

# Developmental and health content in popular parenting publications

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## Abstract

Parenting magazines are an important source of health information for women, mothers, and guardians. The purpose of this study was to examine the types of health articles featured from 2010 through 2015 in the popular magazine *Parents*, which is ubiquitous in almost all waiting areas in pediatric offices. Mostly mothers of young children read this publication and it contains short, easy to read articles on developmental milestones, advice for parenting challenges faced during the school years, and parenting guidance on behavioral matters. All articles included in the Table of Contents of each magazine were considered. Health-related categories were created and a dichotomous coding scheme (yes/no) was used to determine if the information was present in the article. The categories included: behavior and development; cognitive development; emotional health; infections and hygiene; allergies, eczema, and asthma; eye health; teeth and dental care; breast milk and formula; gastrointestinal issues; nutrition; weight and exercise; vaccines; medications; sun exposure and skin health; chronic disease; cancer; sleep; reproduction; chemical exposure; injury and safety; pregnancy; electronics; emergencies; alternative and home remedies; smoking; and violence. 24.6% of the articles in *Parents* were about health. The most common health article theme was behavior and development (191 total articles) followed by injury and safety (80 articles) and infections and hygiene (43 articles). Although *Parents* is shedding light on a plethora of important health topics that many moms are concerned about, magazines typically are not a reliable source to obtain health information. Further research is needed to determine the extent to which articles published within parenting magazines are truly reliable and if readers trust the health information put forth in these magazines.

## Introduction

Parenting magazines are an important source of health information for women, mothers, and guardians. Mass media, including print magazines, play a role in supporting and teaching parents [1]. In a nationally representative sample, 60% of first time parents and 62% of parents of children ages birth to eight months old turned to parenting magazines at least once a month for parenting advice [2]. Additionally, nearly half of parents reported that the parenting information from magazines has a major (9%) or moderate (37%) influence on their parenting approach [2].

Parenting magazines often contain advertisements for children's products, such as toys,<sup>3</sup> foods and beverages,<sup>4</sup> infant formulas, toothpastes, children's vitamins, and skin products [5-10]. Health professionals have scrutinized these products and their findings indicate that these products are not always safe, healthy, or promoting valid educational messages to women and parents. For example, Basch *et al.* [11] looked at the images of children in *Parents* and recorded that 88.3% of the 11,018 children pictured in the magazines were sedentary. Pitt *et al.* [12] found that 1 in every 6 advertisements in parenting magazines contained messages that were not consistent with recommendations by the American Academy of Pediatrics and 58.6% of these inconsistencies were potentially life threatening. Chen *et al.* [13] found that 90% of the advertisements for infant and toddler food products made nutritional or health claims in popular Taiwanese pregnancy and early pregnancy magazines. Nutritional or health claims may be a way to entice parents to purchase a product. When mothers were exposed to baby formula advertisements, they were less likely to

start breastfeeding and, if they did, they were influenced to breastfeed for a shorter period of time [13].

The media can play an important role in disseminating health information to women [14]. Consumers seek health information from multiple media sources including television, the Internet, books, and magazines [15]. However, this information may not always be reliable as journalists may misinterpret scientific findings [16]. Healthcare professionals are the most valid source for health information; if not readily available, individuals tend to consult magazines, the Internet, family, and other sources for information. By knowing where their patients get information, health professionals could optimize care and compliance with health objectives [15].

The purpose of this study was to examine the types of health articles featured over six years (2010 through 2015) in the popular magazine *Parents*, which is ubiquitous in the waiting rooms at pediatric offices. Mostly mothers of young children read this publication and it contains short, easy to read articles on developmental milestones, advice for parenting challenges faced during the school years, and parenting

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guidance on behavioral matters. To our knowledge, this is the first study looking at the types of health articles in *Parents*.

