



# Describing school age children problem using strengths and difficulties questionnaire (SDQ)

Umdatul Khoirot<sup>1\*</sup>

<sup>1</sup> Department of Psychology, Faculty Psychology, Universitas Islam Negeri Maulana Malik Ibrahim, Malang, Jawa Timur, Indonesia

\*umdatul.khoirot@psi.uin-malang.ac.id

**Abstract.** This study aims to describe the problems experienced by elementary school-aged children using the Strength and Difficulties Questionnaire (SDQ). The results of this study are expected to provide a better understanding of the problems experienced by elementary school-age children, so that it can help educators, parents, and professionals in planning appropriate interventions. The participants of this study were 82 elementary school-aged children aged 6-7 years. The data obtained were analyzed descriptively to identify common problems faced by children, further using the item person map from Rasch model to see the distribution of problems experienced by children based on the algorithm created. The results of this study provide an overview of the social, emotional, behavioral, and strength problems of elementary school-age children in the sample studied. Based on the categorization of SDQ, in the abnormal category, peer problems (67%) are the most common problems experienced by school-age children. Then the next order is hyperactivity 22%, behavioral problems 21%, and emotional problems 15%. In the borderline category, most problems are related to behavioral problems, namely 32%, then the next order is emotional problems by 18%, and peer problems by 15%. Meanwhile, based on the item person map from Rasch model, it is found that the majority of children's problems both from the dimensions of peers (66%), hyperactivity (51%), emotional problems (49%) and behavior (43%) are in the moderate category.

**Keywords:** Problem screening, Primary school-age children, Strengths and Difficulties Questionnaire (SDQ).

## 1. Introduction

In general, the middle stage of child development is the age when they begin to enter primary school education. During this period, children experience significant changes in various aspects of their lives, including cognitive, social, emotional, and behavioral aspects. At this stage, children begin to develop their identity, interact with peers, and face various academic, and social demands. Primary school students are often referred to as children who have a lot of behavior, excess movement, and "naughty" in their social relationships [1], which sometimes at a certain level becomes a problem that is not realized by teachers, parents, and people around them. This also leads to the emergence of complaints that lead to the mental health of school-age children.

Many children are at risk of mental health problems that impact their social (such as difficulty getting along with others), emotional (such as anxiety, sadness), or behavioral (such as inattention, hyperactivity-impulsivity, aggression) lives in early childhood.

© The Author(s) 2023

Y. R. Agung et al. (eds.), *Proceedings of the Second Conference on Psychology and Flourishing Humanity (PFH 2023)*, Advances in Social Science, Education and Humanities Research 808,

[https://doi.org/10.2991/978-2-38476-188-3\\_22](https://doi.org/10.2991/978-2-38476-188-3_22)

Mental health issues experienced by school-age children often lead to emotional and behavioral problems. These behavioral problems generally occur around 4-5 years of age and usually persist until middle childhood when they are increasingly able to control their behavior [2]. Left unaddressed, such problems can put children at risk of school dropout, drug use, criminal behavior, and physical and mental health problems in adulthood and require substantial costs to the education, health, and justice systems [3].

The prevalence of emotional and behavioral problems in children shows different results in different countries. Research estimates that one in five students will experience a significant mental health problem during their school years (*Ready, Set, Go, Review: Screening for Behavioral Health Risk in Schools*, n.d.). Bethell, Read & Blumber [4] research show 55.7% of children diagnosed with developmental, emotional and behavioral problems had disruptive behavior, aggression, deviant behavior, and antisocial disorders. And nearly 43.5% had anxiety or emotional disorders. A survey conducted by Fajardo-Bullon et al., [5] in Spain showed that 19.2% to 26.6% of children and adolescents in Spain are at risk of mental health problems. In Kenya, 13% had emotional and behavioral problems, 10% had externalizing problems, and 22% had internalizing problems [6]. In Mongolia, 9.8% showed emotional problems, 12.3% behavioral problems, 10.4% hyperactivity problems, 7.5% problems with peers [7]. In the UK, 12.4% showed emotional problems, 12.7% behavioral problems, 14.7% hyperactivity problems, 11.7% problems with peers [7].

