



KNOWLEDGE AND ATTITUDES TOWARD COUGH SELF-MEDICATION AMONG PARENTS OF TODDLERS

Murtia Fitriasari¹, Ovikariani¹, Truly Dian Anggraini^{2*}

¹Bachelor of Pharmacy Study Program, Sekolah Tinggi Ilmu Kesehatan Nasional, Jl. Raya Solo - Baki, Bangorwo, Kwarasan, Grogol, Sukoharjo, Jawa Tengah 57552, Indonesia

²Diploma of Pharmacy Study Program, Sekolah Tinggi Ilmu Kesehatan Nasional, Jl. Raya Solo - Baki, Bangorwo, Kwarasan, Grogol, Sukoharjo, Jawa Tengah 57552, Indonesia

*trulydian@stikesnas.ac.id

ABSTRACT

Cough is a common symptom in children and is frequently managed through self-medication. Limited parental knowledge may lead to inappropriate medicine selection, dosing errors, and potential adverse effects. To examine the levels of knowledge and attitudes and to analyse the association between knowledge level and attitudes towards cough self-medication among parents of toddlers in Parangjoro Hamlet, Grogol District, Sukoharjo Regency. A quantitative cross-sectional study was conducted among 99 parents of toddlers selected using purposive sampling. Data were collected using a validated and reliable questionnaire and analysed using univariate statistics and the Chi-square test. Most respondents had a good level of knowledge (70.71%), and 59.6% showed positive attitudes towards cough self-medication. There was a statistically significant association between knowledge level and attitudes ($p=0.001$). Higher knowledge was associated with more positive attitudes towards cough self-medication among parents of toddlers.

Keywords: attitude; cough; knowledge; parent; self-medication; toddler

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INTRODUCTION

Cough is a common symptom, with an estimated prevalence of approximately 15% in children and 20% in adults (Adha & Rida, 2016). According to the 2023 Indonesian Health Survey (Survei Kesehatan Indonesia/SKI), cough may also be an early symptom of serious respiratory conditions such as acute respiratory infection and pneumonia (Ministry of Health of the Republic of Indonesia, 2023). In Central Java Province, the number of acute respiratory infection cases among children under five reached 10,716, with a prevalence of 6.7%. Cough is often managed independently without a physician's prescription through self-medication (Mega et al., 2023). However, self-medication may be inappropriate when medicines are selected incorrectly. Inappropriate drug selection can lead to adverse effects or even worsen the disease condition (Yulianti & Anggraini, 2020). Therefore, knowledge and attitudes are important factors in determining the appropriateness of self-medication. Knowledge is one of the factors that shapes a person's attitude (Annashr et al., 2021). Adequate knowledge may promote positive attitudes and greater awareness of disease and treatment (Firdaus et al., 2024). Attitude is also an important concept in social psychology at both the individual and group levels. Positive attitudes may support better attention to health, whereas negative attitudes may lead to less appropriate health behavior (Selifani et al., 2022). Based on this background, this study was conducted to examine the relationship between knowledge level and attitudes toward cough self-medication among parents of toddlers in Parangjoro Hamlet, Grogol District, Sukoharjo Regency.

METHOD

This study was a quantitative study with a cross-sectional design. Data collection was conducted from March to April 2025 in Parangjoro Hamlet, Grogol District, Sukoharjo Regency. The study population consisted of 130 parents of toddlers living in the study area during the 2024 period, based on information obtained from the village midwife. Sampling was performed using purposive sampling. The inclusion criteria were willingness to complete the questionnaire and having previously practiced cough self-medication for their child. A total of 99 parents met the inclusion criteria and were included in the study. Ethical clearance was obtained under approval number 273/EC/KEPK/VI/2025. Data were collected using a self-administered written questionnaire consisting of two sections. The first section covered respondent demographics and characteristics, while the second section assessed knowledge and attitudes regarding cough and its self-medication. Univariate analysis was used to describe the distribution of knowledge and attitudes, and the Chi-square test was used to assess the association between knowledge level and attitudes, with statistical significance set at $p < 0.05$ (Rachmawati et al., 2023). The questionnaire used in this study had been tested for validity and reliability before the main data collection. The instrument was tested among 30 parents of toddlers. Item validity was assessed using item-total correlation with an r -table value of 0.361 at a significance level of 5%, and items with r -count ≥ 0.361 were considered valid. The initial knowledge questionnaire consisted of 29 items, of which 20 items met the validity criteria and were retained for the study. Reliability testing of the attitude questionnaire showed a Cronbach's alpha value of 0.637, indicating acceptable internal consistency because the value exceeded the minimum threshold of 0.60. Therefore, the knowledge and attitude questionnaires were considered appropriate for use as research instruments.

RESULT

The study included 99 parents of toddlers. Overall, 70 respondents (70.71%) had a good level of knowledge, 20 (20.20%) had a fair level of knowledge, and 9 (9.09%) had a poor level of knowledge. Positive attitudes toward cough self-medication were identified in 59 respondents (59.6%), while 40 respondents (40.4%) showed negative attitudes.

Table 1.

Respondent characteristics (n=99)

Respondent characteristics	f	%
Age: 26–35 years	63	63.64
Education: Senior high school/vocational school	57	57.58
Employment status: Working	71	71.72
Number of children: 2	46	46.46
Knowledge level: Good	70	70.71
Attitude: Positive	59	59.60

Table 2.

