

## **EVALUATING THE ACCURACY OF MARKETING AND PACKAGING CLAIMS OF HERBAL SUPPLEMENTS IN THE PHILIPPINES**

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**Abstract:** Herbal supplements are popularly advertised in various platforms to reach its target consumers. The research looked into the key information found in the advertisements and the packaging, spot the differences, and classified advertisements under exaggeration, misinterpretation, or unclassified. The study focused on 28 herbal supplements and looked into their advertisements and packaging. The advertisements were sourced from local radio network and from a collection made available in YouTube. Results showed that the information given on advertisements are not the same as what is in the packaging. Majority of the advertisements mentions indications (82%) but only 7.1% mentions such on their packaging material. Out of the 28 advertisements, only 1 (3.6%) included information on dosage while 26 out of 28 (92.9%) of the products have dosage information on their packaging. Only 64.3% of advertisements and 82.1% of packaging material provide caution. A good number of advertisements, 21 out of 28 (75%) had misinterpretations and 39.3% had exaggerations. There were 4 advertisements which were unclassified because the information available did fall as either misinterpretation or exaggeration. There are still differences in information provided in advertisements from those in packaging. Future efforts may be geared towards reevaluating the existing guidelines governing food supplements so that the consumers will be better informed.

**Keywords:** food supplements; herbal products; advertisements

### **Introduction**

Nutraceuticals, where herbal supplements is a category, is expected to reach PhP 261 billion in terms of revenue by 2022[1]. According to a survey on over 15,000 respondents published on October 19, 2021, 43% of their respondents take dietary supplements or nutraceuticals [2]. The use of medicinal herbs continue to be an alternative treatment approach for several diseases [3]. Herbal medicine use prevalence was found to be at 68% in a study done in Indonesia. A good 40% of surveyed respondents admitted to self-medicating with herbal medicine [4]. The major use of herbal medicines is for health promotion and therapy for chronic, as opposed to life-threatening, conditions [5]. With the growing interest of the consumers to “go natural” and the increasing concern for self-care, the consumption for herbal supplements will continue to rise. With the a good profitable income generated from sales of herbal supplements, increasing patrons, and the ease in its registration as opposed to drugs, it is expected that more and more herbal supplements will be made available.

Herbal supplements including dietary supplements are considered as herbal supplements according to Philippine Food and Drug Administration. These products can be promoted through advertising. According to Kotler's definition, advertising is “any paid form of non-personal presentation and promotion of ideas, goods and services through mass media such as newspapers, magazines, television

or radio by an identified sponsor [6]. In the Philippines where the market is brand-conscious, advertising plays a significant role in sale of consumer goods; this is according to export.gov. Advertising on radio stations, and in the internet via YouTube are popular means to promote herbal supplements owing to the wide reach it has for its target market. A survey in 2018 conducted on a population of 10,000 showed that 62% of the respondents have accessed the radio [7]. Online access of information has also become popular over the years. Local television channels have created an online presence and captured about 50% of the total market [8]. In another survey, 85% of Filipinos online access YouTube and 63% agrees that YouTube helps them decide which brands to buy[9].

In the Philippines, herbal supplements are very popular and these are advertised in various means such as radio and online. Their sales are income-generating for most pharmacies hence these are sold and dispensed alongside medicines or sometimes, alone due to preference. Due to the popularity of herbal supplements, this study sought to do the following: (1) determine information available in the advertisements and packaging; (2) determine the differences of information per product; and (3) classify the information in the advertisement as exaggeration or misinterpretation based on the information on the packaging. In the Philippine culture, advertisements, claims spread via word-of-mouth, have a huge influence on the deciding factor of which herbal supplements to purchase. With the identified important information of herbal supplements, the researcher wanted to know if these were mentioned in the packaging material of the products and mentioned in the advertisements.

### **Methodology**

The study looked into herbal supplements sold and advertised in the Philippines. It made use of available radio advertisements, TV advertisements, YouTube advertisements and product packaging information. The radio advertisements were sourced from a local radio station as mp3 files and a compilation in YouTube called DRPS Two- Philippine Radio Commercial Archives. TV advertisements and YouTube advertisements were available upon searching in YouTube. Only advertisements aired from 2016 onwards were included in the study, with priority on the latest versions. A total of twenty eight advertisements met the search criteria. Based on the available advertisements, the product packaging was searched for in local drugstores. Since this study was done during the time when the local government still had limited movement allowed due to the spread of COVID-19 infection, only three large pharmacies were visited. For products that were not available in the pharmacies visited, a website of a chain pharmacy was accessed for product information.

Each herbal supplement were coded and each had information gathered from radio advertisement and packaging, YouTube advertisement and packaging, or TV advertisement and packaging. The information included for both the advertisements and the packaging are as follows: indication, dosage, and caution. Remarks were provided by the researcher as needed.

