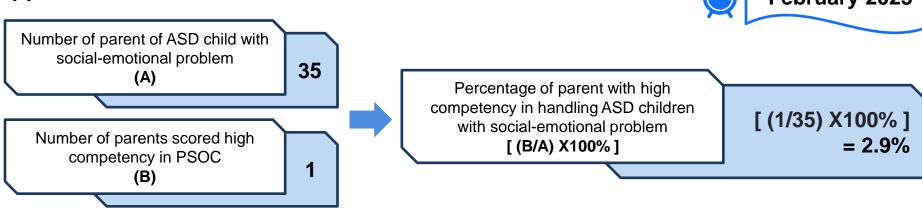






# **Verification Study**





#### **GOAL FOR IMPROVEMENT**

To increase percentage of parent with high competency in handling ASD children with social-emotional problem from:

**2.9%** to **60%** 

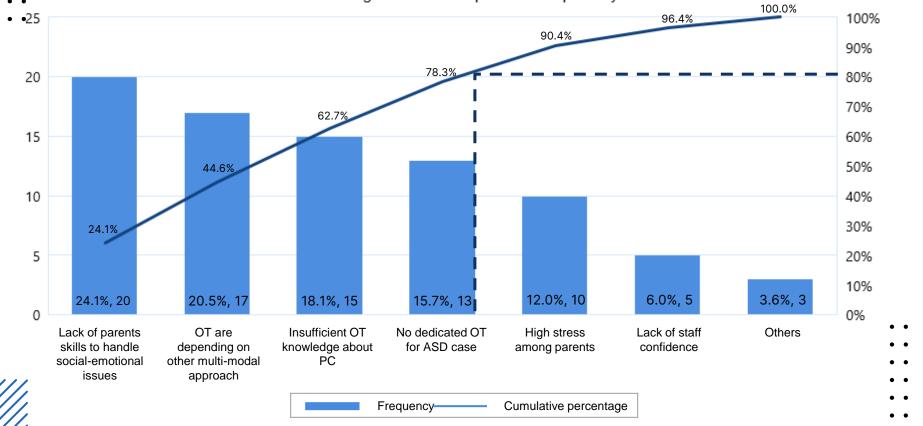
# **Model of Good Care**

No	Critical Step	Criteria	Standard	Verification
1	Assessments using PSOC & FEAS	Identify parents with high competency using PSOC assessment	60%	2.9%
		Determine whether ASD child has achieved > level 4 in FEAS assessment	100%	0%
2	Parents coaching intervention based on DIR approach for 9 sessions	Ideally, OT should involve ASD child and their parents during treatment session. Using standardize intervention plan.	100%	0%
3	Reassessment using PSOC & FEAS reassessment after 6 months to determined effectiveness PC & DIR		100%	0%
4	Achieve FEAS > level 4	Transfer to SRP program when the child achieve FEAS level 4 & > 4 years old	100%	0%

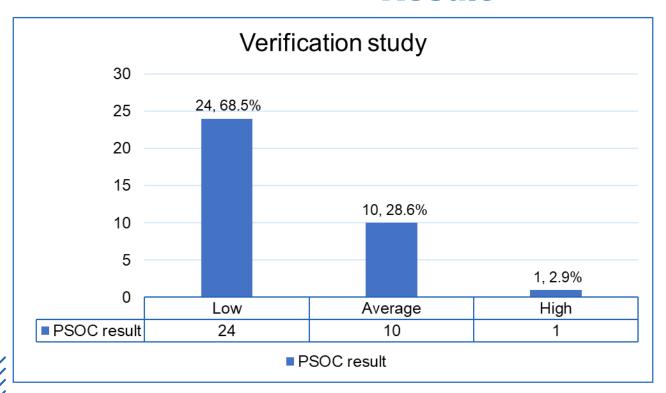
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# **Pareto chart**





