

Monitoring of Food and Nutrition Information in the Articles of Four Major Daily Newspapers*

Kyung Won Kim,^{1)†} Eun Hye Moon,¹⁾ Yun Ahn, Jung Sook Seo,²⁾
Eun Young Yoon,³⁾ Hyun Joo Bae⁴⁾

Food & Nutrition, College of Natural Sciences,¹⁾ Seoul Women's University, Seoul, Korea

Department of Food & Nutrition,²⁾ Yeungnam University, Gyeongsan, Korea

Department of Food & Nutrition,³⁾ Daejeon University, Daejeon, Korea

Department of Food & Nutrition,⁴⁾ Daegu University, Gyeongsan, Korea

ABSTRACT

This study was done to analyze the contents of food and nutrition information in daily newspapers. Articles in four newspapers (Chosun, Donga, Hankook, Joongang Ilbo) published during November 2003 to April 2004 were monitored. In analysis, 216 articles were used. Classifying the articles by topics, cuisine/cooking (19.4%) and food/nutrition related to diseases (18.1%) were most common. Articles regarding food sanitation or safety, obesity and diet accounted for 12.5%, respectively. Other topics in articles included food culture (11.1%), balanced meals/eating habits (10.6%) and functional foods (7.9%). About 77% of articles were written for unspecified persons. Regarding the types of articles, news articles made up 44% of monitored articles, followed by feature articles (14.8%), advertisement by articles (12.9%), serials by professionals (11.6%), and information of daily life (8.8%). Nineteen percent of articles did not have specific sources, while 20.8% were based on interviews with professionals. Other sources of articles included research reports (14.8%), field reports (12.1%) and literature (8.8%). Contents analysis showed that four-fifth of articles were evaluated as 'contents and titles are consistent', 'not difficult to understand', 'contents are not exaggerated', and 'information is not overgeneralized'. Seventy-one percent of articles were evaluated positively on increasing awareness regarding food/nutrition, while 56.5% were evaluated as providing practical information. The major problems in articles were 'intentional or indirect advertisements of specific items/companies' (74.6% of articles applicable), 'lacking in scientific basis/explanation' (65.3%), 'presenting unbalanced information due to focusing on specific area' (46.7%), 'unclearness of contents' (38.4%), and 'lacking in explanation of technical terms' (35.2%). To provide reliable information, stating the sources of articles clearly and supplementing the articles with scientific basis and balanced information on specific topics are needed. It is also necessary to explain the contents and technical terms clearly and to reduce the contents of intentional, indirect advertisement in nutrition-related articles. (*J Community Nutrition* 7(3) : 156~162, 2005)

KEY WORDS: monitoring · newspapers · food and nutrition · information.

Introduction

With increased life expectancy and economic development, the desire for a healthy life has been increasing. These

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† **Corresponding author** : Kyung Won Kim, Food & Nutrition, College of Natural Sciences, Seoul Women's University, 126 Kongnung 2-dong, Nowon-gu, Seoul 139-774, Korea
Tel : (02) 970-5647, Fax : (02) 976-4049
E-mail : kwkim@swu.ac.kr

days, the general public is exposed to mass media so frequently and they receive health, food and nutrition information from mass media easily (Carruth, Skinner 2001 ; Kim et al. 2001 ; Kim, Kang 1997 ; Kim 1996 ; Young, Hetherington 1996). Accordingly, the amount of health or nutrition information delivered by mass media is increasing rapidly.

Kim et al. (1996) analyzed the nutrition information in two major daily newspapers from 1960 to mid-1990's, and reported that there were only 105 cases of nutrition-related articles in the 1960's, compared to 475 cases in the 1990's. When examined, the contents of nutrition information, articles regarding nutrition and diseases increased significantly,

taking 23% of articles regarding foods and nutrition in the 1960's and 43% in the 1990's. Articles regarding health foods also increased from 5% in the 1960's to 21% in the 1990's, while articles on life cycle nutrition decreased from 58% to 33% during the same periods. These changes in topics of articles have reflected the increased interests or concerns toward chronic diseases and nutritional management for health. In a study of monitoring TV programs, Moon & Jang(2005) reported that 25.3% of monitored TV program cases dealt with food or nutrition information.

