Effect of Leaflet Administration on the Level Knowledge and Rationality of Dexamethasone use in “Sumber Sehat” Pharmacy, Banjar, West Java, Indonesia

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Abstract. Dexamethasone is a hormone and corticosteroid-class drug produced by the adrenal gland and its function is to regulate carbohydrate metabolism, fat and protein, regulation of body fluids, the body's defense system, and bone formation. The use of corticosteroid drugs must be considered properly because it can cause various side effects that are not good for the body. Dexamethasone is still widely used in the community without the right indication as an anti-inflammatory drug, rheumatoid arthritis, and anti-allergic. This is due to a lack of knowledge about the side effects of corticosteroids. This study aimed to analyze the effect of education using leaflets on the level of knowledge and rationality of dexamethasone use by the one group pre-test/post-test study design with the Wilcoxon test. Respondents were taken with accidental sampling method. The number of respondents obtained was 47 respondents. Based on the results of this study can be concluded that education by leaflet administration can significantly increase knowledge and rationality of dexamethasone use in Sumber Sehat Pharmacy, Banjar.

1. Introduction
Dexamethasone is one of the drugs widely used in the world of health and was first recognized in 1950 [1]. Dexamethasone is classified as a synthetic corticosteroid drug. Corticosteroids are hormones that are naturally produced by the cortex of the adrenal gland. These hormones are divided into two groups depending on the substances affected, namely glucocorticoids and mineralcorticoids. Dexamethasone belongs to the glucocorticoid group [2].

The use of dexamethasone without a doctor's prescription that occurs in the city of Banjar, especially in the Sumber Sehat Banjar pharmacy is still fairly high and becomes a separate phenomenon that occurs in society. Dexamethasone is a hard drug group, where to get it must be prescribed by a doctor. However, there are still many pharmacies that sell freely without a prescription, allowing people to buy them freely to deal with complaints of diseases they consider to be cured by consuming dexamethasone [3]. The use of dexamethasone without a doctor's recommendation and not accompanied by adequate information can lead to irrational use of dexamethasone so that it can cause undesirable side effects. Pharmacists are currently not only drug providers / suppliers but are coordinators of health teams and patients [4]. Pharmacists are involved in planning, distribution, and
in rational drug selection/use processes. Pharmacists help achieve rational drug use through Good Pharmacy Practice (GPP). Promotion of rational drug use and drug use counseling in patients, Pharmacists have an important role in improving patients’ quality of life [5].

Based on the description above, it is necessary to make efforts to increase knowledge about drugs in the community and minimize all undesirable things that can occur due to the use of a drug. Knowledge is a very important domain for the formation of one’s actions. Actions can be realized if an attitude manifests into a real action with supporting factors or a possible condition [6].

2. Methods

This research did to analyze the effect of education using leaflet to the level of knowledge and rationality to the use of corticosteroids Dexametason. Preexperimental observation using study design “one group pre-test/post-test. The respondence put by accidental sampling method with total of respondence are 47. After they learn the leaflet the should follow pre-test dan post-test. Wilcoxon test used to analyzed as a statistic all data.

The study was conducted through measurements of one group of respondents, then the respondents were given an intervention in the form of education through leaflets, and subsequently re-measured (Campbell and Machin, based on valid and reliable questionnaires [7]. Rationality of the use of corticosteroid dexamethasone drugs include education, age, gender and occupation [8].

3. Result and Discussion

Based on the results of this study it can be concluded that education can significantly increase knowledge and rationality regarding Dexamethasone Corticisteroid drugs. It takes 7 days to reach 47 respondents.

3.1. Validity and Reliability Test Results

Validity and reliability tests were carried out on the questionnaire used in measuring the level of knowledge and rationality of the use of Dexamethasone drugs from respondents. The validity and reliability test results are as follows: The results of observations can be seen in table 1.