### **Results**

Based on the twenty-eight herbal supplements considered in this study, Table 1 presents the information available, or not available, as the case may be, on the packaging material and the advertisements.

**Table 1.** Information on the Twenty-Eight Herbal Supplements

Herbal Brand	Artifact	Indication	Dosage	Caution

HB1	Radio Ad	None mentioned	None mentioned	<i>Mahalagang Paalala:</i> <i>Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	Adult: 1-2 capsules a day or as directed by a health practitioner.	Consult a healthcare professional before taking the product.
HB2	Radio Ad	As sexual performance enhancer; for improvement of well-being, for menstrual problems, for prostate problems.	None mentioned	None mentioned
	Packaging	None mentioned	One capsule a day with a glass full of water.	For adult use only. Not intended for children, pregnant, and lactating women.
HB3	Radio Ad	A testimony from someone who uses the product says it's for arthritis.	None mentioned	<i>Mahalagang Paalala:</i> <i>Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	Take 1 capsule a day or as recommended by your healthcare professional.	None mentioned

HB4	Radio Ad	The ad says it has “gana” boosters making babies and kids healthy.	None mentioned	<i>Mahalagang Paalala: Ang ——ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	Orally, once daily or as directed by the doctor. From birth to 6 months, 0.25mL; 7 to less than 12 months, 0.5-0.75 mL, 1-2 years, 0.75mL.	Keep this product out of reach and sight of children.
HB5	Radio Ad	None mentioned	None mentioned	None mentioned
	Packaging	None mentioned	Take 1-2 tablets, 2 hours before engaging in an intimate activity.	For best results, ingest with warm water and an empty stomach. If you are taking prescription medication, please consult any healthcare professionals before taking this product. Not recommended for ages below 18 years old.

HB6	Radio Ad	The ad quotes biblical passages and has testimonies from ordinary people and celebrities. It has special messages issued during special occasions (e.g. Mother's Day).  It mentions composition of herbal preparation (CoQ10), alpha, beta, gamma nutrients, has low cholesterol, and is fat-free.	None mentioned	None mentioned
	Packaging	None mentioned	One capsule 2x a day	None mentioned
			with a glass full of water.	
HB7	Radio Ad	The ad mentioned insomnia.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	Take 1 tablet 30 minutes before bedtime or as prescribed by a healthcare professional.	For adult use only. Not intended for pregnant and lactating mothers. Not for children. It mentions composition of the herbal preparation.

HB8	Radio Ad	The ad had a patient on dialysis maintaining the product, give a testimonial.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	As a dietary supplement take 1 capsule daily with meals. Or as prescribed by your physician.	For adults use only. Not intended for children, pregnant, and lactating women.
HB9	Radio Ad	The ad had a testimonial from someone who said there were no more brown spots and vision is clear.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	(Adult) as dietary supplement, take 1 capsule daily with meal, or as prescribed by your physician.	For adults use only. Not intended for children, pregnant and lactating women.

HB10	TV ad	It is used for kidney disease, vision problems, obesity, constipation, respiratory disease, insomnia, liver disease, aging, dental problems, reproduction dysfunction, viral and bacterial infections, bad cholesterol, heart disease, and allergy.	None mentioned	None mentioned
	Packaging	None mentioned	Take 1 cap a day or as recommended by your healthcare professional.	If pregnant or breastfeeding, consult your doctor. Keep out of reach of children. It mentions composition of the herbal preparation.
HB11	Radio Ad	The ad had a testimonial about liver swelling that resolved after 2 weeks of taking the product.	None mentioned	None mentioned

	Packaging	None mentioned on the product packaging but printed advertising materials claim the following: antioxidant, immunity booster, helps prevent cancer, improve heart health, supports blood sugar control, lowers cholesterol, detoxifies the body, improves digestive health, helps prevent mental decline.	One capsule daily or consult a healthcare professional.	For adults only. Not intended for children. It mentions composition of the herbal preparation.
HB12	Radio Ad	None mentioned	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	None mentioned	None mentioned
HB13	Radio Ad	The ad mentions cleansing property.	None mentioned	None mentioned



	Packaging	The product is a colon cleanser and helps support healthy immune system.	Take two glasses of the juice for 10 consecutive days. 1 glass is equivalent to about 200 mL or 7 oz. If you plan to take after breakfast, take them both after breakfast. DO NOT SPLIT the 2 servings. Same thing if you plan to take after lunch or before bedtime. Both glasses must be taken at the same time of the day or within 30 minutes interval.	It mentions composition of the herbal preparation.
HB14	Radio Ad	None mentioned	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	Take 1 capsule a day.	Not suitable for children, pregnant, and lactating mothers. It mentions composition of the herbal preparation.