Nutrition or health information through mass media such as newspapers and television has had positive influence on the health status of the public by providing information and helping them adopt desirable health behaviors. On the other hand, mass media might have adverse influence if they deliver incorrect or biased information(Kim 1998 ; Kim 1999). In fact, previous studies of nutrition information monitoring reported that misinformed, unclear, overemphasized, biased or unfair information was frequently delivered through television, newspapers and magazines(Choi et al. 1997 ; Kim 1996 ; Lee, Lee 1998b ; Son 1999 ; Yoon 1998). Ryu et al.(2003) found that about 70% of 237 cases of TV programs monitored were judged as inaccurate or inappropriate in terms of information contents. In the analysis of articles in the daily newspapers or magazines, Moon et al.(2004a, 2004b) reported that 20% of the monitored articles in newspapers and 22.3% in women's magazines provided inaccurate information on health, food and nutrition. They also reported that indirect advertisement of specific items, lack of scientific basis of contents, and unclear presentation of contents were the major problems in unsuitable articles.

Newspapers are the type of mass media that reaches across diverse age groups in daily lives. Recently, it is easier to access articles in daily newspapers using the internet. People also tend to believe the contents in daily newspapers to a certain extent. Therefore, newspapers have an influence on the opinions and behaviors of the general public in many ways. In the survey of representative samples, 67% stated that mass media was the major source of nutrition information(Nam et al. 1995). About seventy percent of U.S. consumers cited that newspapers were the most frequent and easily accessible sources of food and nutrition information(Kim 1998).

Taking into account that newspapers are powerful sources of information to the public, the food or nutrition information in the articles needs to be monitored continuously. This

study was done to monitor and analyze the topics, types, and contents of the food and nutrition information that have been recently published in daily newspapers recently.

Methods

1. Newspapers and period for monitoring

In this study, four major newspapers, including Chosun Ilbo, Donga Ilbo, Hankook Ilbo and Joongang Ilbo, were chosen to get newspaper articles for monitoring. Articles were collected using search programs on websites of each newspaper publishing company. The key words used for collecting articles included 'nutrition', 'nutrition labeling', 'functional foods', 'food sanitation', and 'food safety'. Articles written between the period of November 2003 and April 2004 were searched.

Except for inappropriate articles, 216 articles were used in monitoring. Articles excluded were commercial advertisements and those that were not related to the topics of food or nutrition. For example, when we used the keyword 'nutrition', so many articles regarding the region of 'Youngyang' were found and these were discarded.

2. The methods of monitoring articles

To monitor the newspaper articles, the monitoring form was made based on the previous studies of monitoring nutrition information in printed materials(Moon et al. 2004a ; Son 1999). Personnel for monitoring was composed of a professor and two graduate students majoring in food and nutrition. Before the actual monitoring, meetings and training was done to reduce the between-person variation in evaluating the contents of articles to get more valid results.

The monitoring form included variables such as topics (nutrition related to disease, cuisine/cooking, balanced meals, obesity and diet, functional foods, etc.), target groups of articles(children, adults, etc.), types of articles (news articles, interview articles, serials, case reports, feature articles, etc.), sources of articles (research reports, filed reports, interviews, literatures, etc.), and contents analysis of articles. Contents of articles were evaluated using two appropriate items (increased awareness regarding nutrition, providing practical information), and 11 inappropriate items(inconsistency in titles and contents, lack of scientific basis, unclearness of contents, difficulty in understanding, unbalanced presentation of information, advertisements, etc.)(Table 1). Each item in

content analysis was evaluated using 4 measures of 'strongly agree', 'agree', 'disagree' and 'not applicable'.

3. Data analysis

Data was coded on the Excel program, and SAS (Statistical Analysis System) 8.2 Package was used to describe the data. For each variable, the number of cases and percentages are shown.

