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Vision Impairment: the Impact on Social Cognition and Social Ability

Associate Professor Carolyn Palmer
AM; PhD

Flinders University
South Australia



inspiring achievement

Introduction

- **Vision plays a role in the development of early skills for social cognition which involve:**
 - perspective-taking and joint-attention behaviors.
 - perceiving and interpreting the ideas and sensitivities that underlie what people say and do.¹



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Impact of Vision Impairment

- **Decreased visual acuity:**
 - restricts understanding of the context of social interaction
 - restricts ability to choose appropriate initiations or responses.
- **May also affect**
 - ability to process and act upon other information such as verbalisations,
 - ability to process how peers interact with each other and how they play with toys.
- **Nystagmus**
 - affects the ability to make and maintain eye contact.

The effects of severe vision impairment on children's social competence, social ability and involvement in peer relationships

- This study reports on an aspect of the findings of a much larger study;
- **Focus:**
 - children and youth with Albinism
 - relationship between their vision loss, social information processing, and patterns of social behaviour.
- **Parallel investigation:** students with vision impairment and those with no vision loss

Social Cognition

- ***Is concerned with***
 - understanding social relationships
 - social ability
 - social competence
 - ability to conceptualise others
 - understanding the thoughts, emotions, intentions, and viewpoints of others in social situations
- It is an important mediator in the socialisation process
- It underpins how we process social cues

Social Ability

Social ability is about how individuals make social decisions and how they solve social problems. It represents:

The integration of socio-cultural knowledge



Cognitive development



Behavioural experiences

(Andrews & Lupart, 1993).

The problem

- Severe vision loss impacts on the way children interact with peers
- Loss of vision impacts on
 - processing visual cues
 - Observing the behaviour of others
 - Interpreting subtle social nuances
 - Incidental social learning



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Aim of the study

- To investigate the social cognition and social ability of children with vision impairment and how they process social clues in various situations

Research Questions

- What is the social understanding of children and youth with vision impairment?
- How do they make social decisions and solve social problems
- Do they say things that fit inappropriately with what others say?
- Do they do things that fit inappropriately with what others do?
- Do they show inappropriate feelings?

Method: Qualitative and quantitative



Social
Emotional
Dimensional
Scale (SEDS)



Parent
interviews



Teacher
interviews

Observation



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Participants

- Ten young learners with albinism
- Seven with vision impairment
- Nine students with no vision problems
- Students were aged between 8 and 16
- Parents
- Teachers



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Participants with albinism

Name	Gender	Age	Acuity
Don	M	10	6/60, 6/60
Pam	F	11	6/60, 6/60
Toni	F	11	4/60. 4/60
Sam	M	14	6/24, 6/24
James	M	9	6/60, 6/60
Jason	M	13	6/60, 6/24
Dennis	M	11	6/36, 6/36
Trevor	M	11	6/24, 6/24
Sally	F	8	6/24, 6/24
John	M	16	6/60, 6/60

Participants with Vision Impairment

Name	Gender	Age	Acuity
Tom B	M	12	6/60, 6/60
Tania	F	11	6/60, 6/60
Jenny	F	13	4/60. 4/60
Simon	M	13	6/24, 6/24
Amanda	F	13	6/60, 6/60
Tom C	M	12	6/60, 6/24
Kyle	M	11	6/36, 6/36

Why children with albinism were included in the group

- Difference in physical appearance (very pale, non-pigmented skin and white hair).
- To establish whether the additional factors inherent in this condition resulted in significant differences in the social cognition and social ability of these students compared with peers with vision impairment (not albinism) and those with no vision loss.

Why students with albinism were divided into three groups

- Three major albinism groups: oculocutaneous tyrosinase negative albinism (OCA1), oculocutaneous tyrosinase positive albinism (OCA2), and ocular albinism (OA).
- **Reason:** to gauge whether physical appearance had an impact on participants' social ability and social understanding.