HB15	Radio Ad	The ad calls the attention of smokers, overweight, those who do not eat green vegetables, and heavy gadget users as they are all at risk for blurring of vision.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Website informati on from a chain pharmacy.	None mentioned	Take 1 capsule a day as a nutritional supplement.	For adult use only. Not intended for children, pregnant women, and lactating women. Consult with a doctor about taking this product if taking other medicines, visiting a hospital as an outpatient, pregnant, or breastfeeding. Do not take this product if allergic to one or more ingredients. In case of abnormalities, stop taking this product immediately. A large amount of intake does not mean recovery from disease and improvement of health. Observe the day recommended dose, and do not take this product excessively. Avoid giving to infants and small children.

HB16	Radio Ad	The ad said it is for constipation, slimming, and fights colon cancer.	2 capsules 1 hour before breakfast and 2 capsules 1 hour before dinner.	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	2 capsules 2 times a day 1 hour before each meal (morning and evening).	None mentioned
HB17	Radio Ad	The ad said it is for diabetes, high blood pressure, etc.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Website information from a chain pharmacy.	None mentioned	Three times a day for the first 15 days. Twice daily for maintenance.	For adult use only. Not intended for children. Should not be taken by pregnant and lactating women. Should not be taken with aspirin, ticlopidine, ginkgo biloba, ginseng, warfarin, and heparin. This product is not intended to diagnose, treat and cure diseases. Should not be taken at least one week before contemplated operation. Stop intake of this product in the event of nausea, vomiting, diarrhea, skin pallor, bruises, and nose bleeding.

HB18	TV Ad	The ad mentions total well-being.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Website information from a chain pharmacy.	None mentioned	Take 1 capsule daily preferably before bedtime.	It mentions composition of the herbal preparation. This food supplement may interact with other food supplements or medications. If you are taking blood thinning medications or having bleeding disorder, dental problems, and undergoing surgery, do not use this food supplement without the supervision of a competent healthcare provider. This should not be taken with aspirin, Clopidogrel, Dipyridamole, Heparin, Ticlopidine, Warfarin, Ibuprofen, Tahebo, and high dose of Vitamin E. Should not be taken by pregnant and lactating women.

HB19	Youtube ad	The ad claims the following: strengthens the immune system; supports cardiovascular function and healthy cholesterol; improves gastrointestinal and digestive health; enhances natural cleansing and detoxification; reduces cancer risks with antioxidant protection	None mentioned	None mentioned
	Website information from a chain pharmacy.	It cleanses internal organs to help improve health conditions and blood purifier.	Take 1 capsule three times a day.	It mentions the composition of the herbal preparation.
HB20	Radio Ad	None mentioned	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.

	Website information from a chain pharmacy.	None mentioned	None mentioned	It mentions composition of the herbal preparation. If you are taking prescription medicines, please consult your physician or healthcare professionals before taking this product. For adult use only. Not recommended for children, pregnant women, and lactating women.
HB21	Youtube Ad	In the ad, a patient gave a testimony that he had arthritis and difficulty in urination that were addressed by the herbal preparation. The ad also mentions diabetes, insomnia, high blood pressure, and sex appetite.	None mentioned	<i>Mahalagang Paalala: Ang ———ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.  (This was flashed for 2 seconds but was not read.)
	Packaging	None mentioned	Take 1 cap daily as recommended by a physician.	Keep out of reach of children. Please consult your physician before taking the product. For adults use only not recommended for pregnant and lactating women.

HB22	Radio Ad	The ad claims to increase body's resistance against diseases.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	Take 30 mL 20 minutes before meals or as directed by your health professional.	None mentioned
HB23	Radio Ad	The ad claims that the herbal preparation removes toxins in the natural way. It has value to management of diabetes and rheumatism.  The herbal preparation can be used for arthritis, asthma, mayoma, bladder diseases, UTI, kidney diseases, heart diseases, stomach ulcer, insomnia, malaria, migraine, dengue fever, hepatitis, etc,	None mentioned	None mentioned
	Packaging	None mentioned	1 capsule daily taken 20 minutes before meals with plenty of water or as recommended by physician.	It mentions composition of the herbal preparation. For adults use only.
HB24	Radio Ad	For hemorrhoids	None mentioned	None mentioned

	Website informati on from a chain pharmacy.	None mentioned	Take 4 tablets each time, three times daily or as directed by medical practitioner.	It mentions composition of the herbal preparation. Not recommended for pregnant or lactating mothers. Not recommended for people who are hypersensitive to the ingredients used. If symptoms persist consult your medical practitioner.
HB25	TV ad	The ad mentions the product to be for diabetics and those who aren't diabetics.	None mentioned	The ad says „no approved therapeutic claims” at the end. It was flashed for two seconds but not read.
	Packaging	None mentioned	1 capsule three times a day before meals.	It mentions composition of the herbal preparation.
HB26	Radio Ad	A testimony from someone who says diabetes is managed with exercise, diet, prescription medicines and the herbal preparation manages diabetes.	None mentioned	None mentioned