## Materials and methods

According to the 2017 Media Kit for *Parents*, current readership is 13.7 million, with 2.5 million Twitter followers, and 1.5 million “likes” on Facebook [17]. Furthermore, 11,677,000 of the readers are women with a median age of 35.7 years [18]. Only 30% of the female readers have completed a college degree and only 55% of female readers have a household income greater than \$50,000 [18]. Given *Parents* documented popularity, this magazine was the focus of our study. The sample consisted of 72 issues of *Parents* over a 6-year period: January 2010 to December 2015. A coding sheet was adapted from our previous study aimed to gather and categorize information related to magazine content. This study was a subsidiary of a larger project, which focused on magazine advertising [3]. This study, however, focused on article content. All articles included in the Table of Contents of each magazine were considered. Certain sections, which appeared in the Table of Contents on a monthly basis, were not included in this study. These sections were: Letters to the Editor, Mom to Mom, Meet Our Advisors, Parents to Parents, Parents’ Last Laugh, and Recipes at a Glance.

Coding was completed by one coder (V.C.). The first step in the coding process was to determine the total number of pages in the magazine. Next, the coder counted how many articles were in each issue by looking at the Table of Contents. The coder then recorded how many of the articles were health-related. Finally, the coder read each article to determine the health topic(s) being presented. The month and year of each magazine was recorded. Health-related categories were created and a dichotomous coding scheme (yes/no) was used to determine if the information was present in the article. The categories were as follows: behavior and development (e.g., ADHD, autism); cognitive development; emotional health; infections and hygiene; allergies, eczema, and asthma; eye health; teeth and dental care; breast milk and formula; gastrointestinal issues; nutrition; weight and exercise; vaccines; medications; sun exposure and skin health; chronic disease (e.g., diabetes, heart disease); cancer; sleep; reproduction (e.g., sexual health, puberty); chemical exposure; injury and safety (e.g., preventing physical injury, product recalls); pregnancy (e.g., risks, symptoms); electronics (e.g., television, screen time); emergencies (e.g., preparedness, symptoms of conditions needing urgent care); alternative and home remedies; smoking; and violence. Articles with multiple health themes were coded in all applicable categories. For example, if an article referred to both autism and nutritional advice, such as a gluten free diet, it was coded for both categories.

Magazine issues were grouped by year (Table 1) and by month (Table 2) of publication. For each group, we found the total number of articles containing each theme. We used SPSS (version 23) to perform all statistical tests. We compared these groups using one-way Analysis of Variance (ANOVA) tests. These analyses were based on the mean number of articles containing the theme of interest in the issues of each group. We considered results with  $p < 0.05$  to be significant. Ethics approval was not required as the Institutional Review Board at William Paterson University does not review studies that do not involve human subjects.

## Results

### Number and length of articles

A total of 2,185 articles in the 72 magazine issues were analyzed, for an average of 30.3 articles per issue. Compared to those from earlier

years, issues published in 2014 and 2015 had significantly fewer pages per issue ( $p = 0.026$ ) and significantly fewer articles per issue ( $p < 0.001$ ). Issue lengths decreased from 208.5 pages per issue in 2010 to 153.8 pages per issue in 2015. Issues published in January and February were shorter ( $p < 0.001$ ) and had fewer articles per issue ( $p < 0.001$ ) on average when compared to issues published in other months. Of the 2,185 articles, 24.6% (538 articles) were related to health. On average, there were 7.5 health articles per issue. The highest number of health articles was published in 2012 (104 total health articles) and 2013 (109 total health articles) ( $p < 0.001$ ).

### Content of published articles

The most common health article theme was behavior and development (191 total articles), including identifying normal child behaviors and developmental disorders. The next most common theme was injury and safety (80 articles). This included product recalls and measures to prevent physical injury. There were 43 health articles regarding infections and hygiene, such as symptoms of the common cold and ways to prevent it. Health articles related to nutrition (57 articles) and weight loss/exercise (27 articles) were also common.