The prevalence of emotional and behavioral problems in Indonesia also shows different results. In Penjaringan sub-district, North Jakarta, there are 32% of children with behavioral, and emotional problems, including 38.5% behavioral problems; 34.2% problems with peers; 25% emotional problems [8]. Yogyakarta, it is known that 20.5% of children experience behavioral disorders, of which 87.9% are boys and most appear at the age of 9 and 10 years [9]. In East Denpasar, it is known that 83.3% of emotional problems experienced by 6-year-old children, 100% of hyperactivity problems and 75% of peer problems, with the distribution of emotional problems mostly experienced by girls and hyperactivity mostly experienced by boys [10].

Based on the results of research by Rahmadi et al., [11] In children with short stature in Brebes Regency, the prevalence of emotional disorders was 24.2% in the abnormal category and 17.1% in the borderline category. A total of 57.1% showed abnormal and borderline behavioral disorders, 14.2% showed borderline hyperactivity disorder and 58.5% showed abnormal and borderline peer problems.

Research conducted on younger subjects also showed that as many as 49.0% of young children had subclinical/clinical symptoms according to teachers and 67.9% of children who later met the criteria for psychiatric disorders [12]. Whereas in adolescent subjects, research Suni [13] in Ternate showed that 34.41% of adolescents experienced abnormal hyperactivity problems and 47.31% of problems with borderline category peers. In Pamekasan itself adolescent boys who have mental health problems in the abnormal category amounted to 83%, borderline amounted to 14.8%, and normal amounted to 2.2%, and adolescent girls who have mental health problems in the abnormal category amounted to 86.2%, borderline amounted to 11.8%, and normal amounted to 2% [14].

Furthermore, Abdul Kadir et al., [15] revealed that behavioral problems and peer problems are the most common emotional and behavioral difficulties experienced by adolescents, with emotional symptoms more common in girls than boys.

Many studies have been conducted to see the prevalence of child problems in various cities in Indonesia, but researchers have not found the prevalence of child problems in Malang. So that researchers want to describe the children's emotional and behavioral problems in Malang.

Although emotional and behavioral disorders of children in elementary school are difficult to detect [1], screening of children's emotional mental health needs to be done early so as not to affect their cognitive and social environment [16]. This is because screening with standardized tools in early childhood has the potential to identify most children who exhibit significant emotional/behavioral problems in early elementary school [12]. So the researcher chose school-age participants to identify emotional and behavioral problems so that early treatment can be done.

Seeing this, it is very important to do screening to detect emotional and behavioral problems in children. Screening social and behavioral problems in elementary school children is an important step in identifying and providing early intervention in problems that may arise. One screening tool that has been widely used is the Strengths and Difficulties Questionnaire (SDQ). The SDQ is a questionnaire specifically designed to identify strengths and difficulties in various social and behavioral aspects of children. The SDQ consists of several subscales that include emotional problems, behavioral problems, hyperactivity, peer problems and prosocial behavior [17].

In this study, researchers will examine the use of Strengths and Difficulties Questionnaire (SDQ) in screening social and behavioral problems in elementary school children. The results of this study are expected to provide a better understanding of the problems often experienced by elementary school-aged children, so that it can help educators, parents, and health professionals in planning appropriate interventions. In addition, this study is also expected to contribute to the development of more effective approaches in supporting the social and behavioral development of primary school-aged children, both individually and in groups.

## 2. Method

**Participants.** The study participants were 82 elementary school children aged 6-7 years. The sample was taken randomly from the data of children who will enter elementary school, provided by the Applied Psychology Laboratory of the Faculty of Psychology, UIN Maulana Malik Ibrahim Malang.

