

Comparison between Male and Female in Best Management Practices for Tobacco Cultivators in Bachok District, Kelantan, Malaysia

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Abstract

Kelantan State recorded the highest in terms of acreage for tobacco plantation with consists of 77.94 %. Tobacco plantation was known to be the most risky job among Kelantanese due to extensive usage of pesticide and fertilizer. This study was conducted to identify the differences between male and female in Best Management Practices (BMPs) for tobacco cultivators in Bachok as well as to relate it with the fertilizers and pesticides related diseases in Bachok District, Kelantan, Malaysia. The results revealed that, the correlation between wearing proper PPEs and gender ($p < 0.05$) and between chronic diseases and gender ($p < 0.05$) were significant. Female cultivators they are more concern about their health compared to the male. Meanwhile, 49% of male and 25 % of female cultivators claimed that they had the acute illnesses. On the other hand, the health data in 2010 obtained from the Bachok District Health Center showed that, acute upper respiratory tract infections (19,641 cases) and other disease of the respiratory system (16,484 cases) recorded the highest cases followed by dermatitis (5,300 cases), conjunctivitis (2,582 cases), urticarial (1,689 cases), impetigo (1,387 cases), poisonings (548 cases), asthma (450 cases) and bronchitis (8 cases). It could be concluded that, the female planter are more health conscious and it is revealed in this findings where they wore PPEs at all times when dealing with chemicals.

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1. Introduction

Tobacco was grown in more than 120 countries on almost 4 million hectares of the world's agriculture land. Malaysia was also included as one of the countries that cultivate tobacco for leaf production with acreage planted with tobacco is 13,000 hectares [1]. Kelantan was the highest smoked tobacco leaf producer followed by Terengganu and the other states such as Kedah, Perlis, Pahang, Melaka, Johor and Perak. Tobacco cultivation always associated with health risk due to the substantial usage of fertilizers and pesticides.

The tobacco cultivators can be categorized as risk takers since they have been exposed directly or indirectly with chemicals like fertilizers and pesticides. Works by Rusli *et al.* [2] has revealed that more than one-third of tobacco cultivators in Malaysia suffered from acute symptoms of chemicals poisoning. This was believed to be due to ignorance of farmers on the concept of Best Management Practices (BMPs) for the application of chemicals especially the usage of Personnel Protective Equipment (PPEs). Yang *et al.* [3] define BMPs as methods or techniques, produces results that are in harmony with the values of the proponents of those practices. Thus, to avoid this problem the farmers have to

implement BMPs which encourage them to deserve a better livelihood than being producers of poison [4].

2. Materials and Methods

The study was done during the tobacco planting season. The study sites cover the tobacco planting area around Bachok District comprises of three (3) villages namely Telong, Perupok and Repek (Figure 1).



Source: <http://www.malaysia.maps.com> [5]

Figure 1: Study area.

A set of questionnaire was prepared prior to conduct interviews and observations for data collection. A total of 187 respondents in Bachok District comprises of three (3) villages namely Telong, Perupok and Repek were interviewed and observed. The period of study was from the 1st of January until 20th March 2011. The objectives of the study are to identify the level of BMPs among tobacco cultivators and also to compare the awareness of BMPs between male and female cultivators in term of the application of PPEs in Kelantan. The data collected were analyzed using descriptive statistic to test the frequency and percentage of the data and cross tabulation test.

Secondary data was also obtained for this study such as data for tobacco cultivators from the Board of National Kenaf and Tobacco and the health data from the Bachok Health Clinic to support the study.

3. Results and Discussion

Out of 187 respondents, 141 respondents was male and 46 female were involved in this study where majority of them was in the age ranged between 40 and 59 years old. Majority of the respondents were undergone or passed secondary school which comprises of 81.3 %. All of the respondents are Malay with 180 (96.3%) of them were married.

The results show that the correlation between wearing proper PPEs and gender was significant with p value 0.005, meaning that female cultivators are more concern about their health compared to the male, they wore more PPEs as compared to male. More PPEs means, they wear long sleeves, long pants, boots and hat without face musk, glove and goggle but for the male they only wear t-shirt and hat with barefoot. The results above in-line with the correlation between chronic diseases and gender where the results revealed that this correlation was also significant with p value 0.035 where 49% of male cultivators claimed that they have chronic illnesses compared to 25% female. The rest (26%) of the respondents claimed that they do not have any chronic illnesses.

On the other hand, the health data in 2010 obtained from the Bachok District Health Center showed that, acute upper respiratory tract infections was the highest cases recorded with 19,641 cases where 9,517 cases was recorded in male patients and 10, 124 cases in female. The second higher cases recorded were the other disease of the respiratory system with 16,484 cases which 8,069 cases were recorded in male patients and 8,415 cases in female. This was followed by dermatitis with 5,300 cases (2,578 cases in male and 2,722 in female), conjunctivitis with 2,582 cases (1,326 cases in male and 1,255 cases in female), urticarial with 1,689 cases (814 cases in male and 875 cases in female), impetigo with 1,387 cases (767 cases in male and 620 cases in female),

poisonings with 548 cases (290 cases in male and 258 cases in female), asthma with 450 cases (247 cases in male and 203 in female) and bronchitis with 8 cases (5 cases in male and 3 cases in female) (Figure 2).

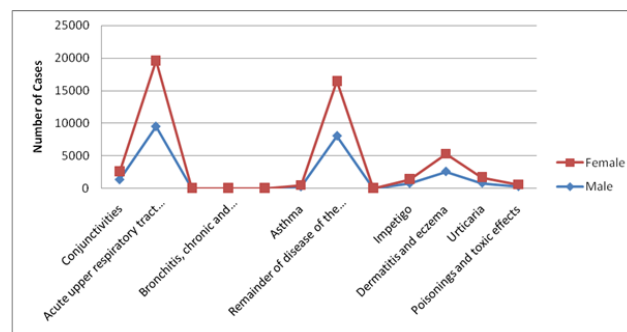


Figure 2: Chemicals poisoning illnesses cases in Bachok for 2010

The results revealed that female are more concern about their health while dealing with chemicals and the result in-line with the question about their health where more male cultivators claimed that they had chronic illnesses compared to female but health data obtained from the Bachok District Health Clinic revealed otherwise. The health data obtained from the clinic revealed that, female has more disease related to respiratory tract as well chemicals related diseases cases such as poisonings, dermatitis, impetigo and urticarial as compared to male.

The health data that was obtained from the clinic also does not confirm to the statement from Ashley Montagu in his book, *The Natural Superiority of Women*, where he stated that women have a more powerful immunological system that helps them having a better resistance to fatigue, shock and illness cited by Jafar Hassan in Islamic Insights published on-line in 19 April 2011 [6]. Women has more chemicals related diseases even though they have wore more PPEs as compared to men, this was believed to be due to the women normally bring their food and drinks to the field while they dealt with pesticides.

4. Conclusion

It could be concluded that, the female planter are more health conscious and it is revealed in this findings where they wore PPEs at all times when dealing with chemicals. This is also in line with the women characteristics where they are known for being cautious in all aspects in life as compared to men, and therefore it is not surprising the results of this study support its character.

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