Regarding trends in the appearance of specific health content by year, notably more health articles about injury and safety were published in 2012 and 2013 than in other years ( $p = 0.010$ ). The number of health articles about nutrition also peaked during 2012 (14 articles,  $p = 0.035$ ). While there were no health articles about the use of electronics in 2010 or 2011, there were at least three published each year from 2013 to 2015 ( $p = 0.015$ ). Health articles regarding medications for children peaked in frequency in 2013 ( $p = 0.030$ ). Health articles related to cognitive development were significantly ( $p = 0.003$ ) more common in 2014 and 2015 than in previous years. Analyses of content type by month of publication, indicated that the only significant difference was that more health articles about sun exposure and skin health were published in the month of June ( $p = 0.009$ ).

## Discussion and conclusions

Our study found that nearly 25% of the articles published in *Parents* in the past 6 years were about health. Although *Parents* is shedding light on a plethora of important health topics that many moms are concerned about, magazines typically are not a reliable source to obtain health information. Reynolds & LoRusso (2016) [16] looked at the sources of health information in women’s fitness magazines and found that the most common source of information was from clinical and professional experts, followed by multiple sources used in a single article, including celebrities, research studies, real people, and the editorial team.

The decline in magazine pages and articles in 2014 and 2015 may be related to the decline in *Parents*’ print advertising and an increase in online advertising, as the world is shifting to being predominantly technology based [19].

Articles about skin health and safety occurred mostly in the summer month of June. This is not surprising since women and children spend more time outside in the warmer weather, and therefore, such articles address parents’ seasonal concerns. This also allows for timely advertising of relevant products, and possibly product placement.

Behavior and development was the most popular type of health article identified in our study. According to one study analyzing woman’s magazines in Canada, articles about managing children’s behavior was more prominent in 1990-2010, than in 1945-1956 [20].

**Table 1.** Themes of articles by year of publication

	Year of Publication								p*
	Total	2010	2011	2012	2013	2014	2015		
Total pages	13134	2502	2315	2113	2393	1965	1846		
Average pages per issue	182.4	208.5	192.9	176.1	199.4	163.8	153.8	<b>0.026</b>	
Number of articles	2185	418	386	387	373	318	303		
Average articles per issue	30.3	34.8	32.2	32.3	31.1	26.5	25.3	<b>&lt;0.001</b>	
Number of health articles	538	61	87	104	109	100	77		
Average health articles per issue	7.5	5.1	7.3	8.7	9.1	8.3	6.4	<b>&lt;0.001</b>	
<b>Article Themes</b>									
Behavior & Development	191	22	31	40	33	37	28		0.212
Injury & Safety	80	11	13	18	16	15	7		<b>0.010</b>
Nutrition	57	10	2	14	10	11	10		<b>0.035</b>
Infections & Hygiene	43	9	7	8	7	5	7		0.832
Allergies, Eczema & Asthma	34	4	7	7	6	6	4		0.787
Sleep	34	3	6	3	10	8	4		0.345
Emotional Health	32	2	4	4	12	8	2		0.053
Reproduction	31	5	2	3	4	7	10		0.128
Weight & Exercise	27	5	6	6	0	6	4		0.115
Teeth & Dentistry	24	3	6	5	5	3	2		0.599
Breastmilk & Formula	23	5	2	2	5	5	4		0.697
Cognitive Development	20	0	1	0	2	7	10		<b>0.003</b>
Medications	18	0	4	1	8	1	4		<b>0.030</b>
Sun Exposure & Skin Health	17	2	4	3	5	2	1		0.586
Vaccines	16	1	3	2	3	2	5		0.425
Pregnancy	16	2	4	4	3	2	1		0.669
Electronics	13	0	0	2	5	3	3		<b>0.015</b>
Chemical Exposure	13	3	2	0	2	3	3		0.618
Emergencies	11	1	3	2	2	3	0		0.518
Gastrointestinal Issues	9	1	1	1	1	3	2		0.768
Chronic Diseases	9	0	0	3	2	2	2		0.308
Cancer	8	0	1	2	2	2	1		0.741
Eye Health	6	2	1	1	0	1	1		0.825
Alternative & Home Remedies	6	1	1	1	1	2	0		0.910
Smoking	5	2	1	1	1	0	0		0.619
Violence	2	0	0	1	0	1	0		0.514

