CORRELATION OF THE KNOWLEDGE OF JAMU GENDONG SELLER ABOUT INGREDIENT AND BENEFIT AGAINST THE KNOWLEDGE AND CUSTOMER'S PERCEPTION

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ABSTRACT

Jamu Gendong is an Indonesian traditional medicine which is sold in fresh condition by seller who are going door to door or sell in the downtown. The purposes of this research are to find out the consumer's perception and level of knowledge about Jamu Gendong, analyzing the correlation of seller's Knowledge with the consumer's knowledge and perception about Jamu Gendong. Research design is using correlation studies and comparison with cross sectional approach. Furthermore, the instruments using questionnares which are given to consumers amounted 100 people. The level of consumer's knowledge 48% is good and the rest is not good from 20 queries, while the consumer's perception is "very good" 85 percents, the rest is "good". There is no correlation between seller's knowledge against consumer's knowledge or perception. Comparison of consumer's knowledge did not discover any difference, however there is the difference upon consumer's perception. Research suggestion to develop Jamu Gendong by educating the seller and to conduct a further research as well.

KEYWORDS: Jamu Gendong, Level of knowledge, Perception, Traditional medicine, Consumers, Herb

INTRODUCTION

Jamu gendong is Indonesian traditional medicine (Depkes, 2010) that still remained in the herbs modernization, jamu gendong seller has recipes and various of jamu gendong according to the needs of consumers, the consumer only tell the need of benefit then the seller formulate with simple doses. Knowledge and perception of consumers about jamu gendong has not been identified, either because of habit, the need for health or cultural belief.

Jamu in the Javanese's daily language (*Ngoko* Javanese language) means drug, and more gently (*Krama* Javanese language) called *jampi*. Jamu is derived from ancient Javanese language *usadha* or *jampi* which means drugs (Sutarjadi and Indrawati, 2012).

Suyono (1996) in the scientific oration at Airlangga Unversity quoted from Jaya Soeprana said that jamu are not drugs in the western opinion. Jamu has many uses for health, beauty, happiness and many other purposes. Jamu is taken from the animals and all the parts of a plant, leaves, roots, barks and almost no parts of the remaining plants.

Jamu gendong is jamu with fresh form which is carried around door to door daily, formulated and served directly to consumers (Riswan and Roemantyo, 2002). Jamu gendong is made by decoct and squeezed, and usually sold by women to be carried around on her back to be sold (Elfahmi *et al.*, 2006).

The most popular types of jamu gendong in the community are beras kencur, kunir asem, temulawak, paitan, cabe puyang and other several types of jamu that have many health benefits

based on experience and knowledge developed in the community (Suharmiati and Handayani, 2008; Sutarjadi and Indrawati, 2012)

Research on jamu gendong have been done previously, but generally still focus on hygiene and bacterial and heavy metal contaminant, beside hygiene and contamination of jamu gendong the author assume it is important the seller has sufficient general knowledge about the jamu they sell, so it can be one of the traditional medicine that actually benefit to consumer and know what is consumed. Preliminary studies have been carried out by author to ten jamu gendong sellers to describe the level of their knowledge. They have been given 30 questions about general things that are based on Guide to Elucidation of Jamu Gendong (Depkes, 1996). approximately the seller can answer 26 questions, and at least jamu gendong seller can answer 23 questions. This description shows the seller knowledge is qualified, because the seller is able to answer at least more than 75% of the questions. These figures have not been able to explain the implications of the knowledge and perceptions of consumers.

The paper contributes the first logical analysis, the author has not found research on the knowledge and perceptions of consumers about jamu gendong quantitatively, so it would be a motivation for the authors to examine the knowledge and perception of consumers jamu gendong and the correlation with the level of seller's knowledge.

Author hoped that this research could be the basis how importance to understanding product that is sold and consumed. The hypothesis in this study is the level of knowledge and perception of consumers jamu gendong related with the level of knowledge of the seller.

METHODOLOGY

This study is correlative studies that look at the correlation between the knowledge level of the jamu gendong seller with the knowledge level and perceptions of consumers jamu gendong, using primary data in the form of sheets of questionnaires. This study also uses a comparative study, which compares the level of knowledge and perceptions of each group of consumers based on its subscription jamu gendong seller who is also a respondent in this research.

The study was conducted in the districts Srengseng Sawah, South Jakarta. This region was taken by author because many jamu gendong sellers found with different characteristic each of them.

The population is consumer of jamu gendong in Srengseng Sawah, South Jakarta. Samples are regular consumers of jamu gendong that confirmed by 10 jamu gendong, with the restriction that consumers aged 15 to 70 years with a minimum education level studied in primary school. Sampling technique to consumers using judgmental sampling or purposive sampling the researcher chose based on subjective considerations and practical that the respondent can provide sufficient information to answer the research question (Sastroasmoro and Ismael, 2011).