**Procedure.** Parents completed a questionnaire about their child in the past month. With the help of teachers, parents were invited to complete the questionnaire about their respective children. Before completing the questionnaire, parents were given informed consent to participate in the study.

**Measurement.** The Indonesian-translated version of the SDQ was used for screening, with a reliability of 0.71 based on previous studies [18]; 0.77 [9]; 0.75 [19]; and between 0.56 - 0.73, except in the dimension of peer problems [20].

The SDQ is a brief behavioral screening questionnaire about children aged 2-17 years. It consists of 25 items that have been translated into several versions to meet the needs of researchers, clinicians and educators. The SDQ consists of five measuring dimensions that contain 5 items in each dimension, namely: 1) emotional symptoms; 2) conduct problems; 3) hyperactivity/lack of attention; 4) peer relationship problems; 5) prosocial behavior. The questionnaire can be completed by parents, teachers, or even the child themselves. The SDQ provides a comprehensive understanding of the strengths and difficulties experienced by the child, which can help in directing appropriate attention and intervention [17].

**Data analysis.** The data obtained were analyzed descriptively to identify the problems of primary school-age children through SDQ, based on the score categorization that has been set on the SDQ. In addition, researchers also used the wright map from the Rasch model to see the distribution of problems experienced by children based on the algorithm created.

### 3. Result

The results of this study provide an overview of the social, emotional, behavioral, and strength problems possessed by elementary school-age children in the sample studied. In the first data presentation, the researcher will show the screening results based on the categorization that has been determined on the SDQ test. Furthermore, in the second data presentation, the researcher will show the results of categorization using Rasch modeling based on the item person map.

#### The Problem Results based on Strength and Difficulties Questionnaire (SDQ) categorization

**Table 1.** The result of strengths and problems in school-age children

	Normal (%)	Borderline (%)	Abnormal (%)
Kesulitan total	50	4	28
Hyperactivity	67	11	22
Emotional problem	67	18	15
Conduct problem	47	32	21
Peer problem	18	15	67
Prosocial	93	6	1

Based on the table above, overall in the difficulty dimension, 50% of children are in the normal category, 4% in the borderline category and 28% in the abnormal category. It can be concluded that out of 82 children, 28% of children experience behavioral problems. Meanwhile, in the prosocial dimension which is an indicator of strength, 93% of children are in the normal category, 6% are in the borderline category and 1% are in the abnormal category. These results indicate that the majority of children show high prosocial behavior.

When viewed from each dimension, in the hyperactivity dimension, 67% of children are in the normal category, 11% are in the borderline category and 22% are in the abnormal category. In the emotion dimension, 67% of children are in the normal category, 18% are in the borderline category and 15% are in the abnormal category. In the behavior problem dimension, 47% of children are in the normal category, 32% are in the borderline category and 21% are in the abnormal category. In the dimension of peer problems, 18% of children are in the normal category, 15% are in the borderline category and 67% are in the abnormal category.

### **Categorization based on Rasch model**

Figures 1, 2, 3 and 4 are person map items on each SDQ dimension of 82 participants. **Figure 1.** presents the results of the hyperactivity dimension person map, there are 9 (11%) children who are in the high hyperactivity category, 51 (62%) children who are in the medium hyperactivity category, and 22 (27%) children who are in the low hyperactivity category. **Figure 2.** presents the results of the emotion dimension person map, there are 4 (5%) children with high emotional problems, 49 (60%) children with moderate problems, and 29 (35%) children with low problems. **Figure 3.** presents the results of the person map of the behavior dimension, there are 43 (52%) children showing moderate behavior problems and 39 (48%) children showing low behavior problems. **Figure 4.** presents the results of the person map of the peer dimension, there are 1 (1%) children showing high peer problems, 66 (81%) children showing moderate peer problems, 15 (18%) children showing low peer problems. **Figure 5.** Presenting the results of the prosocial dimension person map, there are 49 (60%) children with high prosocial, 43 (39%) children with moderate prosocial, 1 (1%) child with low prosocial.



