



Universiteit
Leiden
The Netherlands

Social emotions and social functioning in Chinese deaf and hard-of-hearing and hearing preschoolers

Li, Z.

Citation

Li, Z. (2025, February 14). *Social emotions and social functioning in Chinese deaf and hard-of-hearing and hearing preschoolers*. Retrieved from <https://hdl.handle.net/1887/4180533>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/4180533>

Note: To cite this publication please use the final published version (if applicable).

Appendices



Supplementary Materials

Acknowledgments

Curriculum Vitae

List of Publications



Appendices & Supplementary Materials of Chapter 2

Table A. Items of the Moral Emotions Questionnaire, MEQ (Da Silva et al. 2022)

Pride

- | | |
|----|--|
| 2 | When my child has done something remarkable, he/she comes over to show me |
| 6 | When he/she has accomplished something difficult, my child looks at me |
| 8 | When my child receives a compliment, he/she smiles |
| 10 | My child tries to do well |
| 12 | My child wants me to come over and take a look when he/she has accomplished something difficult. |
| 14 | My child likes receiving compliments |
| 17 | When my child has done something well, he/she says something positive about him-/herself |

Guilt

- | | |
|----|---|
| 3 | When my child does something he/she is not allowed to do, he/she tries to make up for it (e.g., saying sorry) |
| 5 | My child shows that he/she regrets something |
| 9 | When my child has broken something of someone else, he/she tries to repair it |
| 11 | My child cries when he/she has accidentally hurt someone |
| 13 | When my child does something wrong (e.g., spill something), he/she tries to fix it (e.g., fetches a cloth) |
| 16 | My child does not respond when I scold him/her for doing something he/she is now allowed to do (R) |

Shame

- | | |
|----|--|
| 1 | My child hides when he/she has done something wrong |
| 4 | When my child has done something wrong, he/she does not look at me |
| 7 | My child quickly walks away when he/she has done something he/she is not allowed to do |
| 15 | When my child has broken something, he/she tries to hide it from me |
-

Table B. Age distribution and mean scores (standard deviations).

	Age Distribution				
	2 years	3 years	4 years	5 years	6 years
<i>N</i> (total = 182)	10	46	48	63	15
Moral Emotions					
Pride	2.41 (0.27)	2.66 (0.27)	2.65 (0.46)	2.59 (0.31)	2.61 (0.29)
Guilt	2.11 (0.40)	2.33 (0.43)	2.31 (0.43)	2.38 (0.41)	2.40 (0.40)
Shame	1.67 (0.41)	1.67 (0.46)	1.71 (0.48)	1.69 (0.39)	1.78 (0.39)
Social-Emotional Functioning					
Internalizing Behaviors	1.70 (0.27)	1.66 (0.23)	1.66 (0.21)	1.59 (0.17)	1.61 (0.21)
Externalizing Behaviors	1.49 (0.31)	1.33 (0.28)	1.35 (0.23)	1.27 (0.22)	1.24 (0.31)
Social Competence	2.14 (0.34)	2.29 (0.31)	2.37 (0.44)	2.41 (0.35)	2.55 (0.42)

Table C. Spearman's correlations between the study variables.

	3.	4.	5.	6.	7.	8.
1. Age	-.02	.11	.06	-.12	-.18*	.22**
2. Gender	-.20**	.003	-.02	.01	.12	-.13
3. Pride		.50***	-.08	.09	.01	.47***
4. Guilt			-.09	-.05	-.14	.38***
5. Shame				.17*	.23**	-.12
6. Internalizing Behaviors					.36***	-.23**
7. Externalizing Behaviors						-.22**
8. Social Competence						-

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table D. Group differences of means of moral emotions across Gender and Age groups.

	Gender			Age		
	df	t	p	df	t	p
Configural test						
Pride	179	-2.52	.01	179	-.42	.67
Guilt	179	.05	.96	179	-1.82	.07
Shame	179	-.41	.68	179	-.07	.95
Partial Metric test ^{a, b}						
Pride	179	-2.62	.01	179	-.42	.67
Guilt	179	.16	.87	179	-1.82	.07
Shame	179	-.41	.68	179	.33	.74
Partial Scalar test ^c						
Pride	179	-2.62	.01	179	.35	.72
Guilt	179	.16	.87	179	-.89	.38
Shame	179	-.41	.68	179	.34	.73

Note:

a. For the partial metric model across gender, equality constraints on the factor loadings of Item 14 and 16 were freed.

b. For the partial metric model across age, equality constraint on the factor loading of Items 4 was freed from the model.

c. For the partial scalar model across age, equality constraints on the intercepts of Items 9 and 17 were freed from the model.