	Website informati on from a chain pharmacy.	None mentioned	One capsule a day.	Food supplement must not be used as a substitute for a varied and balanced diet and a healthy lifestyle. If you are pregnant or breastfeeding or under medical supervision, please consult with a doctor to health professional. For adult use only. Not intended for children, pregnant, and lactating women. It mentions composition of herbal preparation.
HB27	TV ad	The ad mentions exposure to changing weather, long travels, and late nights.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.
	Packaging	None mentioned	1 sachet three times daily for 7 days or as needed.	For adult use only. Not intended for children, pregnant, and lactating women.
HB28	TV ad	The ad mentions for relief of “cold” in the body.	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.

	Packaging	None mentioned	1-3 sachets a day	For adult use only, and not intended for pregnant women, and those with allergy to menthol flavors. It mentions composition of herbal preparation.
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Table 2 shows the number of herbal supplements that mentioned indication, dosage, and caution.

**Table 2. Herbal Supplements That Mentioned Key Information**

		Frequency	Percent
Advertisements	Indication	23/28	82%
	Dosage	1/28	3.6%
	Caution	18/28	64.3%
Packaging	Indication	2/28	7.1%
	Dosage	26/28	92.9%
	Caution	23/28	82.1%

There are key information considered to be important for consumers to be wellinformed in making decisions on herbal supplements. Indication tells the consumer what the product is for. Majority of the advertisements mentions indications (82%) but only 7.1% mentions such on their packaging material. Dosage information guides consumers on how much to take and how often. Out of the 28 advertisements, only 1 (3.6%) included information on dosage while 26 out of 28 (92.9%) of the products have dosage information on their packaging. Caution informs consumers what to consider when taking the herbal supplement. Only 64.3% of advertisements and 82.1% of packaging material provide caution. There are differences among the three key information between advertisements and packaging as opposed to the expectation where both forms will contain the same key information.

Table 3 presents information in the advertisement classified as exaggeration or misinterpretation based on the information on the packaging.

**Table 3. Information on the Twenty-Eight Herbal Supplements with their Corresponding Classification**

Herbal Brand	Artifact	Indication	Dosage	Caution	Classification
HB1	Radio Ad	None mentioned  This ad claims it is the most effective and 100% natural, and inexpensive.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Exaggeration
	Packaging	None mentioned	Adult: 1-2 capsules a day or as directed by a health practitioner.	Consult a healthcare professional before taking the product.	It mentions composition of the herbal preparation.
HB2	Radio Ad	As sexual performance enhancer; for improvement of well-being, for menstrual problems, for prostate problems.	None mentioned	None mentioned	Misinterpretation
	Packaging	None mentioned	One capsule a day with a glass full of water.	For adult use only. Not intended for children, pregnant, and lactating women.	It mentions composition of the herbal preparation.

HB3	Radio Ad	A testimony from someone who uses the product says it's for arthritis.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation and Exaggeration
	Packaging	None mentioned	Take 1 capsule a day or as recommended by your healthcare professional.	None mentioned	It mentions composition of the herbal preparation.
HB4	Radio Ad	The ad says it has "gana" boosters making babies and kids healthy.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation
	Packaging	None mentioned	Orally, once daily or as directed by the doctor. From birth to 6 months, 0.25mL; 7 to less than 12 months, 0.5-0.75 mL, 1-2 years, 0.75mL.	Keep this product out of reach and sight of children.	It mentions composition of the preparation.
HB5	Radio Ad	None mentioned	None mentioned		Unclassified

	Packaging	None mentioned	Take 1-2 tablets, 2 hours before engaging in an intimate activity.	For best results, ingest with warm water and an empty stomach. If you are taking prescription medication, please consult any healthcare professionals before taking this product. Not recommended	It mentions composition of the herbal preparation.
				for ages below 18 years old.	

HB6	Radio Ad	The ad quotes biblical passages and has testimonies from ordinary people and celebrities. It has special messages issued during special occasions (e.g. Mother's Day).  It mentions composition of herbal preparation (CoQ10), alpha, beta, gamma nutrients, has low cholesterol, and is fat-free.	None mentioned	None mentioned	Misinterpretation
	Packaging	None mentioned	One capsule 2x a day with a glass full of water.	None mentioned	
HB7	Radio Ad	The ad mentioned insomnia.  The ad says the product allows for a sound sleep.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation and exaggeration