Fig 1. Wright map of hyperactivity dimension

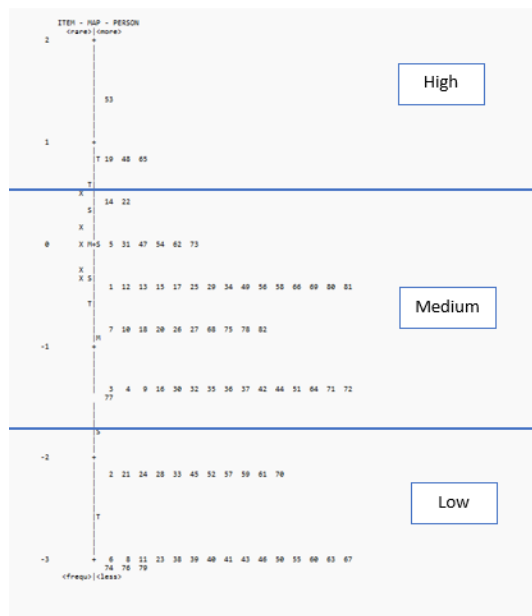


Fig 2. Wright map of emotion dimension

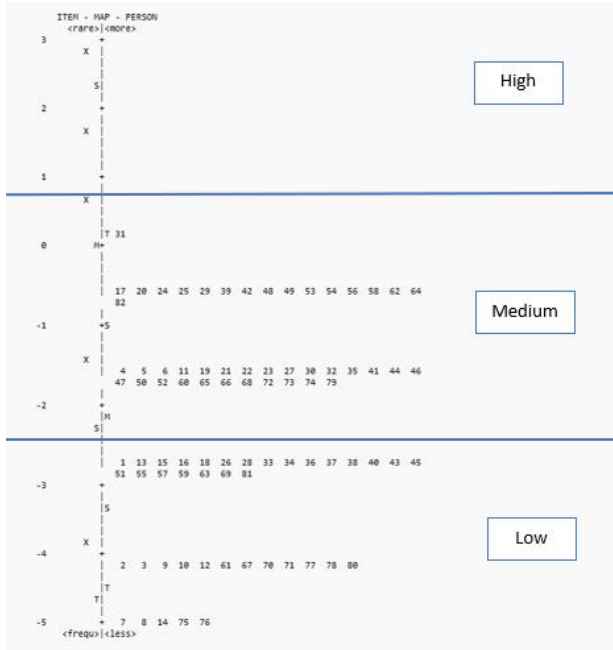


Fig 3. Wright map of the behavioral problem dimension

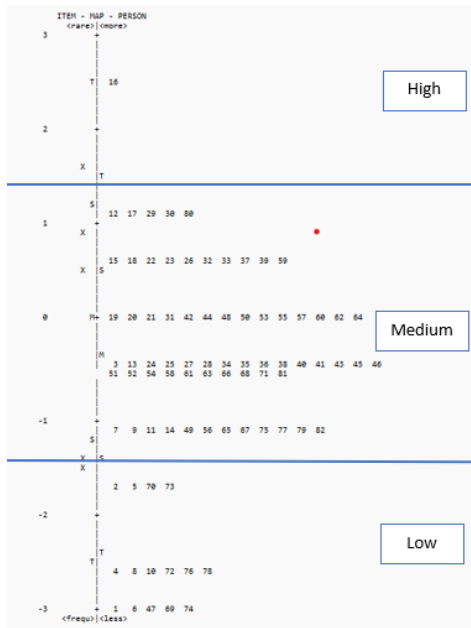


Fig 4. Wright map of the peer problems dimension

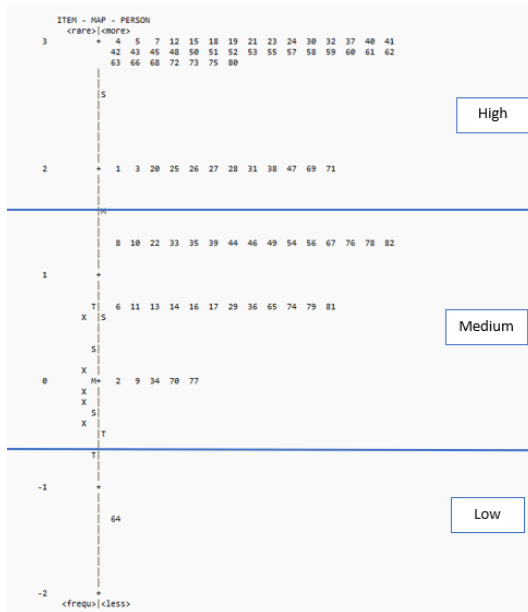


Fig 5. Wright map of prosocial dimension

### 4. Discussion

This study aims to describe primary school children's problems. Children's mental health problems at school age become serious if they do not get appropriate treatment. And the assessment of school readiness in children is the right context to get information from parents to be able to improve the readiness of teachers and schools in meeting the needs, providing referrals and dealing with each child's problems.

Screening for problems in younger elementary school-aged children is considered difficult to detect [1]. This may be due to several things, namely: wide variability, behaviors that are considered normative when the child is at this stage of development, the risk of false results, the burden on schools to meet the needs of detected children and the potential financial costs [3]. However, screening for behavioral and emotional problems in children needs to be done early so as not to affect their cognitive and social aspects [21]. Because Failure to meet children's mental health needs is associated with low academic achievement, behavioral problems, school violence, school dropout, substance abuse, referral to special education, suicide, and criminal activity [22]. Through this screening, teachers and parents can identify children who may have special needs and require assistance, thus providing an opportunity for schools to communicate with parents, conduct monitoring and early intervention.

Based on the categorization of SDQ, the results of this study obtained information. In the abnormal category, peer problems are the most common problems experienced by school-age children, which is 67%. Then hyperactivity 22%, behavioral problems 21%,



