**Table S2: Excluded studies at full text stage with reasons for exclusion:**

| Author | Country of Origin | Study Title | Aim of the Study | Reason For Exclusion |
|---|---|---|---|---|
| Almazrou, S. (2014) | Saudi Arabia | Ability of Saudi mothers to appropriately and accurately use dosing devices to administer oral liquid medications to their children | The study was designed to assess Saudi mother's experiences with measuring cups, syringes and droppers for oral liquid medications, and compared the accuracy of dosing across these devices | Health literacy levels was not tested. |
| Huang, W. T. (2015) | Taiwan | Immigrant mothers' knowledge of medication safety and administration for young children | The study aimed at comparing immigrant (Southeast Asian and Chinese) and non-immigrant (Taiwanese) mothers' knowledge of medication safety and administration for children, and to reveal how the accessibility of medical resources could affect immigrant mothers' medication administration. | Health literacy levels was not tested. |
| Boztepe, H. (2016) | Turkey | Administration of oral medication by parents at home | The study aimed at determining the practices and difficulties experiences by the parents at home when administering oral medication to their children. | Health literacy levels was not tested. |
| Chan, H. K. (2017) | Malaysia | Influences of pictogram-based instructions in paediatric drug labelling on dosing accuracy among caregivers: a pilot study from Malaysia | The study investigated the influence if pictographic dosing instructions used in paediatric drug labelling on dose accuracy. | Health literacy levels was not tested. |
| Chew, C. C. (2019) | Malaysia | Medication Safety at Home: A Qualitative Study on Caregivers of Chronically Ill Children in Malaysia | The study designed to specifically explore the issues related to out-of-hospital medication safety among the pediatric outpatients in Malaysia from the caregivers' perspective. | Health literacy levels was not tested. |
| Emmerton, L. (2014) | Australia | Management of children's fever by parents and caregivers: Practical measurement of functional health literacy | The study assessed the health literacy skills of parents and caregivers of children using a hypothetical dosing scenario of a child with fever. | Health literacy levels was not tested. |
| Joshi, P. (2019) | Mumbai | Liquid Drug Dosage Measurement Errors | The study was carried out to determine the magnitude of dosing errors made by parents of | Health literacy levels |

| | | | | |
|---|---|---|---|---|
| | | with Different Dosing Devices | children aged under 5 years old, the most preferred drug delivery device and its association with age, gender, education of caregivers and number of children. | was not tested. |
| Lee, C. H. (2017) | Taiwan | Inappropriate self-medication among adolescents and its association with lower medication literacy and substance use | The study assessed inappropriate self-medication among adolescents and examines the relationships among medication literacy, substance use, and inappropriate self-medication. | Health literacy levels was not tested. |
| Lubrano, R. (2016) | Italy | Acetaminophen administration in pediatric age: An observational prospective cross-sectional study | The study evaluated the appropriateness of the dosage of acetaminophen administered to children with fever, and the factors that may influence dosage accuracy. | Health literacy levels was not tested. |
| Ryu, G. S. (2012) | South Korea | Analysis of liquid medication dose errors made by patients and caregivers using alternative measuring devices | The study was designed to determine the rate and magnitude of liquid medication dose errors that occur with patient/caregiver use of various measuring devices in a community pharmacy. | Health literacy levels was not tested. |
| Sil, A.(2017) | India | A study of knowledge, attitude and practice regarding administration of pediatric dosage forms and allied health literacy of caregivers for children | The study assessed the knowledge, attitude and practices regarding medicine administration and literacy. | Health literacy levels was not tested. |
| Solanki, R. (2017) | India | Medication errors by caregivers at home in neonates discharged from the neonatal intensive care unit | The study determined the frequency of medication errors by caregivers at home in neonates discharged from the neonatal intensive care unit and to identify the associated risk factors. | Health literacy levels was not tested. |
| Tanner, S.(2014) | USA | Parents' understanding of and accuracy in using measuring devices to administer liquid oral pain medication | The study looked at dosing accuracy when parents used various measuring devices and aimed at identifying risk factors associated with dosing errors. | Health literacy levels was not tested. |
| Tobaiqy, M. | Saudi Arabia. | Parental Experience of Potential Adverse Drug | The study explored parent's experience of potential adverse drug events after administering | Health literacy levels |