Knowledge level by demographic characteristics

Variable	Good, f (%)	Fair, f (%)	Poor, f (%)	Total
Age: 17–25 years	4 (80.0)	1 (20.0)	0 (0.0)	5
Age: 26–35 years	48 (76.19)	11 (17.46)	4 (6.35)	63
Age: 36–45 years	17 (68.0)	8 (32.0)	0 (0.0)	25
Age: 46–55 years	3 (50.0)	2 (33.3)	1 (16.7)	6
Education: Elementary school	0 (0.0)	1 (50.0)	1 (50.0)	2
Education: Junior high school	6 (42.86)	5 (35.71)	3 (21.43)	14
Education: Senior high school/vocational	46 (80.70)	10 (17.54)	1 (1.76)	57
Education: Diploma/Bachelor/Postgraduate	21 (80.77)	5 (19.23)	0 (0.0)	26
Employment: Not working	21 (75.0)	6 (21.43)	1 (3.57)	28
Employment: Working	51 (71.83)	16 (22.54)	4 (5.63)	71
Children: 1	33 (78.57)	8 (19.05)	1 (2.38)	42
Children: 2	35 (76.09)	8 (17.39)	3 (6.52)	46
Children: 3	6 (54.55)	4 (36.36)	1 (9.09)	11

Table 3.
Association between knowledge level and attitudes (n=99)

Knowledge level	Positive	Negative	Total	p-value
Good	49	21	70	0.001
Fair	9	11	20	
Poor	1	8	9	
Total	59	40	99	

DISCUSSION

Evaluating parents' knowledge of cough self-medication is important for understanding whether treatment decisions are made appropriately. The findings showed that many respondents were still confused about the classification of cough, particularly the distinction between productive and dry cough. Misunderstanding this distinction may result in inappropriate medicine selection. For example, a medicine may reduce cough frequency in productive cough while mucus remains in the airway, potentially increasing the risk of infection (Lorensia et al., 2018). Respondents also showed limited understanding of medication dosing instructions. This finding highlights the importance of pharmacist-led education to provide clear directions for medicine use and to encourage parents to pay close attention to product labeling (Fatikasari et al., 2024). In practice, self-medication for cough symptoms is often performed by purchasing medicines directly from pharmacies because a wider range of medicines is available there than in small shops, and parents may also receive recommendations from health personnel (Ariwati et al., 2023). Parents may likewise underestimate the importance of proper medicine storage. Expiry dates indicate the period during which medicine quality and purity remain guaranteed, and syrup preparations may show visible color changes when they are damaged or expired and should no longer be consumed (Sugiharta & Ningsih, 2021). Use of expired medicines may reduce drug integrity, a problem known as a deteriorated drug error, which can result in treatment failure (Safanny et al., 2022). Descriptive analysis by age, education, employment status, and number of children showed that the good knowledge category predominated. Age may influence parents' knowledge and, consequently, their health-related thinking. The highest proportion of good knowledge was found among respondents aged 17-25 years (80.0%), followed by those aged 26-35 years (76.19%), while the lowest proportion was found among respondents aged 46-55 years (50.0%). This pattern may be related to the predominance of respondents in the productive age group (Dea & Eva, 2024).

Most respondents had completed senior high school or vocational school education. Good knowledge was mainly found among respondents with senior high school/vocational, diploma, bachelor's, or postgraduate education. In general, higher educational attainment is expected to be associated with broader knowledge regarding self-medication (Farida et al., 2022). Knowledge may also be improved through consultation with pharmacists or pharmacy personnel and through reading medicine information leaflets (Ariwati et al., 2023). In this study, a slightly higher proportion of respondents who were not working had good knowledge compared with those who were working. This finding is in line with previous research suggesting that mothers who are not employed may play a more direct role in childcare and therefore may be more involved in day-to-day self-medication practices (Maulidah et al., 2023). Parents with fewer children tended to have higher knowledge levels, possibly because they had more time and energy to focus on their child's health. Respondents with two or three children still showed poor knowledge in some cases, which may reflect limitations in remembering proper cough medicine use over time (Hanifah et al., 2021).

Positive attitudes toward cough self-medication were found in 59.6% of respondents. Positive attitudes may be influenced by prior experience and easier access to health information through mass media. Education level may also shape parents' way of thinking and decision-making, allowing them to make more appropriate self-medication choices for their children (Wijaya & Yulianti, 2022). Negative attitudes were also observed and may contribute to inappropriate medicine selection and treatment failure (Ricardo et al., 2021). Therefore, pharmacists have an

important role in preventing misuse and adverse effects by providing guidance to parents, including education about the proper use of antibiotics (Rachmawati et al., 2023). Antibiotics are not commonly used for self-medication because of concerns regarding antimicrobial resistance (Restiyono, 2016). In addition, Regulation of the Minister of Health of the Republic of Indonesia Number 28 of 2021 states that antibiotics should be used only with a physician's or dentist's prescription (Permenkes RI, 2021). The association analysis showed a significant relationship between knowledge level and attitudes toward cough self-medication among parents of toddlers ($p = 0.001$). This finding supports the view that knowledge contributes to the formation of attitudes and influences health-related behavior (Madania & Papeo, 2021). The result is also consistent with previous findings showing an association between knowledge and attitudes related to self-medication behavior among health students in Kendal Regency during the COVID-19 pandemic (Rosyid & Magfiroh, 2023). Better knowledge is likely to be accompanied by more positive attitudes, thereby reducing irrational self-medication practices (Arrang et al., 2024).

CONCLUSION

Parents of toddlers in Parangjoro Hamlet, Grogol District, Sukoharjo Regency generally had a good level of knowledge regarding cough self-medication (70.71%), and 59.6% showed positive attitudes. There was a statistically significant relationship between knowledge level and attitudes toward cough self-medication among parents of toddlers ($p = 0.001$).

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