# Parents Sense of Competency Scale (PSOC) Result



N = 35

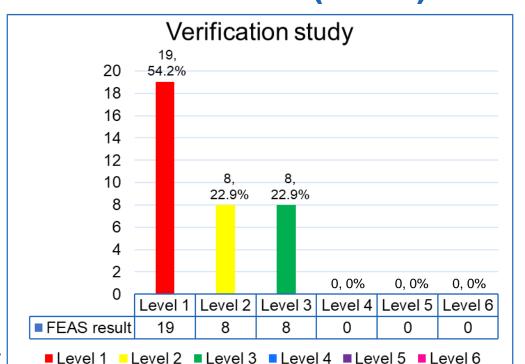
Interpreting the PSOC:							
Low	Average	High					
< 58	58 - 74	75 +					

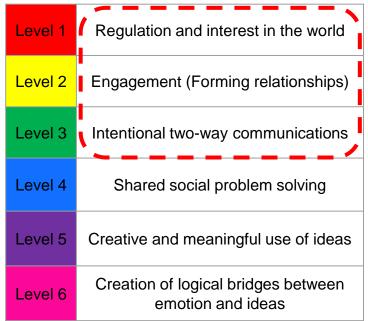
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Functional Emotional Assessment Scale (FEAS) Result

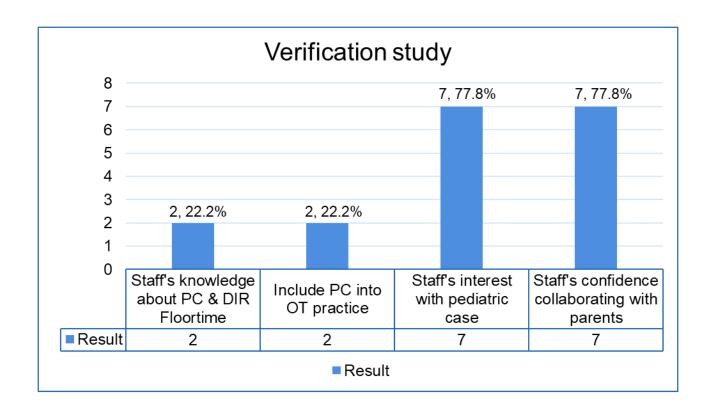




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N = 35

# **Findings from Questionnaires**



N = 9

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# **Main Findings From Verification Study**

