Structured observation in inclusive settings of social interaction in play among preschoolers in Sweden: reliability and validity of an instrument

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Background

- Socioemotional competencies/social skills

- Children with disabilities

- Peer-mediated interventions

- Play

Socioemotional competence

- Based on a constellation of emotional, cognitive and behavioral factors

Social competence

- Performance-Based Assessment of Social Competence

- Two-factor model;

- The first one is being pro-social and cooperating with others

- The second is the achievement of personal or group goals in social situations (Odom et al.,1997).

Social skills

- Include showing a interest in others, initiating and sustaining interactions, taking part in group play or goal-directed group activities, responding appropriately to peers' aggressive behavior, and also effectively solving social problem (Jamison et al. 2012; Odom et al. 1999; Van Hecke et al. 2007)

- Social skills are required for positive relationships with parents, peers, and other significant adults (e.g., teachers) which satisfy the need to belong, protect against victimization, and promote cognitive and social development (Miles & Stipek 2006; Parker & Asher 1987).

Peer-mediated interventions

- An immense amount of research is showing that peer-mediated interventions (PMI) programs, with the aim of facilitating social interaction among children in early childhood setting, are one of the most favorable methodologies to promote social skills in children (Chan et al., 2009; Chang & Locke, 2016; McConnell, 2002; Reichow & Volkmar, 2010).

- PMI has several benefits for children who have difficulties (e.g., children with or risk for disabilities) establish social relationships and provide effective tools to support practice of social skills (Case-Smith, 2013, see even [AFIRM resources](#) for children with autism).

Peer-mediated interventions

- A systematic review, which examined the effect of PMIs for children and adolescents with Autism spectrum Disorder (ASD), showed that PMIs promote social network inclusion as well as social communication skills (e.g., social initiations, social responses, and greater social interaction) for children and adolescents with ASD (Chang & Locke, 2016).

- Peer-mediated interventions strategies (e.g., modeling, prompting, and reinforcing appropriate social behaviors) in naturally occurring play activities at preschools can promote social competence and development of social skills in children with disabilities (Case-Smith, 2013).

Play

- Play has an essential function for peer interactions and socio-emotional development in children. However, children with disability and developmental delays may not initiate play activities, participate and engage in play with peers as much as typically developed children do (Ashiabi, 2007; Odom et al., 1997, Barton, 2015).

- Peer-to-peer interactions in natural settings (i.e., in play activities) are one of the favorable PMI methodologies to promote social skills in children. The peer can model appropriate social behaviors for children who are in need of practice with their social skills (Chan et al., 2009).

Aim

- The purpose of the current study was to investigate the validity and reliability of the translated Swedish version of the Teacher Impression Scale (TIS-S, Siljehag & Westling Allodi, 2016) in Swedish early childhood setting, as rated by preschool teachers.

- We aimed to know whether the instrument was reliable and valid cross-culturally as well as if the tool could be used to measure the social skills of children in Swedish preschools.

Method

- **Participants**
- The study population in the current study consisted of 53 preschool teachers from different municipalities in Sweden, and 92 children aged 3-5 years in Swedish preschools
- **Measures**
- The translated Swedish version of the Teacher Impression Scale (TIS-S, Siljehag & Westling Allodi, 2016)

The Teacher Impression Scale (TIS)

- Performance-Based Assessment of Social Competence
- Social competence is multidimensional, which means that it can be measured with several instruments that provide overlapping information about social functioning (McConnell & Odom, 1999; Vaughn et al., 2009)

The Teacher Impression Scale (TIS)

- TIS a structured observation instrument included in the peer-mediated play program **Play Time Social Time** (PTST, Odom et al., 1997) which focuses on six social interaction skills: sharing, persistence, requesting to share, play organizing, agreeing, and helping.

- TIS has been translated into Swedish, i.e., the Teacher Impression Scale Swedish version (TIS-S, Siljehag & Westling Allodi, 2016)

- In 2017, its social validity were tested with 16 teachers (Gladh et al. forthcoming)

- In 2018, we investigated the test re-test reliability and the validity of the TIS

The Teacher Impression Scale (TIS)

- The instrument was developed by Odom et al. (1997)

- It is a teacher-report instrument

- Assesses a child's ability to enter an interaction and to play with peers

- Consisting of 16 items to which responses are given using a five-point Likert scale, ranging from 1=the child never displays this skill, to 5=the child frequently displays this skill

- Higher scores represent better social skills

Items for the Teacher's Impression Scale (TIS)

Table 2
Play Time/Social Time
Teacher Impression Scale

Child Name _____ Date _____

Teacher _____ Subject Number _____

Please read each item below and rate the degree to which it describes the child's behavior **in your classroom program.** *If you have not seen the child perform a particular skill or behavior, circle* **1,** *indicating* **Never.** If the child frequently performs the described skill or behavior, circle **5,** indicating **Frequently.** If the child performs this behavior in between these two extremes, circle **2, 3,** or **4** indicating your best estimate of the rate of occurrence of the skill.