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Procedure

- Teachers and parents were interviewed
- Parents completed a survey
 - Both parents and teachers were asked to comment on each child's social cognition (social understanding)
- Teachers completed a *Social Emotional Development Scale (SEDS)* for each student
- Students were observed in various settings

Parents' & Teachers' comments on social cognition: Children with albinism

Sam	Standoffish until knows what's happening.	Clues in quickly on body language: aware when excluded
Trish	Vision impacts: Picks up subtle messages auditorily	Limited
Jan	Understands arguments	Still rather immature
Tim	Interrupts, talks over others, doesn't pick up vibes	Aware
John	Intuitive, picks up vibes	Good understanding: doesn't pick up on body language well.
Sara	Good with adults	Mature outlook, understands roles in a group. Won't be pushed around.
Tom	Can turn it on when needed	Will know if he's offended: knows to let others have turns.

Parents' & Teachers' comments on social cognition: Students with Vision Impairment

Judy	Extremely good	All concepts poor
Tessa	Not putting it into practice. Doesn't sense when behaviour is inappropriate Not reading what is going on.	Picks that sort of stuff up
Ian	Wants to learn about it. Learning	Doesn't care about how others feel, or doesn't show it
Alice	Not socially conscious	Unaware of how her actions affect others
Travis	Very intuitive	Doesn't let that be seen. Male chauvinist image
Toby	*	Very aware of how his actions affect others

Parents' & Teachers' comments on social cognition: Students with normal vision

Jesse	Doesn't read situations or what others are thinking correctly.	Improving. In past solved problems by running away
Ben	Interjects, can be rude: emotional and sensitive	Can't understand why boisterous bullying behaviour isn't appropriate.
Luke	Picks up innuendos and understands adult humor	Picks up body language. Can have an adult conversation
Mat	Good social understanding	Understands adult humour, picks up hidden meanings, & body language.
Ray	Reads body language, understands moods, interprets feelings. Knows when to back off.	Very good understanding of how to interact. Deep thinker. Very considerate.
Dennis	Can read how others are feeling: knows when to go into a situation and when to "back off".	Knows place in the world already. Realizes his limitations. Knows right from wrong. Picks up clues quickly

Social Ability

- Severe vision impairment clearly imposed
 - a major difficulty in social understanding
 - resulted in some examples of inappropriate, assertive behaviour
- Although students with vision impairment were not always as popular as some students with no vision problems, the findings showed that they were not rejected by classmates



Social Ability

- The majority of students in the study
 - *had a well-developed repertoire of social skills.*
- However some lacked social understanding
 - *They tended to miss or misunderstand subtle social nuances and social feedback*
 - *They needed assistance to interpret social dynamics and make sense of the social environment.*

Say things that fit inappropriately with what others are saying: Teachers' rating

Students with Albinism:

Teacher ratings

- 40% never or rarely
- 40% occasionally,
- 20% frequently

Students with Vision Impairment

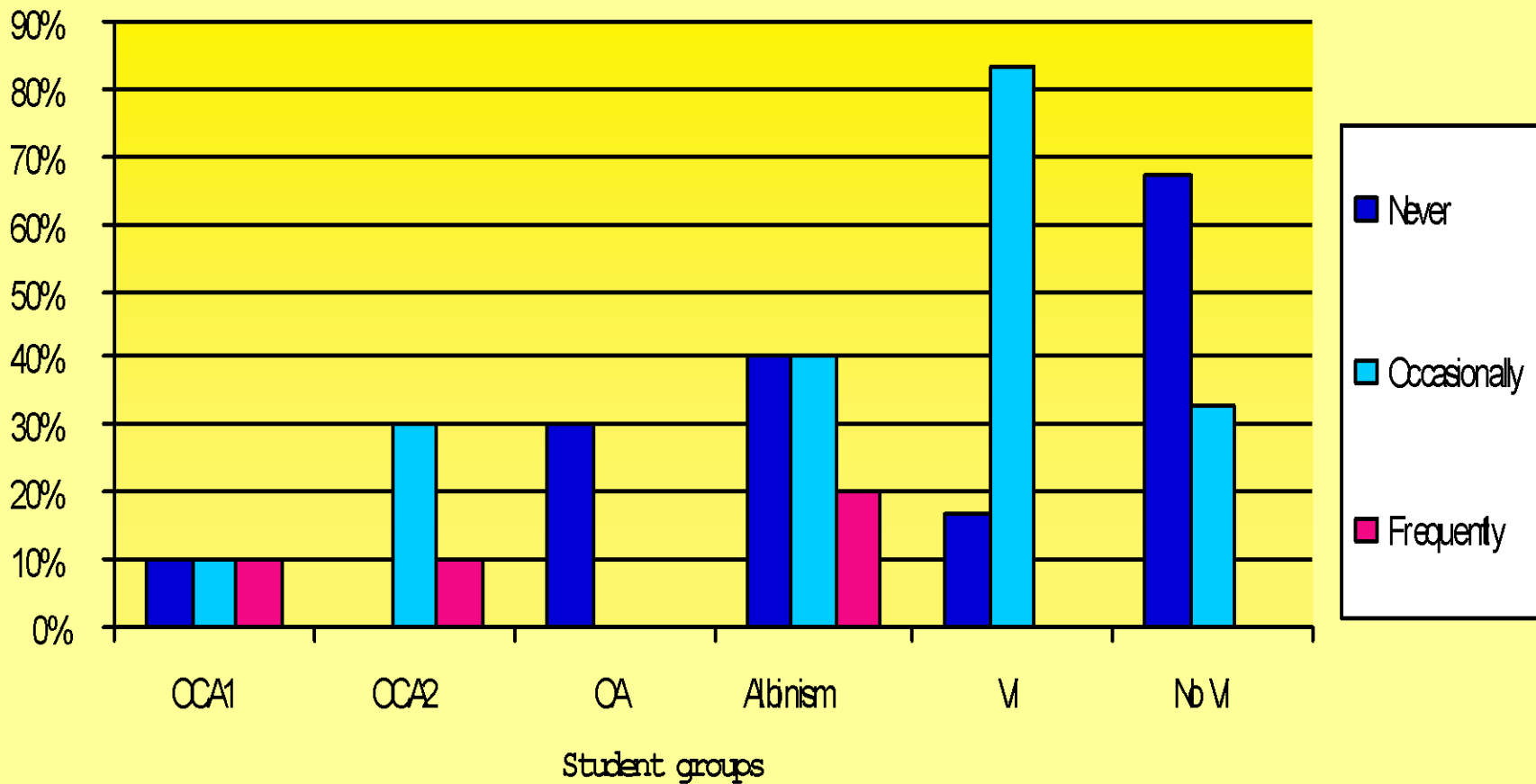
Teacher ratings

- **17% never or rarely**
- **83% occasionally**

Sighted group

- Teacher ratings
- **68% never or rarely**
- **32% Occasionally**

Percentage of students by category who say things that fit inappropriately with what others are saying (N=25): Teachers' rating