The estimation of proportion formulation is used to determine the number of samples by the simple random sampling with absolute precision:

$$n = \frac{Z^2_{1-\alpha/2}P(1-P)}{d^2}$$

Figure-1. Calculate number of sample

Explanation :
n : amount / minimum sample size

$Z^2_{1-\alpha}/2$: the default value for the normal
           distribution on certain α (1.96)
P   : proportion an incident on
  the population in the previous
  study (0.5)
d   : degree of accuracy (absolute
  precision) (Ariawan, 1998).

Deviation obtained from the mean valuesthat can be accepted by theresearchersis0.10withthe confidence interval95% of researchers(α = 0.05 level, the value of the normal α distribution=1.96), the minimum number of samples can be calculated as follows:

$$n = \frac{(1.96)^2 \cdot 0.5(0.5)}{(0.1)^2} = \frac{0.9604}{0.01}$$
$$n = 96.04$$

The minimum required sample size are 96 people jamu gendong consumers, researchers replenish to be 100 respondents, respondents will be selected from 10 jamu gendong sellers and will be measured the level of knowledge and perception of jamu gendong.

The data of consumer's knowledge collected using questionnaires with 20 questions with the option "yes" or "no", each question answered correctly will get 1 (one) value, whereas for questions answered incorrectly get the value zero (0).

Assessment of consumer perceptions on using questions which answered strongly disagree with the value of number 1, do not agree with the value of number 2, agrees with the value of number 3, and strongly agree with a numeric value 4. questionnaires consists of 21 questions, approximately 30% among the negative worded questions . The lowest value is 21 if the respondent strongly disagree on the positive statement and strongly agree on the negative one, the highest score is 84 if the respondent instead of the respondents chose the option with the highest value (Yount, 2006).

RESULT AND DISCUSSION

Table-1. Consumer Characteristics

Variable	frequency	%
Sex		
Men	12	12
Women	88	88
Total	100	100
Occupation		
Employee	11	11
Businessman	21	21
Student	5	5
Housewife	57	57
Others	6	6
Total	100	100
Last education		
College	8	8
Senior high school	45	45
Junior high school	20	20
Primary	27	27
Total	100	100

The above table illustrates jamu gendong consumers dominated by women, only 12% of men who consume it regularly. Riskesdas data (2010) shows the percentage of men who consume jamu is 56%, but this data shows only jamu consumers in general, whereas this study is specializing in

jamu gendong. Beers (2001) said it is not only women who consume jamu for health and beauty, but men are also considered jamu important to increase stamina and libido. Research on jamu powders previously found that the percentage of consumers of jamu in powder form is much higher male than female consumers, consumers who consume jamu powder *tolak angin* 87.5% of men, 77.5% of male consumers consume jamu *pegel linu*, and consumers who consume jamu powder type men's health is 90% (Yulianto, 2009). The occupation of jamu consumers is highly varied, the most one is housewives (57%) and the fewest are students, it is only 5 of the 100 respondents, this is could happened because jamu gendong seller peddling it door to door in the morning, while the students usually doing their activities outside the house in the morning.

The majority of consumer education are high school which 45% of consumers, although consumers who have higher education only 8 of the 100 respondents, but this shows that jamu gendong consumers have a fairly good level of education with almost half have received his high school.

Table-2. Source of consumers knowledge about Jamu Gendong

Source of knowledge	frequency	%
Parents/ family	45	45
Friends	14	14
Jamu sellers	41	41
Total	100	100

Consumers who claimed know jamu gendong from the are41%, but in fact the more dominant is role of the family in introducing jamu gendong to consumers, consumers who claimed to have information about jamu gendong of parent /family with 45%. Torri (2013) in a qualitative study says that middle age between 25-35 years consume jamu because of motivated from parents and friends who say that jamu essential to the health and fitness of the body, while the older age choose to drink herbal medicine because it is a tradition from generation to generation in everyday life, this shows that the role of the family greatly affect a person's knowledge in the decision to consume a product.

Table-3. Kind of consumed Jamu Gendong

Kind of jamu gendong	frequency	%
Beras Kencur	13	13
Kunir Asem	61	61
Cabe Puyang	20	20
Temulawak	2	2
Others	4	4
Total	100	100

Kind of jamu gendong that the most widely consumed is jamu kunir asem, it is consumed regularly by 61% of consumers, jamu kunir asem is useful to refresh the body and good for the women health, successively consumers choose cabe puyang, beras kencur, temulawak, and others jamu (4%).