| | | | | |
|---|---|---|---|---|
| (2020) | | Reactions Related to Their Oral Administration of Antipyretic Analgesic Medicines in Children in Saudi Arabia | antipyretic analgesics. The study looked at adverse drug events after administering analgesics to children. | was not tested. |
| You, M. A. (2015) | Korea | Parental experiences of medication administration to children at home and understanding of adverse drug events | The study described parent's administration of medications to their children at home and their understanding to adverse drug events. | Health literacy levels was not tested. |
| Glick, A. F. (2020) | USA | Accuracy of Parent Perception of Comprehension of Discharge Instructions: Role of Plan Complexity and Health Literacy | The study compared parents` perceived and actual comprehension of discharge instructions as well as assessed association between plan complexity and parent's health literacy with overestimation of comprehension. | No medication administratio n related information. |
| Brass, E. P. (2018) | USA | Medication Errors With Pediatric Liquid Acetaminophen After Standardization of Concentration and Packaging Improvements | The study assed the impact of the 2011 changes in paediatric single-ingredient liquid acetaminophen product packaging and standardization of the acetaminophen concertation on poison control centre exposure due to medication errors. | The study did not examined medication administratio n challenges, however, looked at reported medication errors on poison control centre. |
| Freedman, R. B.(2012) | USA | Influence of Parental Health Literacy and Dosing Responsibility on Pediatric Glaucoma Medication Adherence | The study assessed glaucoma medication adherence in children, hypothesising that poor parental health literacy and eye drop instillation by the child are associated with worse adherence. | The study examined medication adherence not administratio n errors. |
| Erickson, S. R. | USA | Health literacy and medication administration performance by caregivers of adults | The study determined the association between health literacy and a medication administration task assessment, as well as to identify caregiver characteristic associated with higher health literacy and medication administration task. | The study looked at medication administratio n in adults |

| | | | | |
|---|---|---|---|---|
| | | with developmental disabilities | | with disabilities not within the age range of this review. |
| Taybeh, E. (2020) | Jordan | The awareness of the Jordanian population about OTC medications: A cross-sectional study | The study evaluated the knowledge and attitudes towards the use of OTC products. | The targeted population was adults and not within the specific age group that this review was aimed at. |
| Walsh, K. E. (2011) | USA | Medication errors in the homes of children with chronic conditions | The study observed and described the types of medication errors occurring at home of children with chronic disease. | Unable to extract data for children aged 0 to 18 years old from the final analysis, which included adult data. |
| Walsh, K. E. (2013) | USA | Medication errors in the home: A multisite study of children with cancer | The study described the types of errors occurring in the home medication management of children with cancer. | Unable to extract data for children aged 0 to 18 years old from the final analysis, which included adult data. |
| Shone, L. P. (2011) | USA | Misunderstanding and potential unintended misuse of acetaminophen among adolescents and young adults | The study assessed adolescents` s (ages 16 to 23 years) health literacy, knowledge about acetaminophen, recent use of over the counter medicines and understanding of medication dosing instructions. | Unable to extract data of children aged between 16 and 18 years old from the adult data. |
| Manchana yake, M. | Sri Lanka | Patients' ability to read and understand dosing | Looking at adult's participants and their overall knowledge in regards to written dosing | Younger people aged |

| | | | | |
|---|---|---|---|---|
| G. C. A. (2018) | | instructions of their own medicines - A cross sectional study in a hospital and community pharmacy setting | instructions provided by the pharmacists on dispensing labels. | 18 years old data was no stratified from the adult data. |