Appendices & Supplementary Materials of Chapter 4

Table A. The items of the existing five versions of the EmQue (by country)

Versions of EmQue		NL	IT	JP	SP	PT
Emotional Contagion						
1	When another child cries, this child gets upset too.	X				X
4	This child also needs to be comforted when another child is in pain.	X	X	X	X	X
7	When another child makes a bad fall, shortly after this child pretends to fall too.	X	X	X	X	
10	When another child is upset, this child needs to be comforted too	X	X	X	X	X
13	When another child gets frightened, my child freezes or starts to cry	X	X	X	X	X
16	When other children argue, this child gets upset.	X				X
19	When another child cries, this child looks away.					
Attention to Others						
3	When this child sees other children laughing, he/she starts laughing too.	X	X	X	X	
6	When an adult gets angry with another child, this child watches attentively.	X	X	X	X	X
9	This child looks up when another child laughs.	X	X	X	X	X
12	When adults laugh, this child tries to get near them.	X	X	X	X	X
15	This child looks up when another child cries.	X	X	X	X	X
18	When another child is angry, this child stops his own play to watch.	X				X
20	When other children quarrel, this child wants to see what is going on.	X				X
Prosocial Behaviors						
2	When I make clear that I want some peace and quiet, this child tries not to bother me.	X				
5	When another child starts to cry, this child tries to comfort him/her.	X	X	X	X	X
8	When another child gets upset, this child tries to cheer him/her up.	X	X	X	X	X
11	When I make clear that I want to do something by myself (e.g. read), this child leaves me alone for a while.	X				
14	When two children are quarrelling, this child tries to stop them.	X	X	X	X	X
17	When another child gets frightened, this child tries to help him/her.	X	X	X	X	X

Note: “X” means the corresponding item is included in that version of EmQue.

The abbreviations represent the country in which the corresponding version of EmQue was validated: NL = Netherlands; IT = Italy; JP = Japan; SP = Spain; PT = Portugal.

Table B. Spearman's correlations between the study variables.

	3.	4.	5.	6.	7.	8.
1. Age	-.06	-.06	.34***	-.12	-.18*	.22**
2. Gender	-.02	-.12	-.10	.01	.12	-.13
3. Emotional Contagion		.26**	.06	.20**	.01	-.39***
4. Attention to Others' Feelings			.32***	.29**	.09	.22**
5. Prosocial Behaviors				-.25*	-.17**	.39***
6. Internalizing Behaviors					.37***	-.23**
7. Externalizing Behaviors						-.24**
8. Social Competence						-

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Acknowledgments

I want to thank all those who have contributed to completing this thesis.

First and foremost, I want to express my appreciation to all the children, parents, and teachers who participated in and contributed their time to our research. In particular, the China Rehabilitation Research Center for Hearing and Speech Impairment assisted us with the data collection. Without their contribution, our work would not be possible.

I am sincerely thankful that my supervisors, Prof.dr. Carolien Rieffe, Dr. Boya Li, and Prof.dr.ir. Johan Frijns, offered me the opportunity to study social emotions in deaf and hard-of-hearing children. Carolien and Boya have spent a considerable amount of time revising all my “first drafts” sent to them throughout these years. I can imagine how difficult it is to correct and improve my academic writing. Yet, it is amazing to see all these chapters published right before the PhD defense. What an achievement for the supervisors! Also, Johan provided valuable insights into children’s hearing impairment and early rehabilitation.

I am grateful to the China Scholarship Council (CSC) for their financial support for this PhD project. Knowing that my home country backs me up is an inspiration.