	Packaging	None mentioned	Take 1 tablet 30 minutes before bedtime or as prescribed by a healthcare professional.	For adult use only. Not intended for pregnant and lactating mothers. Not for children. It mentions composition of the herbal preparation.	
HB8	Radio Ad	The ad had a patient on dialysis maintaining the product, give a testimonial.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation and exaggeration
	Packaging	None mentioned	As a dietary supplement take 1 capsule daily with meals. Or as prescribed by your physician.	For adults use only. Not intended for children, pregnant, and lactating women.	
HB9	Radio Ad	The ad had a testimonial from someone who said there were no more brown spots and vision is clear.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation and exaggeration

	Packaging	None mentioned	(Adult) as dietary supplement, take 1 capsule daily with meal, or as prescribed by your physician.	For adults use only. Not intended for children, pregnant and lactating women.	
HB10	TV ad	It is used for kidney disease, vision problems, obesity, constipation, respiratory disease, insomnia, liver disease, aging, dental problems, reproduction dysfunction, viral and bacterial infections, bad cholesterol, heart disease, and allergy.	None mentioned	None mentioned	Misinterpretation and exaggeration
	Packaging	None mentioned	Take 1 cap a day or as recommended by your healthcare professional.	If pregnant or breastfeeding, consult your doctor. Keep out of reach of children. It mentions composition of the herbal preparation.	



HB11	Radio Ad	The ad had a testimonial about liver swelling that resolved after 2 weeks of taking the product.	None mentioned	None mentioned	Misinterpretation
	Packaging	None mentioned on the product packaging but printed advertising materials claim the following: antioxidant, immunity booster, helps prevent cancer, improve heart health, supports blood sugar control, lowers cholesterol, detoxifies the body, improves digestive health, helps prevent mental decline.	One capsule daily or consult a healthcare professional.	For adults only. Not intended for children. It mentions composition of the herbal preparation.	

HB12	Radio Ad	None mentioned	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Unclassified
	Packaging	None mentioned	None mentioned	None mentioned	
HB13	Radio Ad	The ad mentions cleansing property.	None mentioned	None mentioned	Misinterpretation
	Packaging	The product is a colon cleanser and helps support healthy immune system.	Take two glasses of the juice for 10 consecutive days. 1 glass is equivalent to about 200 mL or 7 oz. If you plan to take after breakfast, take them both after breakfast. DO NOT SPLIT the 2 servings. Same thing if you plan to take after lunch or before bedtime. Both glasses must be taken at the same time of the day or within 30 minutes interval.	It mentions composition of the herbal preparation.	

HB14	Radio Ad	None mentioned	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Unclassified
	Packaging	None mentioned	Take 1 capsule a day.	Not suitable for children, pregnant, and lactating mothers. It mentions composition of the herbal preparation.	
HB15	Radio Ad	The ad calls the attention of smokers, overweight, those who do not eat green vegetables, and heavy gadget users as they are all at risk for blurring of	None mentioned	<i>Mahalagang Paalala: Ang ---ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation
		vision.			

	Website information from a chain pharmacy.	None mentioned	Take 1 capsule a day as a nutritional supplement.	For adult use only. Not intended for children, pregnant women, and lactating women. Consult with a doctor about taking this product if taking other medicines, visiting a hospital as an outpatient, pregnant, or breastfeeding. Do not take this product if allergic to one or more ingredients. In case of abnormalities, stop taking this product immediately. A large amount of intake does not mean recovery from disease and improvement of health. Observe the day recommended dose, and do not take this product excessively. Avoid giving to infants and small children.	
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HB16	Radio Ad	The ad said it is for constipation, slimming, and fights colon cancer.	2 capsules 1 hour before breakfast and 2 capsules 1 hour before dinner.	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation
	Packaging	None mentioned	2 capsules 2 times a day 1 hour before each meal (morning and evening).	None mentioned	
HB17	Radio Ad	The ad said it is for diabetes, high blood pressure, etc.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation

	Website information from a chain pharmacy.	None mentioned	Three times a day for the first 15 days. Twice daily for maintenance.	For adult use only. Not intended for children. Should not be take by pregnant and lactating women. Should not be taken with aspirin, ticlopidine, ginkgo blob, ginseng, warfarin, and heparin. This product is not intended to diagnose, treat and cure diseases. Should not be taken at least one week before contemplated operation. Stop intake of this product in the event of nausea, vomiting, diarrhea, skin	
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				pallor, bruises, and nose bleeding.	
HB18	TV Ad	The ad mentions total well-being.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Exaggeration

	Website information from a chain pharmacy.	None mentioned	Take 1 capsule daily preferably before bedtime.	It mentions composition of the herbal preparation. This food supplement may interact with other food supplements or medications. If you are taking blood thinning medications or having bleeding disorder, dental problems, and undergoing surgery, do not use this food supplement without the supervision of a competent healthcare provider. This should not be taken with aspirin, Clopidogrel, Dipyridamole, Heparin, Ticlopidine, Warfarin, Ibuprofen, Taheebo, and high dose of Vitamin E. Should not be taken by pregnant and lactating women.	
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HB19	Youtube ad	The ad claims the following: strengthens the immune system; supports cardiovascular function and healthy cholesterol; improves gastrointestinal and digestive health; enhances natural cleansing and detoxification; reduces cancer risks with antioxidant protection	None mentioned	None mentioned	Exaggeration
	Website information from a chain pharmacy.	It cleanses internal organs to help improve health conditions and blood purifier.	Take 1 capsule three times a day.	It mentions composition of the herbal preparation.	
HB20	Radio Ad	None mentioned	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Unclassified