This finding is similar to that described by Riswan and Roemantyo (2002) that jamu gendong commonly sold by the seller consists of only 5 jamu that is beras kencur, cabe puyang, kunir asem, paitan and jamu galian, whereas the empirical fact that there are 10 kinds of jamu gendong (Suharmiati and Handayani, 2008). Beers (2001) says that jamu is a holistic therapy, using the concept of harmony and balance between man and nature, so that more promotional efforts a priority in the use of jamu for health, although some modern jamu has also been proven as a curative treatment. Torri (2013) says that 71% of consumers believe that consumption of jamu is essential for maintaining health.

Table-4. Knowledge level of consumers of Jamu Gendong

	Value
Mean	14.25
Median	14.00
SD	2.012
Lower score	9
Higher score	20
CI 95%	13.85 - 14.65

Table above shows more than 70% of questions can be answered by the respondents on average, the lowest score in getting respondents was 9 of 20 questions. Based on a median cut point of 48% of consumers have "good" knowledge about jamu gendong, they can answer 70% or more of the 20 questions, and the rest are classified as "less" knowledge about jamu gendong because only able to answer less than 70% of the questions. Consumers have the different level of product knowledge, which can be used to translate new information and make a purchase option. Level of knowledge is formed when one combines the concept of meaning into the category of greater knowledge and more abstract (Dwiastuti *et al.*, 2012).

Table-5. Perception of Consumers of Jamu Gendong

Perception level	Frequency	%
Good	15	15
Good enough	85	85
Total	100	100

Consumer perception assessed by 8 dimensions that exist in jamu gendong and the seller, the dimensions consist of benefits, flavor, aroma, color, cleanliness, products and seller's appearance, seller's neatness and how to present jamu gendong (Dwiastuti *et al.*, 2012). Consumer perceptions of the benefits of jamu is also reflected in the Riskedas table (2010) that nationally 96.60% of consumers feel the benefits of consuming medicinal herbs.

Table-6. Analysis Correlation between Seller's Knowledge with Consumer's Knowledge About Jamu Gendong

Variable	N	Mean rank	p *value*
Good knowledge	48	53.48	0.274
Less knowledge	52	47.27	

Table above shows the p value 0.274, this value is greater than 5% alpha that showed no correlation between the seller's knowledge level to the level of consumer knowledge about jamu gendong.

Culture is learned, shared, and transmitted knowledge of values, beliefs, norms, and way of life of a group of facts which are generally transmitted from generation to generation and affect the thoughts, decisions and actions in patterned or certain ways (Alligood, 2010). Family is an important element in many cultures, because it influence in shaping the knowledge, attitude and behaviour. Health minister of Republic of Indonesia decree No. 381 (2007) on traditional medicine policy says that the use of traditional medicine in Indonesia are part of the nation's culture and society widely used since centuries ago.

Torri (2013) found that the expression on some people consume jamu on consumers aged 56-65 years has become a tradition that can not be abandoned, and younger says they got motivation from the family, parents and friends to consume jamu, and they believe in the benefit of jamu. Nurses as one of the health workers have a role to increase public knowledge about jamu and medicinal plants. Libster (2012) describes three models of nursing practice to arrange various approaches in the practice of nurse-herbalist, one of model is a consumer approach that focuses on consumer's education and information resources. This model is most common for novice nurses

who studied herbal therapies commonly used as a single herb and is similar to using the drug for certain conditions.

Table-7. Analysis Correlation between Sellers Knowledge with Consumers perception About Jamu Gendong

Variable	n	Mean rank	P *value*
Consumer's perception			
Good enough	85	51.21	0.553
Good	15	46.50	
Total	100		

The table above illustrates the average ranks of jamu sellers knowledge is 51.21 at the level of the consumer's perception "good enough". Consumer's perceptions "good" average ranks of the seller's knowledge score of 46.50. Statistical test results obtained p =0553, it mean at alpha5% there is no correlation between the level of knowledge of the seller with consumer's perception of jamu gendong. This analysis shows that consumers do not perceive how the knowledge of the seller, but rather the outer appearance of the jamu and the seller, consumer perception is measured hereby 8 dimensions of benefits, flavour, aroma, color, cleanliness, appearance, neatness and presentation (Dwiastuti *et al.*, 2012).

Yulianto (2009) At the stage of needs introduction, most of the respondents consume jamu for curative (treatment). Consumers still believe that the jamu powder is still an option to treat diseases. This study does not mention the number of consumers who consume jamu for the treatment, whereas a number of jamu that are sold freely on the market both packaging and fresh jamu intended for prevention and maintaining health when seen from the composition, processing methods and dosage forms.