1 = Never Performs Skill   5 = Frequently Performs Skill
Circle only one number for each skill. Do not mark between numbers.

1 . . . 2 . . . 3 . . . 4 . . . 5	1. The child converses appropriately.
1 . . . 2 . . . 3 . . . 4 . . . 5	2. The child takes turns when playing.
1 . . . 2 . . . 3 . . . 4 . . . 5	3. The child plays cooperatively.
1 . . . 2 . . . 3 . . . 4 . . . 5	4. The child varies social behavior appropriately.
1 . . . 2 . . . 3 . . . 4 . . . 5	5. The child is persistent at social attempts.
1 . . . 2 . . . 3 . . . 4 . . . 5	6. The child spontaneously responds to peers.
1 . . . 2 . . . 3 . . . 4 . . . 5	7. The child appears to have fun.
1 . . . 2 . . . 3 . . . 4 . . . 5	8. Peers interacting with the child appear to have fun.
1 . . . 2 . . . 3 . . . 4 . . . 5	9. The child continues an interaction once it has begun.
1 . . . 2 . . . 3 . . . 4 . . . 5	10. Peers seek out the child for social play.
1 . . . 2 . . . 3 . . . 4 . . . 5	11. The child uses appropriate social behavior to begin an interaction.
1 . . . 2 . . . 3 . . . 4 . . . 5	12. The child enters play activities without disrupting the group.
1 . . . 2 . . . 3 . . . 4 . . . 5	13. The child suggests new play ideas for a play group.
1 . . . 2 . . . 3 . . . 4 . . . 5	14. The child smiles appropriately at peers during play.
1 . . . 2 . . . 3 . . . 4 . . . 5	15. The child shares play materials with peers.
1 . . . 2 . . . 3 . . . 4 . . . 5	16. The child engages in play activities where social interaction might occur.

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Procedure

- Teachers observed and rated the children, both with and without SEN, and assessed the children's expression in the play and social interaction.

- Teachers observed each child in different situations during a two-week period

- The tool was applied by the same teacher for two children; one for a focus child and one for a support child, and once again two weeks later

- 183 TIS ratings were collected

Analysis

- Cronbach's alpha were used to assess the internal consistency and reliability of the instrument, and the reliability was also tested by using test-retests analysis between the teachers observation ratings with a 2- week interval

- A Principal Components Analysis (PCA) was used to examine underling component structure and construct validity of the instrument

Results

- Reliability was assessed by the intraclass correlation coefficient

- The result shows that TIS-S is reliable (Cronbach α=0.97; average ICC =0.90-0.91 with a 95% CI between 0.85-0.86 and 0.93-0.94 across groups, p<.001)

PCA

- A Principal Component Analysis on the 16 items extracted one component with eigenvalue >1 (eigenvalue=11.5) that explain 72% of variance

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was=.96, above the commonly recommended value of .6, and Bartlett's test of sphericity was significant (χ2 (120) = 3076.04, p < .001)
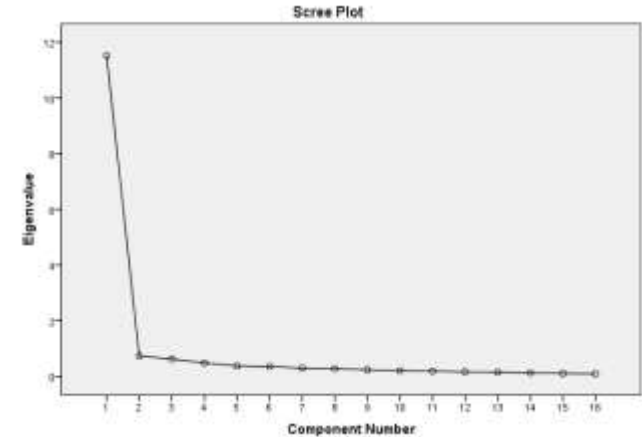
Conclusions

- The aim of this study was to examine the cross-cultural adaptation of the Teacher Impression Scale (TIS)

- The TIS-S was found to be a reliable and valid instrument and useful for identifying and supporting children with disabilities in early childhood setting.

- TIS-S can help identify the needs of support that children need in play and social interaction in inclusive preschool environments. Furthermore, the instrument can also be useful for identifying special educational strategies aimed at strengthening the social interaction between children.

Ongoing research on play and language in inclusive preschools

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