Do things that fit inappropriately with what others are doing: Teachers' ratings



20% frequently
30% Occasionally
50% never

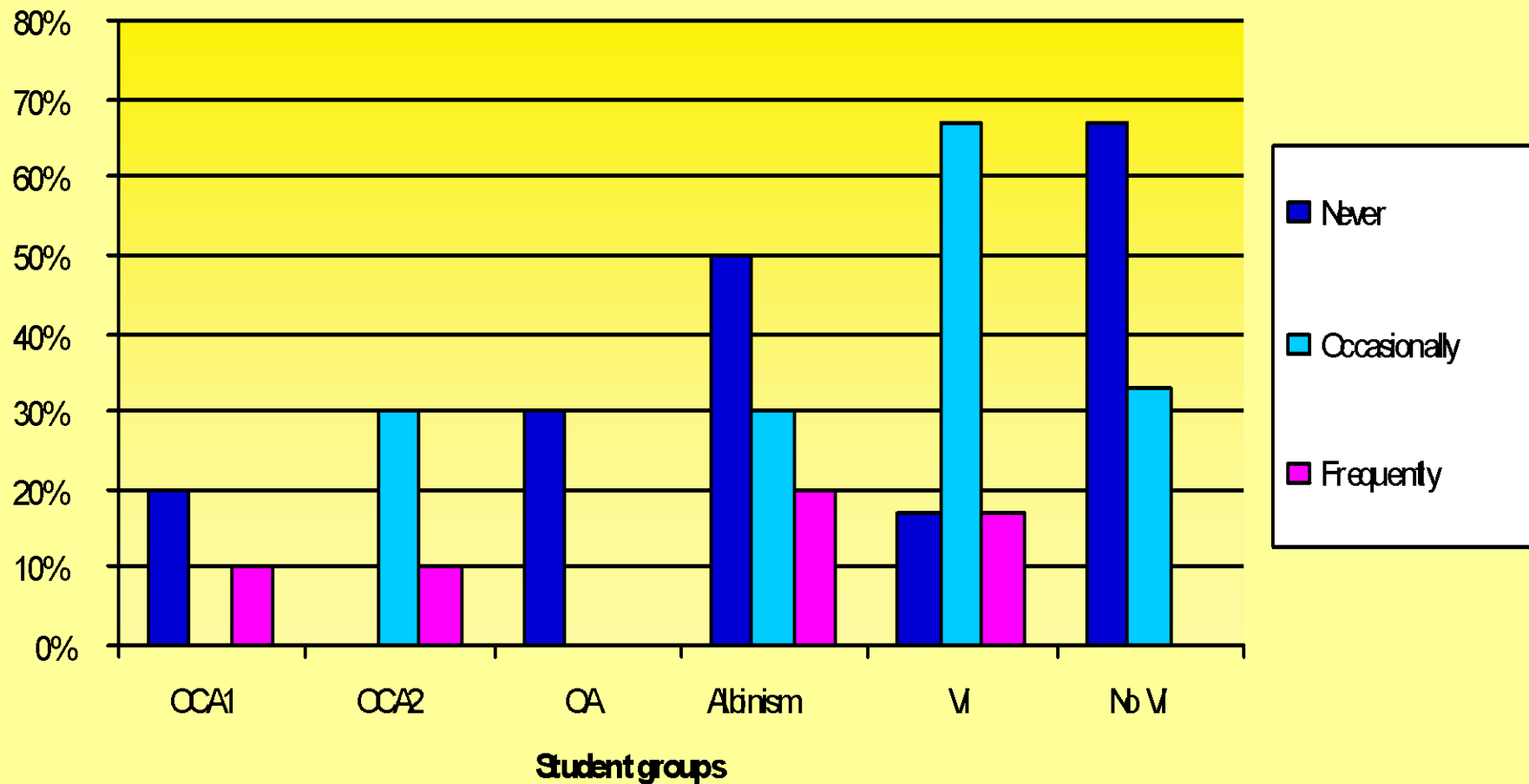


18% frequently
64% occasionally
18% never



32% occasionally
68% never

Number of students who do things that fit inappropriately with what others are doing (N=25): Teachers' rating