Table-8. Comparison Levels of Consumer Knowledge Based jamu gendong Sellers

	n	Mean rank	p *value*
Consumers on seller 1	10	51.65	0.591
Consumers on seller 2	10	42.75	
Consumers on seller 3	10	54.75	
Consumers on seller 4	10	44.40	
Consumers on seller 5	10	59.45	
Consumers on seller 6	10	59.50	
Consumers on seller 7	10	50.45	
Consumers on seller 8	10	59.95	
Consumers on seller 9	10	46.70	
Consumers on seller 10	10	35.40	
Total	100		

Comparison of the level of consumer's knowledge based on jamu sellers, the average value of the highest ranking of consumer's knowledge are visible to the consumer-8 with an average value of rank 59.95, while the lowest average value for consumers-10 with an average value of 35.40. The results of statistical tests to get p = 0591, it mean at alpha 5% can be concluded there is no difference in the level of consumer knowledge about jamu gendong by the seller, these results show once again that consumers are not affected by the level of knowledge of the seller because the seller is not the only source of knowledge about jamu gendong for consumers.

Consumer knowledge about jamu gendong over into the knowledge that has become cultural, because culture can be found on people's actions, words, norms or rules for behaviour, and the important symbols of the group, then learned and passed down from generation to generation (Alligood, 2010).

Table-9. Comparison Levels of Consumer Perception Based jamu gendong Sellers

	n	Mean rank	p *value*
Consumers on seller 1	10	50.95	0.060
Consumers on seller 2	10	57.15	
Consumers on seller 3	10	41.75	
Consumers on seller 4	10	57.55	
Consumers on seller 5	10	50.55	
Consumers on seller 6	10	35.25	
Consumers on seller 7	10	35.10	
Consumers on seller 8	10	47.40	
Consumers on seller 9	10	77.25	
Consumers on seller 10	10	52.05	
Total	100		

Comparison of consumer's perception based on jamu seller, the highest average value of consumer's knowledge looked at consumer-9 with an average value of 77.25, while the lowest average value is on the consumer-7 with an average value of 35.10. The average value of the knowledge on other consumers are in the same range. The results of statistical tests to get p = 0.060, mean at alpha 5% can be concluded there was no difference in consumer's perception of jamu gendong based on the seller.

Consumer perception of the jamu gendong is based on several things, including perceived benefits, nationally Indonesian people who consume jamu 96.60% of them felt the benefits of consume jamu (Badan *et al.*, 2010). Beers (2001) said that almost all of the Java communities perceived benefit, and when told it is need for more research on jamu because some plants used for jamu is declared toxic, consumers said that if the Java communities have been using herbs in a long time, from generation to generation and gain the health benefits of herbal medicine, it is said by most respondents.

Utilization of medicinal plants in addition to the culture that has been passed down for generations but also related to consideration of the benefits and how to use them, Sari (2006) described how to process the medicinal plants for health benefits, there are several things that must be considered the right material that used, accuracy of the dose, timing of use, accuracy of method of use, accuracy of information study, without abuse and drug selection for the accuracy of certain indications, some plants have medicinal alkaloid ingredients that are beneficial to certain conditions, but can be dangerous in different condition. Torri (2013) in his research found that 92% of respondents thought that the government should support jamu and other traditional medicines. Training for producers of jamu and traditional healers are important to improve service and consumer's confidence in the jamu, also minimize the side effects.

CONCLUSION

Consumers of jamu gendong mostly dominated by the female 88%, indicating that almost all consumers are women. Consumer's occupation 57% are housewives, the remaining 21% are businessman, 11% of them are employees. Most education level of consumer jamu gendong are high school, 20%. The average age of consumers carrying herbal stands at 39.59, the lowest age are 16 years and the highest 66 years of age, the majority of consumers recognize jamu gendong from parents or family (45%), although the role of the sellers in introducing jamu gendong to consumers is prominent, amounting to 41% of consumers recognize jamu gendong from the seller. Jamu gendong the most frequently consumed by consumers are jamu kunir asem (61%), which is the main material of turmeric and tamarind.

The average level of knowledge of consumers get value of 14.25, with a confidence level of 13.85 - 14.65 of the 20 questions were given. The classification level of consumer knowledge obtained by the cut point of median 48% of consumers have good knowledge and 52% have less knowledge.

Researchers assign three categories to assess consumer perceptions is good, good enough and less good. Data were visible from the results, only two categories are the "good" and "good enough", consumer with good enough perceptions exist on 85% of consumers, the rest with a good perception as much as 15% of consumers.

This analysis found that there was no association between consumer's knowledge with seller's knowledge with p values greater than 5% alpha is 0.553. Analysis of the correlation with the consumer's perception of knowledge seller also get same results with the previous analysis, there was no correlation between the perception of the consumer with the knowledge of the seller, the p-value is 0.274.

Consumers of jamu gendong obtained from 10 different sellers, the results obtained from 10 consumer groups was not found any differences in the level of knowledge with the value of p 0.591. P-value from this analysis did not differ from the previous analysis, there were no differences in perceptions of consumers based on the seller with p value 0.060.

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