	Website information from a chain pharmacy.	None mentioned	None mentioned	It mentions composition of the herbal preparation. If you are taking prescription medicines, please consult your physician or healthcare professionals before taking this product. For adult use only. Not recommended for children, pregnant women, and lactating women.	
HB21	Youtube Ad	In the ad, a patient gave a testimony that he had arthritis and difficulty in urination that were addressed by the herbal preparation. The ad also mentions diabetes, insomnia, high blood pressure, and sex appetite. The ad claims there are no side effects for this herbal preparation.	None mentioned	<i>Mahalagang Paalala: Ang — — ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.  (This was flashed for 2 seconds but was not read.)	Exaggeration and misinterpretation

	Packaging	None mentioned	Take 1 cap daily as recommended by a physician.	Keep out of reach of children. Please consult your physician before taking the product. For adults use only not recommended for pregnant and lactating women.	
HB22	Radio Ad	The ad claims to increase body's resistance against diseases.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation
	Packaging	None mentioned	Take 30 mL 20 minutes before meals or as directed by your health professional.	None mentioned	

HB23	Radio Ad	<p>The ad claims that the herbal preparation removes toxins in the natural way. It has value to management of diabetes and rheumatism.</p> <p>The herbal preparation can be used for arthritis, asthma, mayoma, bladder diseases, UTI, kidney diseases, heart diseases, stomach ulcer, insomnia, malaria, migraine, dengue fever, hepatitis, etc,</p>	None mentioned	None mentioned	Misinterpretation and exaggeration
	Packaging	None mentioned	1 capsule daily taken 20 minutes before meals with plenty of water or as recommended by physician.	It mentions composition of the herbal preparation. For adults use only.	
HB24	Radio Ad	<p>For hemorrhoids</p> <p>The ad says it is effective and affordable.</p>	None mentioned	None mentioned	Misinterpretation and exaggeration

	Website information from a chain pharmacy.	None mentioned	Take 4 tablets each time, three times daily or as directed by medical practitioner.	It mentions composition of the herbal preparation. Not recommended for pregnant or lactating mothers. Not recommended for people who are hypersensitive to the ingredients used. If symptoms persist consult your medical practitioner.	
HB25	TV ad	The ad mentions the product to be for diabetics and those who aren't diabetics.	None mentioned	The ad says „no approved therapeutic claims” at the end. It was flashed for two seconds but not read.	Misinterpretation
	Packaging	None mentioned	1 capsule three times a day before meals.	It mentions composition of the herbal preparation.	
HB26	Radio Ad	A testimony from someone who says diabetes is managed with exercise, diet, prescription medicines and the herbal preparation	None mentioned	None mentioned	Misinterpretation

		manages diabetes.			
	Website information from a chain pharmacy.	None mentioned	One capsule a day.	Food supplement must not be used as a substitute for a varied and balanced diet and a healthy lifestyle. If you are pregnant or breastfeeding or under medical supervision, please consult with a doctor to health professional. For adult use only. Not intended for children, pregnant, and lactating women. It mentions composition of herbal preparation.	

HB27	TV ad	The ad mentions exposure to changing weather, long travels, and late nights.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation
	Packaging	None mentioned	1 sachet three times daily for 7 days or as needed.	For adult use only. Not intended for children, pregnant, and lactating women.	
HB28	TV ad	The ad mentions for relief of “cold” in the body.	None mentioned	<i>Mahalagang Paalala: Ang — —ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit.</i>  No approved therapeutic claims.	Misinterpretation
	Packaging	None mentioned	1-3 sachets a day	For adult use only, and not intended for pregnant women, and those with allergy to menthol flavors. It mentions composition of herbal preparation.	

**Table 4. Summary of Classification**

	Frequency	Percent
Exaggeration	11/28	39.3%
Misinterpretation	21/28	75%
Unclassified	4/28	14.3%

Table 4 shows the summary of the classification of the information of the advertisement based on what is mentioned in the packaging. A good number of advertisements, 21 out of 28 (75%) had misinterpretations and 39.3% had exaggerations. There were 4 advertisements which were unclassified because the information available did fall as either misinterpretation or exaggeration.