and emotional problems 15%. In the borderline category, the most problems are related to behavioral problems at 32%, then the next order is emotional problems at 18%, and peer problems at 15%. Meanwhile, based on the item person map from Rasch modeling, it is found that the majority of children's problems both from the dimensions of peers (66%), hyperactivity (51%), emotional problems (49%) and behavior (43%) are in the moderate category. Although the distribution of categorization shows different results from the two analyses, these results are consistent in saying that the problems experienced by many children are peer problems. Peer problems are related to children's tendency to be alone, not having good friends, not being liked by friends, being bullied or choosing to hang out with adults rather than children. When viewed from social development, when children enter elementary school, reciprocal relationships become important in their social relationships. At this time there is a possibility of being popular, average, ignored, rejected or controversial [23]. Children who are rejected, which leads to not being liked by friends or not being chosen as friends, according to Rubin et al., [24] may be due to adjustment problems that lead to aggression, although not all rejected children exhibit aggression.

The magnitude of the tendency of peer problems obtained from the results of this screening is in line with research [25]. The percentage of different children's problems in this study provides information about the social problems of school-age children, so that through this information, appropriate measures can be taken to give more attention and stimulation to children's social development. Social development is considered an important factor in child development [26]. A child's inability to establish relationships with peers can not only contribute to his or her social problems but also interfere with the child's progress in school [27].

## 5. Acknowledgments

Special thanks to the Applied Psychology Laboratory of the Faculty of Psychology, Universitas Islam Negeri Maulana Malik Ibrahim, Malang for its assistance in this research. Thanks also to schools and teachers who have helped coordinate the research activities, as well as parents who have been willing to become participants.