OT are depending on other multi-modal approach

Insufficient OT knowledge about PC

No dedicated OT for ASD case

Lack of OT confidence

Lack of parents skills to handle social-emotional issues

High stress among parents

Parents





Occupational

**Therapists** 







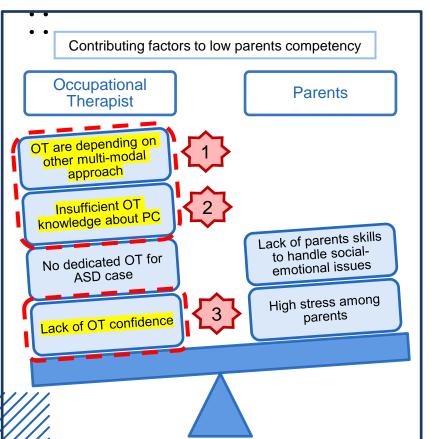


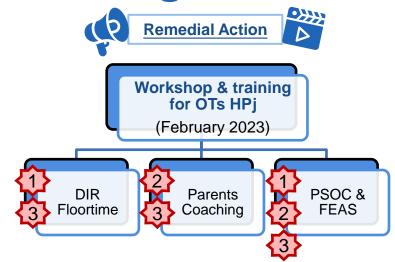


# **STRATEGIES FOR CHANGE**



# **Strategies For Change**

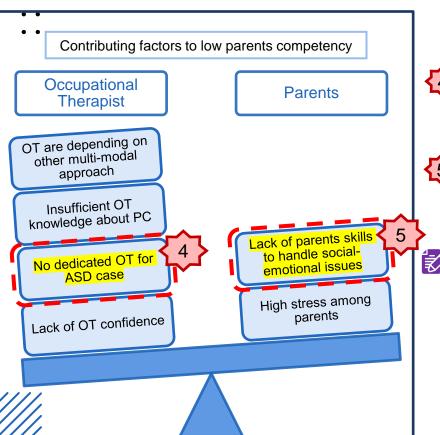








# **Strategies For Change**





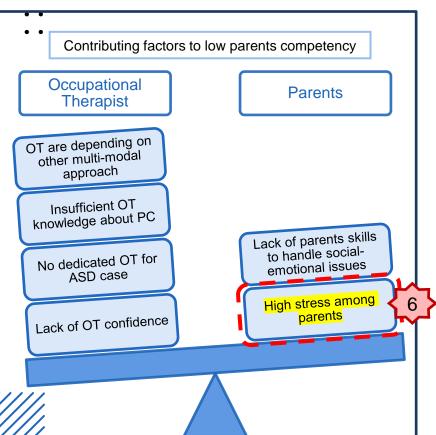
- DIR appointment slot was created at the beginning of March 2023 specifically for ASD patients with severe social-emotional problems.
  - Individual PC has been practiced by following the DIR floortime approach
  - Parents were trained on how to improve their children's social-emotional skills as well as other occupational performance such as play and self-care.

1 <sup>st</sup>	month	2 <sup>nd</sup> month	3 <sup>rd</sup> month	4 <sup>th</sup> month	5 <sup>th</sup> month	6 <sup>th</sup> month
2 s	essions	2 sessions	2 sessions	1 session	1 session	1 session





### **Strategies For Change**





- Parents support group was established since March 2023 not only to share knowledge but also to increase social support among parents of children with ASD
- This session is held every 3 months in the HPj
- Parents share problems and discuss solutions with each other and OTs.





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# **Strategies For Change**

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			Evaluation	OT workshop/ training	Evaluation	PC based on DIR floortime approach	Parents group support	Evaluation	PC based on DIR floortime approach	Parents group support	Evaluation
		Feb			<b>*</b>			,	Cycle		
		Mar				✓	✓		1		
		Apr				✓					
		May				✓					
	2023	June				✓	✓				
		Jul				✓					
		Aug •				✓					\
		Sept							✓	✓	
		Oct						Cycle	✓		
		Nov						2	✓		
		Dis							✓	✓	
	2024	Jan							✓		
4	2024	Feb						•	_		^











## **Effect of Change (Cycle 1)**

Number of parent of ASD child with social-emotional problem
(A)

Number of parents scored high competency in PSOC (B)

10

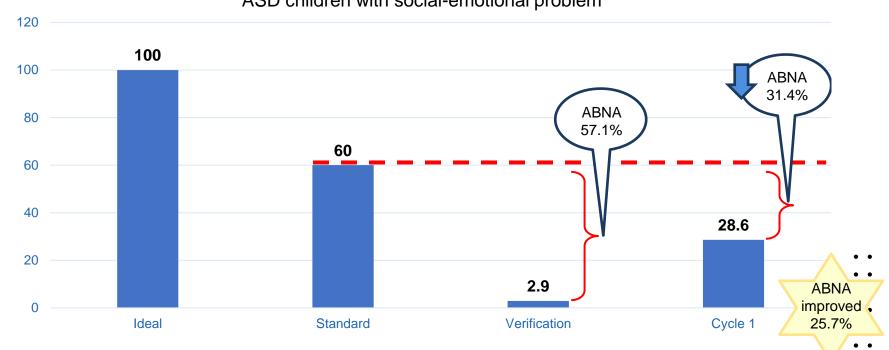
	v	C1
	Feb 2023	Aug 2023
FORMULA Percentage of parent with high competency in handling ASD children with social-emotional problem [ (B/A) X100% ]	[ (1/35) X100% ] = 2.9%	[ (10/35) X100% ] = 28.6%
GOAL FOR IMPROVEMENT To increase percentage of parent with high competency in handling ASD children with social-emotional problem from:	<b>2.9%</b> to <b>60%</b>	<b>28.6%</b> to <b>60%</b>

# **Model of Good Care (Cycle 1)**

No	Critical Step	tical Step Criteria		V	<b>C</b> 1
1	Assessments using PSOC & FEAS	Identify parents with high competency using PSOC assessment	60%	2.9%	28.6%
I		Determine whether ASD child has achieved > level 4 in FEAS assessment	100%	0%	14.3%
2	Parents coaching intervention based on DIR approach for 9 sessions	Ideally, OT should involve ASD child and their parents during treatment session. Using standardize intervention plan.	100%	0%	100%
3	Reassessment using PSOC & FEAS reassessment after 6 months to determined effectiveness PC & DIR		100%	0%	100%
4	Achieve FEAS > level 4	Transfer to SRP program when the child achieve FEAS level 4 & > 4 years old	100%	0%	0%