Show inappropriate feelings

Teachers' rating



- 10% frequently
- 40% occasionally
- 50% Never

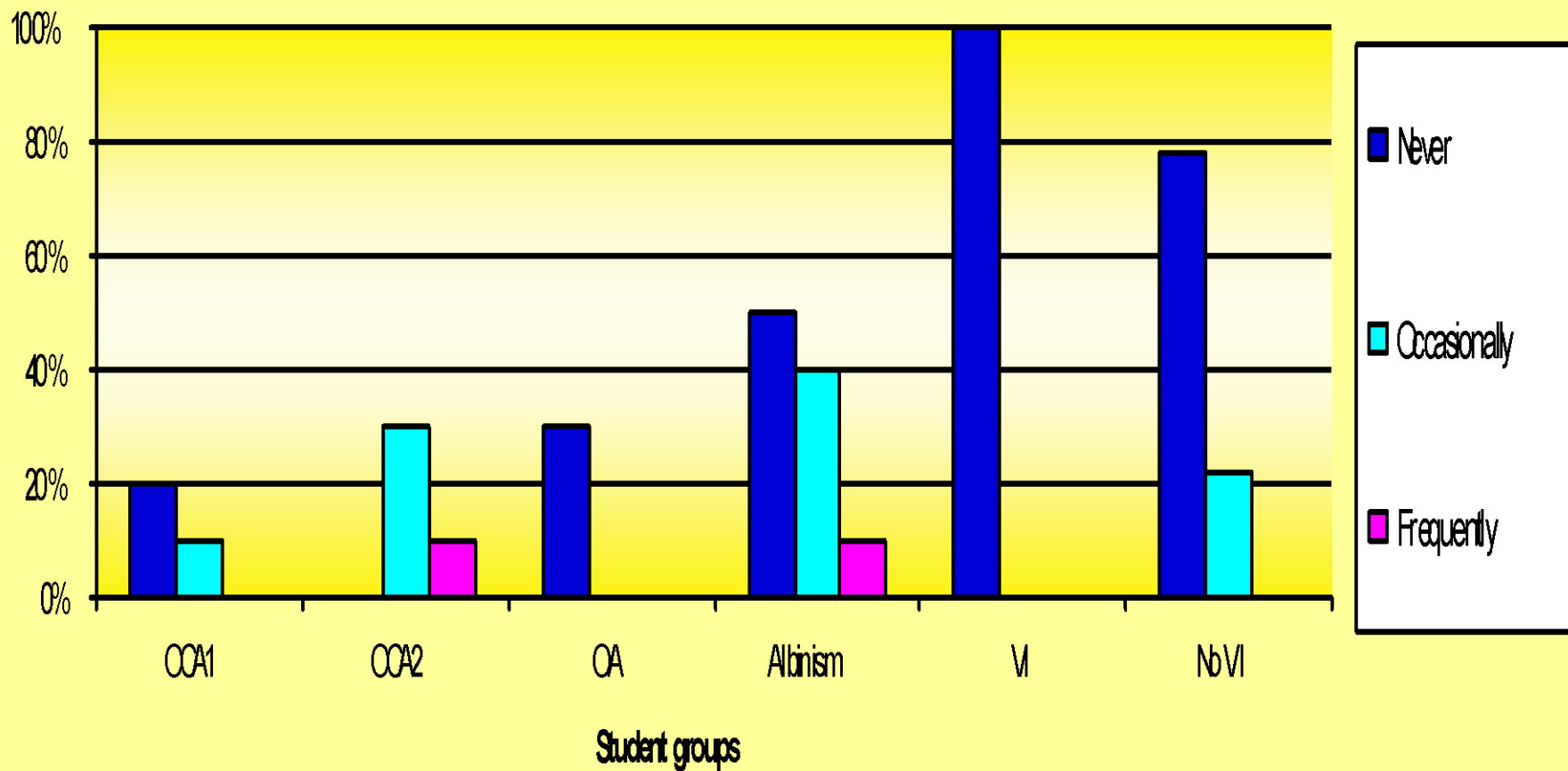


- **100% Rarely or never**



- **22% Occasionally**
- **78% Never or rarely**

Students who show inappropriate feelings, e.g. looks or acts happy when should be sad (N=25): Teachers' rating



Summary: Social Cognition



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- Teachers and parents views were not always in agreement
- Parents were more positive generally than teachers
- Students with vision impairment were generally not as socially cognisant as their sighted peers
- Vision Impairment had an impact on children's social understanding

Conclusion: Strong Key Messages

- Vision has an impact on the development of social cognition
- The major factor that impacted on the social cognition of students with vision impairment was the difficulty they had in picking up and interpreting subtle visual cues, and body language.
- Early intervention assists students with vision impairment to become more socially aware
- Teachers need to be aware of the impact of loss of vision on the development of social understanding and social ability.

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Thank You