Results

The monitored articles were quite evenly collected from the four newspaper publishing companies. Among the 216 articles monitored, 57 articles (26.4%) were from Donga Ilbo and 55 articles (25.5%) were from Hankook Ilbo (Table 2). Chosun Ilbo made up 24.5%, and Joongang Ilbo accounted for 23.6% of articles monitored. This suggested that major daily newspapers cover the topics of nutrition or food quite

Table 1. The assessment tools for monitoring of newspaper articles

The assessment tools	
Inappropriate	
1.	The contents of articles are not consistent to the titles.
2.	Technical terms are not explained well.
3.	The scientific basis or explanations are lacking.
4.	The contents are not clear.
5.	It is difficult to understand the contents.
6.	The presentation of information is unbalanced due to focusing on specific area.
7.	The contents are exaggerated.
8.	The information of some cases is overgeneralized.
9.	The findings of animal experiments are overapplied to the humans.
10.	There are intentional or indirect advertisements of specific items or some companies.
11.	Foods are described as having the effect of medicines (e.g., remedial results).
Appropriate	
12.	The presented information helps to increase awareness or concerns related to food and nutrition.
13.	The presented information is practical or applicable to daily lives.

Table 2. Number of analyzed articles by the newspaper publishing company

Newspapers	n	%
Chosun Ilbo	53	24.5
Donga Ilbo	57	26.4
Hankook Ilbo	55	25.5
Joongang Ilbo	51	23.6
Total	216	100.0

similarly in quantity.

1. Topics and target groups of monitored articles

Table 3 shows the distribution of monitored articles by topics. The most common topics of articles were those about cuisine and cooking (42 articles, 19.4%), followed by those regarding food and nutrition for diseases (39 articles, 18.1%). Articles related to food sanitation or food safety, obesity and diet were 12.5% (27 articles), respectively. Some other topics covered were food culture (11.1%), balanced meals or eating habits (10.6%), functional foods (7.9%), introduction of new foods (5.6%), and introduction to popular restaurants (2.3%).

When we examined the target groups of articles, about three-quarters of articles (166 articles) were written for unspecified persons (Table 3). Twenty-four articles (11.1%) were written for adults, while 17 articles (7.9%) were for children. Compared to these, there were few articles written for older adults (1.9%), adolescents (1.4%), or patients (0.9%).

2. Types and sources of monitored articles

When types of monitored articles were examined, most common were news articles (95 articles) which accounted for 44.0% (Table 4). These were followed by feature articles (32 articles, 14.8%), advertisement by articles (28 articles, 12.9%), and serials by professionals (25 articles, 11.6%).

Table 3. Topics and target groups of monitored articles

Variables	n	%
Topics		
Functional foods	17	7.9
Foods : sanitation, safety, adverse effects	27	12.5
Food and nutrition related to diseases	39	18.1
Cuisine and cooking	42	19.4
Balanced meals, eating habits	23	10.6
Obesity and diet	27	12.5
Introduction of new foods	12	5.6
Introduction to famous restaurants	5	2.3
Others : food culture, etc.	24	11.1
Total	216	100.0
Target groups		
Unspecified persons	166	76.8
Children	17	7.9
Adolescents	3	1.4
Adults	24	11.1
Older adults	4	1.9
Patients	2	0.9
Total	216	100.0

Information for daily life or living were 8.8%, and interview articles were 5.6%. Case reports were smaller percentages (2.3%). Considering the fact that commercial advertisements regarding food and nutrition in the newspapers were not included in this study, the proportion of advertisements appearing in newspaper articles seemed to be high.

Table 4. Types and sources of monitored articles

Variables	N	%
Types of articles		
News articles/Reports	95	44.0
Interview articles	12	5.6
Serials by professionals	25	11.6
Case reports	5	2.3
Feature articles	32	14.8
Information to daily life or living	19	8.8
Advertisement by articles	28	12.9
Total	216	100.0
Sources of articles		
Research reports	32	14.8
Field reports	26	12.1
Interviews with people/entertainers	6	2.8
Interviews with professionals	45	20.8
Literatures (books, journals)	19	8.8
Cases/Experiments	7	3.2
No specific sources	41	19.0
Others	40	18.5
Total	216	100.0

With respect to the sources of articles, 19.0% of articles (41 articles) did not have specific sources. In contrast, 20.8% of articles (45 articles) were based on interviews with professionals (Table 4). The other common sources of articles were research reports (14.8%), field reports (12.1%), and literature such as books and journals (8.8%). Articles based on cases or experiments and interviews with people or entertainers were only 3.2%, 2.8%, respectively.

