Consumer awareness on misinformation linked with consumption of broiler chicken meat: A case of Kandy district - Sri Lanka

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1. Introduction

The current poultry industry is proficient in producing broilers weighing around 2 kg or more at the end of its 6-7-week production phase (Maurer, 2003). Vigorous genetic selection and improved nutrition are the key reasons for these large sized broilers. Moreover, comfort environment and efficient management practices also assist in overall growth of the birds.

Several hormones such as 17-β-Estradiol, Progesterone, Testosterone and their anabolic substances (e.g. Clenbuterol and Zeranol) are used in livestock production for fattening purpose (Hirpessa et al., 2020). However, these substances have found to generate genotoxic, mutagenic, carcinogenic, immunotoxic and teratogenic effects on human (Hirpessa et al., 2020). Therefore, government regulations have been imposed worldwide prohibiting the use of hormones in livestock and poultry production (Hirpessa et al., 2020).

However, as highlighted by the most social media the myth of the fact that 'the broiler chickens are fed with hormones to produce more meat' has popularized globally (Esquivel-Hernandez et al., 2016) though hormones for broiler chickens are not available commercially. This imprecise information brought unintended consequence on the poultry industry while creating fraudulent health concerns (e.g. cancers, obesity and early puberty in adolescence girls) among the public (Esquivel-Hernandez et al., 2016). However, limited systematic studies have been conducted in Sri Lanka to investigate the public awareness about broiler chickens with no added hormones. Therefore, the present study was carried out to explore misinformation exist among the public community in Kandy district - Sri Lanka pertaining to consumption of broiler chicken meat.

2. Materials and Methods

Research approach was deductive and the study was based on both primary and secondary data. Kandy district was selected purposively for the study (i) for having higher numbers of poultry farms (11,156) in this area (ii) for being ranked the 5^{th} and 11^{th} positions, respectively when considering the total number of poultry farms and total number of broiler farms in Sri Lanka and (iii) for being a district belonging to the Central province where the chicken meat industry is prevalent (Alahakoon et al., 2016; Census and Statistics, 2020). Primary data collection tools included an interviewer administered questionnaire and field observations. The sample consists with 460 randomly selected participants in Kandy district. Questionnaire was designed to identify the consumer perception, buying and consumption behaviours of consumers. The secondary data were collected from the Ministry of Livestock and Rural Community Development, Department of Census and Statistics and Central bank reports. Data were analyzed using SPSS (Statistical Package for Social Sciences) version 22 software and Microsoft Excel 2016 software. To analyze the collected data descriptive statistics, such as frequencies, percentages, Chi square analysis were used.

3. Results and Discussion

Socio economic background of the respondents of the study presented that the majority of them are male (52.6 %), frequent age group is 18-30 years who are living in rural areas (54.6%), the most of them are educated up to the higher education level (Graduates and post graduates) (48.9 %), majority of their income level is distributed between Rs.25,000-50,000 per season/per month and the majority of respondent's profession has been recorded as 'other' category (41.1%).

The results revealed that the majority of the respondents (85.4%) consume broiler chicken. Unpalatability (41.9%) is the major reason outlined by those who do not prefer broiler meat. Considering buying behaviour, the majority of the respondents (64.6%) purchase broiler meat from small scale retailers and consume in a frequency of once or few times per week (46.6%).

When considering the perception toward the hormone usage in broiler chicken production, 85.9% of the sample thinks that the hormones are used for broiler chicken at the production level and these substances impose health risk (83.7%) in human. They also believe that (76.7%) eating broiler meat frequently during childhood leads to earlier onset of puberty in adolescent girls. Moreover, the majority of the respondents (75.7%) do not aware on the fact that the use of hormones (anabolic steroids such as Oestradiol, Testosterone, Stilbene, Estrogen, Progestogens *etc.*) in broiler production is banned in Sri Lanka (Gazette No. 1,292, 06.06.2003) and they do not have any idea whether there is any illegal use of hormones in broiler production in Sri Lanka. According to the chi-square analysis, there is a positive correlation exists between the gender and the chicken consumption (P = 0.014) and therefore the null hypothesis has been rejected. Moreover, there is a positive relationship between the income level and the consumption frequency (P = 0.000012). No relationship exists between the education level and the perception of hormone usage in broiler chicken production and no relationship exists between the profession and the perception of hormone usage to gain rapid growth in broiler chicken production (Table 01) (P = 0.153).

Table 01. Chi square test results

Education level x Perception on hormones usage in rapid weight gain in broilers	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	0.624[a]	2	0.732
Likelihood Ratio	0.678	2	0.713
Linear-by-linear association	0.005	1	0.943
N of valid cases	460		

[a.] 1 cell (16.7%) has expected count less than 5. The minimum expected count is 3.11.

This study also revealed that the misinformation about hormone usage has perceived from the general public (36.2%). Moreover, the majority of the respondents (81.3%) have agreed to change their mindset if there is any proof or certification for no added hormones in broiler chicken meat.

It is well known that the consumer satisfaction on meat and their products is set primarily by the numbers of criteria such as safety guarantee, provision of precise information, quality assurance of the product, convenience and attentiveness in animal welfare (Alahakoon et al.,

2016). Therefore, the public awareness should be accelerated rationally to abolish currently existing misbeliefs among the public and change their negative attitudes about broiler chicken meat.

4. Conclusions

The present study concluded that the myths of (i) using hormones to gain rapid growth rates in broilers, (ii) the hormones assumed to be present in broiler meat can impose health risk in human and (iii) frequent broiler meat consumption during childhood has an impact on earlier onset of puberty in adolescent girls exist. Though the majority of the sample represents higher educated professionals, these myths were based on the information gathered from the general public. Provision of valid certification with no added hormone in broiler meat will change the mindset of public. Therefore, improving the public awareness on legal background of hormone usage and product labelling with correct information are warranted.

5. References

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