| No. | r count | r tabel | Explanation |
|-----|---------|---------|-------------|
| 1.  | 0.943   | 0.444   | Valid       |
| 2.  | 0.980   | 0.444   | Valid       |
| 3.  | 0.980   | 0.444   | Valid       |
| 4.  | 0.942   | 0.444   | Valid       |
| 5.  | 0.980   | 0.444   | Valid       |
| 6.  | 0.943   | 0.444   | Valid       |
| 7.  | 0.980   | 0.444   | Valid       |
| 8.  | 0.942   | 0.444   | Valid       |
| 9.  | 0.943   | 0.444   | Valid       |

| No. | r count | r tabel | Explanation |
|-----|---------|---------|-------------|
| 1.  | 0.765   | 0.444   | Valid       |
| 2.  | 0.483   | 0.444   | Valid       |
| 3.  | 0.811   | 0.444   | Valid       |
| 4.  | 0.483   | 0.444   | Valid       |
| 5.  | 0.765   | 0.444   | Valid       |
| 6.  | 0.811   | 0.444   | Valid       |
| 7.  | 0.483   | 0.444   | Valid       |
Based on the calculated results in the value of \( r_c \) count for each question the level of knowledge is greater than \( r_{table} \), the Knowledge level questionnaire is declared valid as in table 1. Based on the calculated results, the value of \( r_c \) count for each Rationality level is greater than \( r_{table} \), then the rationality questionnaire declared valid, as in table 2.

| No. | Variable  | Cronbach Alpha | \( r_{table} \) | Explanation |
|-----|-----------|----------------|----------------|-------------|
| 1.  | Knowledge | 0.991          | 0.600          | Reliable    |
| 2.  | Rationality | 0.867          | 0.600          | Reliable    |

Based on table 3, the results of questionnaire reliability tests obtained the level of knowledge and rationality of corticosteroid use. the results of the Cronbach alpha value are >0.600 so the questionnaire is declared reliable.

### 3.2. The level of knowledge and rationality of the use of Dexamethasone corticosteroid drugs

An assessment of the level of knowledge of respondents about dexamethasone drugs before and after giving leaflets is to use a knowledge questionnaire. The knowledge questionnaire consists of 15 questions. Each question is rated 1 if you choose the right answer and 0 if you choose the wrong answer. Knowledge scores are obtained from the number of correct answers from the 15 questions contained in the knowledge questionnaire (Score = 0-15). The knowledge category is obtained from the formula \( \text{score} = \frac{n}{15} \times 100 \), with \( n = \) score or number of correct answers. Knowledge is categorized into three levels, namely poor knowledge if the value is <56, knowledge is good enough if the value is 56-75, knowledge is good if the value is 76-100 [7].

The statistical test used to assess the level of knowledge was a Wilcoxon test. The results showed that there was a change in the knowledge of the respondents before they were given leaflets and after giving leaflets. Respondents with a good level of knowledge increased from 13 people (27.7%) to 29 people (61.7%) and respondents with less knowledge decreased from 15 people (31.9%) to 0 people (0%). Giving Leaflets affect the level of knowledge of the use of corticosteroid dexamethasone drugs with significance value (\( P = 0.000 <0.05 \)), as shown in the following table 4:

| Pretest | Postest | \( P \) |
|---------|---------|--------|
| F   | %      | F   | %      |
| Good Enough | 13 | 27,7 | 29 | 61,7 | 0,000 |
| Good Enough Knowledge | 19 | 47,4 | 18 | 38,3 |
| Poor Knowledge | 15 | 31,9 | 0 | 0 |
| **Total** | **47** | **100.0** | **47** | **100** |

The results showed that there was a change in the rationality of the respondents before they were given leaflets and after giving leaflets. Rational respondents increased from 10 people (21.3%) to 25 people (53.2%) and irrationally decreased from 37 people (78.7%) to 22 people (46.8%). Giving Leaflets affect the level of rationality of the use of corticosteroid dexamethasone drugs with significance value (\( P = 0.002 <0.05 \)), as shown in the following table 5:

| Pretest | Postest | \( P \) |
|---------|---------|--------|
| Rational | F   | %  | F   | %  |
| Rational | 10 | 21,3 | 25 | 53,2 | 0,002 |
| Irrational | 37 | 78,7 | 22 | 46,8 |
| **Total** | **47** | **100.0** | **47** | **100** |

The results of the study showed that leaflet administration had an effect on the level of knowledge and rationality of the use of dexamethasone corticosteroid drugs. so that it can be said that the level of knowledge and rationality of the use of corticosteroid dexamethasone drugs by respondents has increased after the provision of education through leaflet media.
Actions of drug use Dexamethasone corticosteroids are a form of health behavior, whose formation is influenced by internal factors and external factors. The level of one's knowledge is included in one of the internal factors. An educational provision is expected to provide a better level of knowledge for respondents, so that in the future it can also influence the behavior of drug use [4]. The theory is proven by the results of this study.

4. Conclusion
The administration of leaflets using influences on the level of knowledge and rationality of the use of dexamethasone corticosteroid drugs.

5. References
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