3. Contents analysis of monitored articles

The results regarding contents analysis of monitored articles are presented in Table 5. Content analyses were done using 13 items, including 11 negative or inappropriate aspects and 2 positive or appropriate aspects. With respect to the item of 'inconsistency in title and contents of articles', 80.5% (174 articles) were evaluated as 'disagree', showing that most of the contents were consistent to the titles. Similarly, most articles were evaluated as 'not difficult to understand' (172 articles, 79.6%), 'contents are not exaggerated' (176 articles, 81.5%), and 'information is not overgeneralized' (162 articles, 75%).

Compared to these results, in the item of 'lacking in scientific basis or explanation', 51.4% of articles were rated as 'agree' and 13.9% as 'strongly agree'. In addition, about half of the articles were evaluated as 'presenting unbalanced information due to focusing on specific areas'; 22.2% of articles were recorded as 'strongly agree' and 24.5% as

Table 5. Contents analysis of monitored articles

Analysis tools					n(%)
	Strongly agree	Agree	Disagree	Not applicable	Total
Inappropriate					
1. Inconsistency in title and contents of articles	12(5.6)	30(13.9)	174(80.5)	0(0.0)	216(100.0)
2. Lack of explanation of technical terms	22(10.2)	54(25.0)	105(48.6)	35(16.2)	216(100.0)
3. Lack of scientific basis or explanations	30(13.9)	111(51.4)	71(32.9)	4(1.8)	216(100.0)
4. Unclearness of contents	9(4.2)	74(34.2)	132(61.1)	1(0.5)	216(100.0)
5. Difficulty in understanding the contents	16(7.4)	28(13.0)	172(79.6)	0(0.0)	216(100.0)
6. Unbalanced presentation of information by focusing on specific area	48(22.2)	53(24.5)	114(52.8)	1(0.5)	216(100.0)
7. Exaggeration of contents	13(6.0)	27(12.5)	176(81.5)	0(0.0)	216(100.0)
8. Overgeneralization of information of some cases	7(3.2)	47(21.8)	162(75.0)	0(0.0)	216(100.0)
9. Overapplication of the animal experiments to the humans	2(0.9)	3(1.4)	8(3.7)	203(94.0)	216(100.0)
10. Intentional or indirect advertisements of specific items or some companies	40(18.5)	16(7.4)	19(8.8)	141(65.3)	216(100.0)
11. Incorrect presentation of function of foods (e.g., remedial results)	25(11.6)	19(8.8)	58(26.8)	114(52.8)	216(100.0)
Appropriate					
12. Increased awareness or concerns related to food and nutrition	57(26.4)	97(44.9)	55(25.5)	7(3.2)	216(100.0)
13. Provision of practical, applicable information	51(23.6)	71(32.9)	89(41.2)	5(2.3)	216(100.0)

‘agree’ on this item.

With respect to the item of ‘unclearness of contents’, 34.2% of articles were measured as ‘agree’ and 4.2% of articles as ‘strongly agree’. This indicated the need to present the nutrition information more clearly in the newspaper articles. About a third of the articles were evaluated as ‘lacking in explanation of technical terms’; 25% of articles were coded as ‘agree’ and 10.2% as ‘strongly agree’ on this item.

Many articles were coded as ‘not applicable’ on the items, including ‘overapplication of the animal experiments to the humans’ (94% of articles monitored), ‘intentional or indirect advertisements of specific items some companies’ (65.3%), ‘incorrect presentation of function of foods’ (52.8% of articles). Among 75 articles that measured the item of ‘intentional or indirect advertisements of specific items or some companies’, 40 articles (53.3% of articles applicable) were evaluated as ‘strongly agree’ and 16 articles (21.3% of articles applicable) as ‘agree’. This suggested that indirect advertisement is quite popular in newspaper articles related to food and nutrition. Out of 102 articles that were applicable to the item of ‘foods are incorrectly described as having remedial effects’, 43.1% were rated as ‘strongly agree’ or ‘agree’.