# Achievable Benefit Not Achieved (ABNA) (Cycle 1)

Percentage of parent with high competency in handling ASD children with social-emotional problem



### **Strategies For Change**

#### Cycle 1

- Conduct workshop and training for OTs HPj:
- Parents coaching
- DIR floortime
- PSOC & FEAS
- Developed designated slot only for ASD case (DIR slot)
- Implement parents coaching intervention based on DIR approach for 9 sessions
- Developed parents group support to motivate parents



#### Cycle 2

- Continue:
- parents coaching intervention (9 sessions)
- parents group support to maintain parents motivation
- ASD children that scored FEAS level >4, will referred to School Readiness Program (SRP).

### **Effect of Change (Cycle 2)**

Number of parent of ASD child with social-emotional problem
(A)

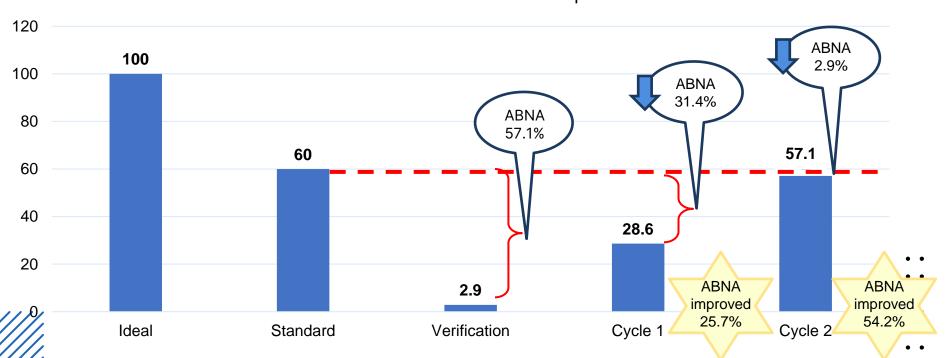
35

Number of parents scored high competency in PSOC (B)

	V	<b>C1</b>	C2
	Feb 2023	Aug 2023	Feb 2024
FORMULA Percentage of parent with high competency in handling ASD children with social-emotional problem [ (B/A) X100% ]	[ (1/35) X100% ] = 2.9%	[ (10/35) X100% ] = 28.6%	[ (20/35) X100% ] = 57.1%
GOAL FOR IMPROVEMENT To increase percentage of parent with high competency in handling ASD children with social-emotional problem from:	<b>2.9%</b> to <b>60%</b>	<b>28.6%</b> to <b>60%</b>	<b>57.1%</b> to <b>60%</b>

# Achievable Benefit Not Achieved (ABNA) (Cycle 2)

Percentage of parent with high competency in handling ASD children with social-emotional problem



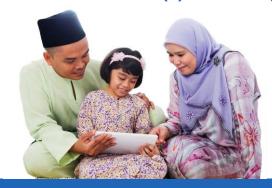
# **Model of Good Care (Cycle 2)**

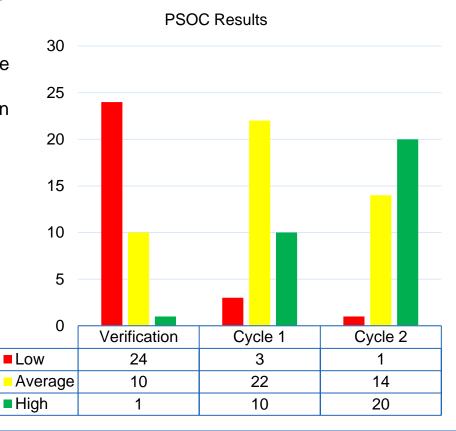
•	No	Critical Step Criteria		Standard	V	C1	C2
	1	Assessments using	Identify parents with high competency using PSOC assessment	60%	2.9%	28.6%	57.1%
	1	PSOC & FEAS	Determine whether ASD child has achieved > level 4 in FEAS assessment	100%	0%	14.3%	77.1%
2		Parents coaching intervention based on DIR approach for 9 sessions	Ideally, OT should involve ASD child and their parents during treatment session. Using standardize intervention plan.	100%	0%	100%	100%
3	3	Reassessment using PCOS & FEAS	OT administer PSOC & FEAS reassessment after 6 months to determined effectiveness PC & DIR	100%	0%	100%	100%
4		Achieve FEAS > level 4	Transfer to SRP program when the child achieve FEAS level 4 & > 4 years old	100%	0%	0%	77.1%

### **Impact - parents**

35 parents were assessed using PSOC assessment. The main caregiver and/or parents (either mother or father) who scored higher in PSOC were selected for verification study.