## References

- [1] A. Mahabbati, "Identifikasi anak dengan gangguan emosi dan perilaku di sekolah dasar," *JPK (Jurnal Pendidik. Khusus)*, vol. 2, no. 2, pp. 1–14, 2018.
- [2] J. L. Miner and K. A. Clarke-Stewart, "Trajectories of externalizing behavior from age 2 to age 9: relations with gender, temperament, ethnicity, parenting, and rater," *Dev. Psychol.*, vol. 44, no. 3, pp. 771–786, 2008, doi: 10.1037/0012-1649.44.3.771.
- [3] J. S. Owens et al., "Screening for social, emotional, and behavioral problems at kindergarten entry: The Utility of two teacher rating scales," *School Ment. Health*, vol. 8, no. 3, pp. 319–331, 2016, doi: 10.1007/s12310-016-9176-1.
- [4] D. E. Papalia and R D Feldman, "Menyelami perkembangan manusia edisi 12," in Salemba

Humanika, Penerbit Erlangga, 2012.

- [5] F. Fajardo-Bullon, B. Leon, E. Felipe-Castaño, and E. J. Santos, "Mental health in the age group 4-15 years based on the results of the national survey of health 2006," *Rev Esp Salud Publica*, vol. 86, no. 4, pp. 445–451, doi: 10.4321/s1135-57272012000400011.
- [6] S. M. Kariuki et al., "Burden, risk factors, and comorbidities of behavioural and emotional problems in Kenyan children: a population-based study," *The Lancet Psychiatry*, vol. 4, no. 2, pp. 136–145, 2017, doi: 10.1016/S2215-0366(16)30403-5.
- [7] A. Aoki et al., "Validation of the parent version of the Strengths and Difficulties Questionnaire (SDQ) to screen mental health problems among school-age children in Mongolia," *BMC Psychiatry*, vol. 21, no. 1, 2021, doi: 10.1186/s12888-021-03218-x.
- [8] A. A. P. Savitri, S. Surilena, and E. Gustiawan, "Hubungan pola asuh dengan masalah perilaku dan emosi pada siswa Sd Di Kecamatan Penjaringan Jakarta Utara," *Damianus J. Med.*, vol. 21, no. 1, pp. 26–35, 2022.
- [9] M. Oktaviana and S. Wimbari, "Validasi klinik Strengths and Difficulties Questionnaire (SDQ) sebagai instrumen skrining gangguan tingkah laku," *J. Psikol.*, vol. 41, no. 1, p. 101, 2014, doi: 10.22146/jpsi.6961.
- [10] L. G. M. P. Sari and I. I. Ardani, "Prevalensi masalah emosi dan perilaku pada anak prasekolah di Dusun Pande, Kecamatan Denpasar Timur," *E-Jurnal Med. Udayana*, vol. 3, no. 11, pp. 1–9.
- [11] F. A. Rahmadi, G. Hardaningsih, and R. Pratiwi, "Prevalensi dan jenis masalah emosional dan perilaku pada anak usia 9-11 tahun dengan perawakan pendek di Kabupaten Brebes," *J. Gizi Indones. (The Indones. J. Nutr.*, vol. 3, no. 2, pp. 116–119, doi: 10.14710/jgi.3.2.116-119.
- [12] M. J. Briggs-Gowan and A. S. Carter, "Social-emotional screening status in early childhood predicts elementary school outcomes," *Pediatrics*, vol. 121, no. 5, pp. 957–962, doi: 10.1542/peds.2007-1948.
- [13] A. Suni, "Analisis penerapan instrumen Strengths And Difficulties Questionnaire (SDQ) terhadap deteksi dini kejadian depresi pada remaja Di SMA Kota Ternate," *J. Kesehat.*, vol. 16, no. 1, pp. 25–29, doi: 10.32763/juke.v16i1.684.
- [14] N. A. Syakarofath, "Masalah emosi dan perilaku remaja: Studi awal masalah kesehatan mental di Kabupaten Pamekasan, Indonesia," *Mediapsi*, vol. 7, no. 2, pp. 141–149, doi: 10.21776/ub.mps.2021.007.02.6.
- [15] N. B. ya. Abdul Kadir, Z. Mustapha, M. H. Abdul Mutalib, and N. A. Yakub, "Using the Strengths and Difficulties Questionnaire (SDQ) to predict emotional and behavioral difficulties on positive and negative affect among adolescents in disadvantaged communities," *Asian Soc. Work Policy Rev.*, vol. 9, no. 2, pp. 125–137, doi: 10.1111/aswp.12052.
- [16] A. Rizkiah, R. D. Risanty, and R. Mujiastuti, "Sistem pendeteksi dini kesehatan mental emosional anak usia 4-17 tahun menggunakan metode forward chaining," vol. 10, no. 2. p. 83, doi: 10.24853/justit.10.2.83-93.