With respect to the item of ‘increased awareness or concerns related to food and nutrition’; 26.4% of articles were evaluated as ‘strongly agree’ and 44.9% as ‘agree’ (Table 5). In the item of ‘the presented information is practical and applicable’, 23.6% of articles were measured as ‘strongly agree’ and 32.9% of articles as ‘agree’. These results showed that only one-fourth of monitored articles were evaluated as very positive in these two items.

Discussion

This study monitored four major newspapers that dealt with food or nutrition information and published during November 2003 to April 2004. Nutrition information was evenly published through the daily newspapers during this period of time, and this might reflect the steady increased interests and concerns of the public toward nutrition and health.

In this study, common topics of articles were cuisine and cooking (19.4%), food and nutrition related to diseases (18.1%), food sanitation and safety, and obesity and diet (12.5%, respectively). Moon et al. (2004a) analyzed the food and

nutrition information from articles and advertisements in the daily newspapers for the year 2002, and stated that frequently reported topics were introducing to foods or restaurants (24.7%) and cuisine and cooking (21.0%), followed by topics of introducing new foods (11.8%), food safety and toxicity (10.9%), and diseases and foods (9.0%). The results of Moon et al. (2004a) are somewhat different from the findings of the current study, in that topics such as nutrition/foods related to diseases and obesity and diets were not as frequently reported as in the current study. Son (1999) also reported that major topics of newspaper articles were obesity and diets (21.4%), general health (19.2%), diseases and foods (14.4%) and food safety and adverse effects (11.1%). In women’s magazines, food and cooking made up 74% of articles regarding food and nutrition and showing different patterns of topics from in the newspapers (Moon et al. 2004b).

About 77% of monitored articles in this study were written for the general public. Media, such as women’s magazines, are targeting ladies in the 20’s or 30’s (Moon et al. 2004b); in contrast, daily newspapers cover broader age groups and publish articles for the general public instead of targeting specific age groups.

In the current study, news articles were 44% of monitored articles. News articles accounted for 48.8% of monitored articles in 1999 (Son 1999), and 43% in 2002 (Moon et al. 2004a), which was similar to this study. Since news articles are the major types in newspapers, it is understandable that news articles also take higher percentages in food and nutrition information. However, the percentages of feature articles (14.8%) or serials by professionals (11.6%) found in this study were higher than those reported by Son (1999) or Moon’s et al study (2004a). Instead, articles regarding ‘information to daily life or living’ (8.8% in this study vs. 17.2% in Moon’s et al study) or interview articles (5.6% vs. 12.4%) were more common in Moon’s et al study (2004a). This might represent the trend according to the monitoring period.

When examined, the articles by sources and interviews with professionals were most common, accounting for 20.8% of monitored articles in the current study. This percentage is two times higher than that reported by Son (1999). In Moon’s et al study (2004a), filed reports were 30.5% of articles and interviews with professionals accounted for 13.8%. The interviews with professionals as major sources in the current study might reflect the needs to deliver correct nutrition information to the public. The interviews, however, were

done frequently with doctors or oriental medicine doctors rather than nutrition professionals (Lee, Lee 1998a ; Lee, Lee 1998b). It is desirable that nutritional professionals act more to deliver correct nutrition information to the public using mass media. In the current study, 19% of articles did not have specific sources, which was higher than that reported by Moon et al. (3.5%, 2004a). Kang et al. (2004) found that 55% of internet sites providing nutrition information did not have sources and that newspapers or television programs were the major sources in case of giving sources. It is suggested that newspaper articles be based on sound sources to provide valid and reliable nutrition information.

The current study showed that about four-fifths of monitored articles were evaluated as 'contents and titles are consistent', 'not difficult to understand', 'contents are not exaggerated', and 'information is not overgeneralized'. Since the daily newspapers are targeting the general public, it seemed that articles regarding food and nutrition are also written in easy-to-understand words. Moon et al. (2004a) suggested that 26% of monitored newspaper articles had appropriate contents. In cases of positively evaluated, the articles were easy to understand and reliable as well as providing usable information.