I may also thank my colleagues at Leiden University for their support, lunchtime chats, lab meeting discussions, and daily communications. Yung-Ting, Brenda, Evelien, Tirza, Lisa, Claudia, Adva, Maedeh, Qi, Shannon, Hanjie, Kexin, Charlotte, Jiayin, and Lia - I learned a lot from you. Yung-Ting, you always acted like a supervisor and helped me in every aspect of my PhD study. Qi and Shannon, it is a pleasure to work together, and you contributed greatly to data collection. Claudia, I enjoyed the chats when sharing the office, your philosophical ideas and wise words were impressive. Hanjie, you were nice to talk to, and I believe your second PhD journey will be another triumph.

Thanks to the FSW Graduate School for finalising my graduation. Thanks to the Service Center International Staff (SCIS) for your housing arrangement: this cozy home supported my study and carried tons of precious memories.

Lastly, I shall express my thanks and fondness to Leiden. The wonderful scenery in Leiden's countryside always eases my mind during my study and the composition of this thesis. The stunning sunsets, the rivers, the emerald farmland in spring, the twilight in autumn, and the snowflakes in winter - all these unforgettable memories will continue to accompany me in the future.

Zijian Li,

Leiden, December 2024

Curriculum Vitae

Zijian Li was born in 1991 on the 14th of June in Lin-Fen, China. In 2010 he graduated from the Affiliated Senior High School of South-East University of China. He obtained a bachelor's degree in Applied Psychology at Shanghai Normal University in 2014. In 2017, he acquired a (research) master's degree in Psychology, at Renmin University of China. In October 2019, he started his PhD program at the Institute of Developmental Psychology of Leiden University, under the supervision of Prof.dr. Carolien Rieffe, Dr. Boya Li, and Prof.dr.ir. Johan H. M. Frijns.

Zijian Li's research focused on the social-emotional development of preschool children who are deaf and hard of hearing. In the PhD period, he worked on longitudinal studies examining the impact of hearing loss on the development of social emotions in preschool children. He has also worked on many validation studies aimed at developing questionnaires for measuring moral emotions, empathy, parental-child communication, and cultural identities for preschool children. His interest lies also in neuropsychology: he is skilled at designing and operating EEG experiments and published several relevant studies during his master's stage in China. Currently, he seeks to continue his academic career after his PhD study.

List of Publications

- Li, Z., Li, B., Tsou, Y. T., Oosterveld, P., & Rieffe, C. (2023). Moral emotions in early childhood: Validation of the Chinese moral emotion questionnaire. *Social Development*, 32(2), 527-545. <https://doi.org/10.1111/sode.12645>
- Li, Z., Li, B., Tsou, Y. T., & Rieffe, C. (2024). Validation of the Chinese Empathy Questionnaire for Pre-school Children. *Early Education and Development*, 1-16. <https://doi.org/10.1080/10409289.2024.2372938>
- Li, Z., Li, B., Tsou, Y. T., Wang, L., Liang, W., & Rieffe, R. (2024). A longitudinal study on moral emotions and psychosocial functioning among preschool children with and without hearing loss. *Development and Psychopathology*, 1-12. <https://doi.org/10.1017/S0954579424001408>
- Li, Z., Li, B., Tsou, Y. T., Frijns, J. H. M., Meng, Q., Yuen, S., Wang, L., Liang, W., & Rieffe, C. (2024). The Development of empathy and its association with social-emotional functioning in preschoolers with hearing loss and typical hearing. *Research on Child and Adolescent Psychopathology*, 1-14. <https://doi.org/10.1007/s10802-024-01271-0>
- Rieffe, C., Li, Z., & Tsou, Y. T. (2024). Development and validation of the short parent-child emotion communication questionnaire. *European Journal of Developmental Psychology*, 1-14. <https://doi.org/10.1080/17405629.2024.2388589>
- Rieffe, C., Li, Z., Yuen, S. Li, B. (submitted). Validation of the short Parent-Child Emotion Communication (PEC) Questionnaire in Chinese.
- 李子健, 张积家, 乔艳阳. (2018). 具身理论分歧: 概念隐喻与知觉符号观. *科学技术哲学*, 35(2), 45-51.
- 李子健, 张积家, 乔艳阳. (2018). 隐喻映射的反向作用: 重量感—亲属词重要性隐喻的 ERP 研究. *心理研究*, 11(1), 19-28.
- 李子健. (2017). “强-弱”具身: 理论与研究. *社科纵横*, 32(12), 112-119.