### **Discussion**

According to Administrative Order 2014-0029 [10] issued by the Philippine Food and Drug Administration (FDA), nutraceuticals are classified and registered as food supplements. Food supplements, herbal food/herbal dietary supplement are those that contain herbs and botanicals or products with other nutritional substances. A Certificate of Product Registration (CPR) is issued by FDA for specific health products after evaluation and approval of submitted registration requirements. CPR stipulates the inclusion of the following information: as applicable, documents to substantiate claims such as technical or nutrition health studies or reports, market research studies, certificate of analysis, quantitative analysis and computations, scientific reports or studies published in peer-reviewed scientific journals, among others. Certificate of analysis reflecting critical parameters to determine compliance to applicable standards and regulations must be provided. Food supplements are considered as medium and high risk products with standards of identity hence the certificate of analysis is required. Additional requirements may be sought such as stability study of the finished product and safety data. On initial application, actual representative product sample in commercial presentation with labels must be submitted. As stipulated in the Administrative Order, food supplements shall not have curative or therapeutic claims, Other claims shall be in accordance to existing and relevant labeling guidelines. Administrative Order 2014-0030 [11] from FDA lists the labeling requirements and indication is not on the list. This supports the result of this study where only 2 out of 28 mentioned an indication of the product. Of the two, one is based on the information provided on the website of the chain pharmacy and may not necessarily be on the packaging material. The other one mentions about cleansing which may not qualify as a therapeutic claim. The same administrative order defined advertising and mentioned that advertising and promotional materials shall not make curative or therapeutic claims without scientific data or clinical trials to substantiate such claims. This is contrary to the results of the study where 23 out of 28 advertisements mentions what the food supplement is for, some even specifying disease states. While some advertisements mentions that exercise, proper diet, prescription medications, and food supplements helped to keep their condition in check, some had testimonials from persons who allegedly got better from a disease or condition after taking the food supplement. While FDA asks for scientific reports, these are as applicable and is not a strict mandate and clinical trials are not required to registered a food supplement. ACS Circular 2018-016 Food/Dietary Supplement Advertising Guidelines [12] states that no claims must be made in advertisement, promotion, and marketing materials in the various media for any use of Food/Dietary Supplement which is not contained in the label or approved by the FDA. The document also lists unacceptable advertising claims to which some advertisements violated.



Dosage information is mandated to be part of the packaging label since it informs consumers how to use the product. The products in the study had 26 out of 28 explicitly stating their dosage information but only 1 out of 28 mentioned this in its advertisement. This information is not required in the advertising guidelines document.

Caution is an important information to make consumers aware as to who may take the product and what should be considered when taking the product. This is a requirement stated in the FDA document as well as the document on advertising guidelines. The statement “No Approved Therapeutic Claims” has been changed to *Mahalagang Paalala: Ang (name of product) ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit*. This is according to the Memorandum Circular 2015-003 [13]. In the products studied, 18 out of 28 mentioned some caution in their advertisements while 23 out of 28 had it in their packaging.

Since there are administrative orders and guidelines issued for food supplements, one will expect that these are strictly followed and complied with. It is also expected that the advertisements and the packaging materials will have the same content, especially on the key information which are important to help consumers decide on their purchase.

The advertisements of the 28 products in the study were classified as either exaggeration, where something better or worse than it really is was stated; misinterpretation, where indications were mentioned in the advertisements but the packaging did not say such; or unclassified because they were neither exaggeration nor misinterpretation. Eleven out of twenty-eight products were classified as exaggeration. Most exaggerations were claims on addressing specific disease states and testimonials from individuals saying that a particular medical condition, such as arthritis, urinary problems, among others, were addressed by taking the food supplement. There were no indications or therapeutic claims on the packaging of the food supplement to support the testimony or the information given by the advertisements. Some mentioned that it can address multiple disease states which makes it appear as a wonder preparation. Some will also say the product is 100% effective and has no side effects. Twenty-one out of twenty-eight were classified as misinterpretation. This was the most common finding owing to the mention of a specific use or indication for a food supplement which is not found on the packaging. Dosage information is also rarely included in the advertisements which is important so the consumer will be aware about it even before they see the packaging of the product.

A study looking at regulatory issues involving food supplements revealed that while there are existing policies on such products, there is clamor for stricter and more definitive guidelines for food supplements as they are abundant in the market. The study identified gaps and made recommendations for it. On advertising and promotion, the study noted that there are no penalties for violators and suggested that FDA have a major role in approving and regulating advertisements. Some advertisements have cure-all claims. It was recommended that there should be a technical/scientific body to pre-approve advertisements. There should be guidelines on how to ethically advertise herbal products and these guidelines should be set per product category. It also recommended that there should be a multi-sectoral body composed of private and government sectors, technical group, and the industry, to screen and monitor advertisements and to formulate clear guidelines on how to advertise products [14]. These are relevant findings and recommendations as advertising has become a vital source of information about food supplement for consumers to make a sound purchase decision. Another study notes that public health authorities in the Philippines have issued statements about studies showing ineffectiveness of particular supplements and have warned the public about rampant misleading claims of these products. They have been worried about the way food supplements are being

advertised in making people believe they can cure diseases as endorsed by celebrities and testimonials of cured patients [15].