In contrast, the major problems in monitored articles in this study were identified as 'intentional or indirect advertisements of specific items or companies', 'lacking in scientific basis or explanation', 'presenting unbalanced information due to focusing on specific area', 'unclearness of contents', and 'lacking in explanation of technical terms'. These areas should be considered in preparing newspaper articles related to food and nutrition. In Son's study (1999), the problem of indirect advertisement in articles was 5.8% of monitored printed materials, however, intentional or indirect advertisement was quite serious in the current study and the Moon et al study (2004a, 2004b), suggesting a significant increase of indirect advertisement through the articles during the past few years. Moon et al. (2004a, 2004b) found that 20% of newspaper articles and 22% of women's magazines had inappropriate content. They also pointed out that 'indirect advertisement', 'not providing clear alternatives for behavioral change', 'lack in scientific basis', 'unclearness in contents or topics' were the major problems of inappropriate articles. Son (1999) also indicated that one-fourth of monitored articles did not have sources nor scientific basis. In the study of nutrition content on the internet, Ly et al. (2004)

pointed out that the major negative aspects of offered information were 'not having scientific basis', 'simplification of specific contents', and 'exaggeration of contents'. These results suggested that nutrition information be based on scientific or reliable sources.

In the current study, 71.3% of articles were evaluated positively on 'increased awareness or concerns related to food and nutrition', while 56.5% of articles were evaluated positively on 'provision of practical information'. This suggested that newspaper articles were quite helpful to increase awareness or concerns, although more effort is needed to provide applicable information through newspaper articles regarding nutrition.

Mass media, including newspapers, have an influence on daily lives and health of the public positively and negatively (Kim 1999). Based on the current study, it is suggested that newspaper articles regarding nutrition information be supplemented by providing scientific basis and providing balanced information on specific topics, as well as clearly stating the contents and explaining the technical terms. In addition, it is desirable to reduce the contents of intentional or indirect advertisement in nutrition-related articles.

Summary and Conclusion

The purpose of this study was to monitor and evaluate the topics, types and contents of food and nutrition information in daily newspapers. Four major newspapers (Chosun Ilbo, Donga Ilbo, Hankook Ilbo and Joongang Ilbo) were chosen for monitoring of articles which were published during the six month period of November 2003 to April 2004. Two hundred sixteen articles were used in the final analysis and the results are as follows:

1) Classification of articles by topics showed that cuisine and cooking (19.4% of monitored articles) and food/ nutrition related to diseases (18.1%) were common. Articles regarding food sanitation/food safety, obesity and diet made up 12.5%, respectively. Other topics were food culture (11.1%), balanced meals/eating habits (10.6%), functional foods (7.9%), introduction of new foods (5.6%) or restaurants (2.3%). About 77% of articles were written for the general public, not aimed for specific age groups.

2) With respect to the types of articles, news articles (44%) had the highest percentage, followed by feature articles (14.8%), advertisement by articles (12.9%) and serials

by professionals (11.6%). Information to daily life were 8.8%, and interview articles and case reports were 5.6%, 2.3%, respectively.

3) Nineteen percent of monitored articles did not have specific sources, while 20.8% were based on interviews with professionals. The other common sources were research reports (14.8%), field reports (12.1%) and literature (8.8%).

4) The content analysis showed that most of monitored articles were evaluated as 'contents and titles are consistent' (80.5%), 'not difficult to understand' (79.6%), 'contents are not exaggerated' (81.5%), and 'information is not overgeneralized' (75.0%). Seventy-one percent of articles were evaluated positively on increasing awareness or concerns related to food and nutrition, while 56.5% of articles were evaluated as providing practical information.

5) In contrast, the major problems in monitored articles were 'intentional or indirect advertisements of specific items or companies' (74.6% of articles applicable), 'lacking in scientific basis or explanation' (65.3% of monitored articles), 'presenting unbalanced information due to focusing on specific area' (46.7%), 'unclearness of contents' (38.4%), and 'lacking in explanation of technical terms' (35.2%) in this study. These areas should be considered in preparing newspaper articles related to food and nutrition.