- [17] DAWBA, "SDQ: Information for researchers and professionals about the Strengths & Difficulties Questionnaires," 2016. .
- [18] R. Goodman, "The strengths and difficulties questionnaire: A research note," *Defin. Classifying Child. Need*, vol. 38, pp. 183–187, 2017, doi: 10.4324/9781315258324-21.
- [19] I. Istiqomah, "Parameter psikometri alat ukur Strengths and Difficulties Questionnaire (SDQ)," *Psymphatic J. Ilm. Psikol.*, vol. 4, no. 2, pp. 251–264, 2017, doi: 10.15575/psy.v4i2.1756.
- [20] S. Wimbari, J. Siregar, M. Oktaviana, and R. Regiastri, "Strengths and Difficulties Questionnaire Parent Report (SDQ-PR) as screening instrument of children mental health in Indonesia," *J. Psikol.*, vol. 46, no. 2, p. 130, 2019, doi: 10.22146/jpsi.46698.
- [21] A. Rizkiah, R. D. Risanty, and R. Mujiastuti, "Sistem pendeteksi dini kesehatan mental emosional anak usia 4-17 tahun menggunakan metode forward chaining," *JUST IT J. Sist. Informasi, Teknol. Inf. dan Komput.*, vol. 10, no. 2, p. 83, 2020, doi: 10.24853/justit.10.2.83-93.
- [22] D. Darney, W. M. Reinke, K. C. Herman, M. Stormont, and N. S. Ialongo, "Children with co-occurring academic and behavior problems in first grade: Distal outcomes in twelfth grade," *J. Sch. Psychol.*, vol. 51, no. 1, pp. 117–128, 2013, doi: 10.1016/j.jsp.2012.09.005.
- [23] J. W. Santrock, "Life-span development, perkembangan masa hidup (Edisi Ketigabelas) Jilid 1," in Erlangga. Penerbit Erlangga, .
- [24] K. H. Rubin, C. S. L. Cheah, and N. Fox, "Emotion regulation, parenting and display of social reticence in preschoolers," *Early Educ. Dev.*, vol. 12, no. 1, pp. 97–115, 2001, doi: 10.1207/s15566935eed1201\_6.
- [25] F. A. Rahmadi, G. Hardaningsih, and R. Pratiwi, "Prevalensi dan jenis masalah emosional dan perilaku pada anak usia 9-11 tahun dengan perawakan pendek di Kabupaten Brebes," *J. Gizi Indones. (The Indones. J. Nutr.)*, vol. 3, no. 2, pp. 116–119, 2016, doi: 10.14710/jgi.3.2.116-119.
- [26] P. R. Ramadhani and P. Y. Fauziah, "Hubungan sebaya dan permainan tradisional pada keterampilan sosial dan emosional anak usia dini," *J. Obs. J. Pendidik. Anak Usia Dini*, vol. 4, no. 2, p. 1011, 2020, doi: 10.31004/obsesi.v4i2.502.
- [27] D. Tarsidi, "Peranan hubungan teman sebaya dalam perkembangankompetensi sosial anak. Bab II: Kompetensi Sosial Dan Ketunetraan Pada Anak, 1999.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