### **Conclusions**

The key information in advertisements and on the packaging vary when it crucial for consumers in their decision to purchase the food supplement. These differences can be attributed to varying guidelines governing packaging materials and advertisements or to the different agencies monitoring the packaging materials and advertisements. The study found most advertisements to be misinterpretations and to some extent, exaggeration was also observed. Future efforts may be geared towards reevaluating the existing guidelines governing food supplements so that the consumers will be better informed.

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### **References**

- Cision PRNewswire. (n.d.). *Philippines Nutraceuticals Market is Expected to Reach Php 261 Billion in terms of revenues by 2022: Ken Research.* <https://www.prnewswire.com/news-releases/philippines-nutraceuticals-market-is-expected-to-reach-php-261-billion-in-terms-of-revenues-by-2022-ken-research818363489.html>
- Statista. (n.d.). *Share of people taking dietary supplements or nutraceuticals in the Philippines as of July 2020.* <https://www.statista.com/statistics/1183177/philippines-share-of-people-taking-dietary-supplements/>
- Shaito, A., Thuan, D., Phu, H. T., Nguyen, T., Hasan, H., Halabi, S., Abdelhady, S.,
- Nasrallah, G. K., Eid, A. H., & Pintus, G. (2020). Herbal Medicine for Cardiovascular Diseases: Efficacy, Mechanisms, and Safety. *Frontiers in pharmacology*, 11, 422. <https://doi.org/10.3389/fphar.2020.00422>
- Rahayu, Y., Araki, T., & Rosleine, D. (2020). Factors affecting the use of herbal medicines in the universal health coverage system in Indonesia. *Journal of ethnopharmacology*, 260, 112974. <https://doi.org/10.1016/j.jep.2020.112974>
- Allen Nnanwuba A., Ogochukwu Charity E., Ojinime Ebelechukwu O. (2019). Herbal Medicine Broadcast Media Advertisement, Audience Perception and Purchase Decision. *International Journal of Marketing and Communication Studies*, (4)1, 63-79
- Kotler, Philip, Armstrong, Gary, Opresnik, Marc Oliver. (2018). *Principles of marketing* 17th ed. (17th ed., Global Ed.). Harlow: Pearson.
- Statista. (n.d.). *Radio usage among consumers based on frequency in the Philippines in 2018.* <https://www.statista.com/statistics/1096952/philippines-consumer-radio-usagefrequency/>

Statista. (n.d.). *Media market in the Philippines-Statistics and Facts*.  
<https://www.statista.com/topics/6119/media-industry-in-thephilippines/#dossierKeyfigures>

Think With Google. (n.d.). *YouTube: The Philippines' most popular online video platform*.  
<https://www.thinkwithgoogle.com/intl/en-apac/marketing-strategies/video/youtubephilippines-most-popular-online-video-platform/Philippine> Food and Drug Administration. Administrative Order No. 29 Series 2014: Rules and Regulations on the Licensing of Food Establishments and Registration of Processed Food, and Other Food Products, and For Other Purposes. Philippines: FDA 2014

Philippine Food and Drug Administration. Administrative Order No. 30 Series 2014: Revised Rules and Regulations Governing the Labeling of Prepackaged Food Products Further Amending Certain Provisions of Administrative Order No. 88-B s. 1984 or the "Rules and Regulations Governing the Labeling of Prepackaged Food Products Distributed in the Philippines," and For Other Purposes.

Philippines: FDA 2014 Ads Standards Council of the Philippines. Food/Dietary Supplement Advertising Guidelines.

Philippines: 2018 Philippine Food and Drug Administration. Memorandum Circular No. 3 Series 2015: Reiteration of the FDA Requirement for the Change in the Use of the Message/Phrase "No Approved Therapeutic Claim" in Filipino as: "Mahalagang Paalala: Ang (Name of Product) ay hindi gamot at hindi dapat gamitin pang gamot sa anumang uri ng sakit" in all Advertisements, Promotional, and/or Sponsorship Activities or Materials. Philippines: FDA 2015

Robles, Y., Peña, I., Loquias, M., Salenga, R., Tan. K., Ruamero, E. Jr. (2012). Regulatory Issues on traditionally used herbal products, herbal medicines and food supplements in the Philippines. *Journal of Asian Association of Schools of Pharmacy*, (1)3, 170179

Reyes, J., & Ramos, R. (2020). Ethical Practices in the Content of Food Supplement Advertisements. *Asia Pacific Journal of Multidisciplinary Research*, 8(3), 33-43