6) In conclusion, it is suggested to state the sources of articles clearly and to supplement the newspaper articles regard nutrition information by providing scientific basis and providing balanced information on specific topics. It is also necessary to explain the contents and technical terms more clearly. It is desirable to reduce the contents of intentional or indirect advertisement in nutrition-related articles.

References

- 김기태(1998) : 대중매체가 국민건강에 미치는 영향과 중요성. 한국영양학회 1998년 춘계학술대회 초록집. pp.8-13
- 김기태(1999) : 국민건강 관련정보의 역할과 중요성. 대한영양사회 식품영양 모니터링 심포지엄 자료집. pp.8-16
- 김초일(1998) : 영양관련 보도의 현실. 한국영양학회 춘계학술대회 초록집. pp.14-16
- 남정자, 최정수, 계훈방(1995) : 한국인의 보건의식형태. 한국보건사회연구원 연구보고서 95-26. pp.128-129
- 손숙미(1999) : 신문매체에 나타난 식품영양정보. 대한영양사회 식품영양 모니터링 심포지엄 자료집. pp.52-72
- 윤진숙(1998) : 올바른 영양정보 보급을 위한 대중매체 ; 전문가와 정부의 역할. 한국영양학회 1998년도 춘계학술대회 초록집. pp.17-21
- Carruth BR, Skinner JD(2001) : Mothers' sources of information about feeding their children ages 2 months to 54 months. *J Nutr Edu Behav* 33 (3) : 143-147
- Choi BS, Lee IS, Lee YE(1997) : The study of nutrition-related messages in food advertising by content analysis of a women's magazine : Women's Dong-A. *Korean J Diet Culture* 12(3) : 309-321
- Kang HK, Kang MH, Yu KH, Ly SY(2004) : Monitoring of on-line nutrition information-analysis of meta data. *Korean J Nutr* 37(8) : 688-700
- Kim EK, Park TS, Park YS, Jang MR, Lee KW(1996) : The content analysis of food and nutrition articles in the Korean newspapers-from January 1960 to June 1996-II. Nutrition in life cycle, health and disease. *Korean J Diet Culture* 11 (4) : 527-538
- Kim HS(1996) : Television food advertisement : review and recommendation. *Korean J Diet Culture* 11 (4) : 507-515
- Kim JS, Lee MY, Jung SH, Lee JH, Kim HD, Lee JH, Hyun TS, Jang KJ(2001) : A study on supplements Used in the middle-aged and elderly. *Korean J Comm Nutr* 6(5) : 798-808
- Kim KH, Kang KJ(1997) : Children's attitudes toward food advertisement on children's television program. *Korean J Soc Food Sci* 13 (5) : 648-660
- Lee JW, Lee BK(1998a) : Analyzing the producer's attitudes toward specialist's advice and the panelist constitution of nutrition-related TV Programs. *Korean J Comm Nutr* 6(5) : 317-328
- Lee JW, Lee BK(1998b) : Examination about the television's role of nutrition education through content analysis of nutrition-related programs. *Korean J Comm Nutr* 3(4) : 642-654
- Ly SY, Kang HK, Yang IS, Kang MH (2004) : Analysis of contents of nutrition information on the internet. *J Korean Diet Assoc* 10(2) : 224-234
- Moon HK, Yong MJ, Jang YJ(2004a) : Analysis of food and nutrition information for articles and advertisements in daily newspapers (Year 2002). *J Korean Diet Assoc* 10(2) : 143-158
- Moon HK, Yong MJ, Jang YJ(2004b) : Quantitative and qualitative analysis of food and nutrition information in women's magazines (Year 2002). *J Korean Diet Assoc* 10(2) : 159-173
- Ryu HS, Yang IS, Kim HS (2003) : The monitoring of information about food and nutrition presented throughout various television broadcast media. *Korean J Nutr* 36(5) : 508-514
- Young B, Hetherington M (1996) : The literature on advertising and children's food choices. *Nutr Food Sci* 5(Sep/Oct) : 15-18