Post-remedial, the percentage of parent with high competency in handling ASD children with social-emotional problem increased from 2.9% (1) to 57.1% (20).



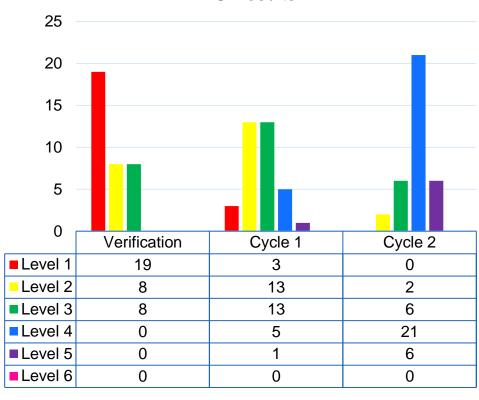


### **Impact - ASD Children**

35 children were selected for this study.
Using a standardize assessment FEAS, in post-remedial, the percentage of ASD children that scored > level 4 FEAS increased from 0% (0) to 77.1% (27).

Level 1	Regulation and interest in the world
Level 2	Engagement (Forming relationships)
Level 3	Intentional two-way communications
Level 4	Shared social problem solving
Level 5	Creative and meaningful use of ideas
Level 6	Creation of logical bridges between emotion and ideas

#### **FEAS Results**



# Impact - Occupational Therapists HPj

During our survey that was conducted in February 2023, 9 OTs (who were in charge in paediatric cases) had completed the questionnaire. The percentage of occupational therapist's:

- Knowledge increased from 22.2% (2) to 100% (9)
- Include PC into practice increased from 22.2% (2) to 100% (9)
- Interest increased from 77.8% (7) to 100% (9)
- Confidence increased from 77.8% (7) to 100% (9)



2% (2) to 100% (9)	6 -					
sed from 22.2% (2) to 100% (9)	5 -					
7) to 100% (9)	4 -					
3% (7) to 100% (9)	3 -					
	2 -					
	1 -					
	0	Verific	cation	Cycle	e 1	
■ Staff's knowledge about PC & DIR Flo	ortime	2	2	9		
Include PC into OT practice		2		9		
■ Staff's interest with pediatric case		7		9		
■ Staff's confidence collaborating with p	arents					
	_					

### **Conclusion**

NO	OBJECTIVES	CONCLUSION			
1	To determine magnitude and severity of incompetent parent in handling their ASD child social-emotional skills in Occupational Therapy Unit, Hospital Putrajaya.	Pre-remedial data showed that only 2.9% (1) of parents with high competency, which was significant below than the standard of 60%. Furthermore 0% (0) ASD children scored > level 4 FEAS, which indicates poor social-emotional development.			
2	To identify contributing factors to the incompetent parent in handling their ASD child social-emotional skills in Occupational Therapy Unit, Hospital Putrajaya.	The main contributing factor to this problem is lack of parents skills to handle social-emotional issues. Other factors include OTs are depending on other multi-modal approaches, insufficient knowledge about PC among OTs, no dedicated OT for ASD case, high stress among parents and lack of OT confidence.			
3	To formulate and implement proper remedial action	Strategies formulated include workshop & training for OTs HPj, DIR appointment slot was created, individual parents coaching based on DIR Floortime was practiced & parents support group was established.			
4	To evaluate the effectiveness of remedial action	Post-remedial, the percentage of parent with high competency in handling ASD children with social-emotional problem increased from 2.9% (1) to 57.1% (20).			













### **The Next Step**











Parents coaching and DIR Floortime will be introduced to other hospitals throughout Malaysia.



A national level clinical course 'Parent coaching & DIR Floortime' was organized by OT HPj on 5-6 March 2024 for all OTs in Malaysia

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