\*One-way ANOVA of mean number of articles; numbers in bold are significant (p<0.05)

**Table 2.** Themes of articles by month of publication

	Month of Publication													p*
	Total	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	
Total pages	13134	616	786	1039	1080	1184	1083	1012	1150	1519	1238	1275	1152	
Average pages per issue	182.4	102.7	131	173.2	180	197.3	180.5	168.7	191.7	253.2	206.3	212.5	192	<b>&lt;0.001</b>
Total number of articles	2185	130	150	192	182	193	186	176	198	231	189	190	168	
Average articles per issue	30.3	21.7	25	32	30.3	32.2	31	29.3	33	38.5	31.5	31.7	28	<b>&lt;0.001</b>
Total number of health articles	538	35	28	42	50	51	49	41	45	53	41	47	56	
Average health articles per issue	7.5	5.8	4.7	7.0	8.3	8.5	8.2	6.8	7.5	8.8	6.8	7.8	9.3	0.010
<b>Article Themes</b>														
Behavior & Development	191	14	10	15	22	16	19	17	13	14	15	14	22	0.652
Injury & Safety	80	3	4	6	6	8	9	6	5	9	9	7	8	0.127
Nutrition	57	1	2	9	5	4	4	5	2	7	5	6	7	0.145
Infections & Hygiene	43	3	2	4	4	4	3	2	3	3	5	3	7	0.700
Allergies, Eczema & Asthma	34	1	1	2	5	5	1	1	1	4	5	2	6	0.032
Sleep	34	3	0	6	2	2	0	4	3	2	3	5	4	0.392
Emotional Health	32	3	4	1	2	2	2	1	5	4	0	3	5	0.649
Reproduction	31	0	2	1	2	1	3	2	5	4	3	3	5	0.481
Weight & Exercise	27	1	2	3	4	1	4	2	2	3	1	2	2	0.828
Teeth & Dentistry	24	3	2	0	3	3	1	2	0	4	2	2	2	0.602
Breast milk & Formula	23	1	0	3	0	3	3	1	3	1	3	2	3	0.427
Cognitive Development	20	1	2	1	2	1	5	0	0	3	4	0	1	0.444
Medications	18	2	1	1	2	1	0	1	1	1	3	4	1	0.750
Sun Exposure & Skin Health	17	0	1	1	0	2	6	1	2	2	0	1	1	<b>0.009</b>

Vaccines	16	1	0	1	0	4	1	2	2	0	1	3	1	0.248
Pregnancy	16	1	1	1	2	0	2	0	2	2	2	3	0	0.537
Electronics	13	2	1	1	0	1	2	1	1	0	2	0	2	0.768
Chemical Exposure	13	1	2	1	1	2	0	1	3	1	1	0	0	0.560
Emergencies	11	1	0	1	1	0	1	2	2	2	0	0	1	0.806
Gastrointestinal Issues	9	0	1	1	1	1	1	0	0	1	1	1	1	0.989
Chronic Diseases	9	0	1	1	3	0	0	1	2	0	0	1	0	0.151
Cancer	8	1	0	0	0	1	1	0	1	0	2	0	2	0.449
Eye Health	6	1	0	0	1	0	0	1	1	1	0	0	1	0.864
Alternative & Home Remedies	6	1	1	1	1	0	0	0	0	2	0	0	0	0.750
Smoking	5	0	1	1	0	0	0	0	1	0	0	2	0	0.330
Violence	2	0	1	0	0	1	0	0	0	0	0	0	0	0.537

\*One-way ANOVA of mean number of article; numbers in bold are significant ( $p < 0.05$ )

ADHD is not well understood by the lay public and the prevalence of ADHD in the United States is high, with one study reporting 9.7% among US children [21,22]. Magazines may see this as an opportunity to attract readers and to publish articles on an issue that many parents do not fully understand. It is nonetheless encouraging that child behavior and development were widely covered, with information on recognizing signs of developmental disorders. Early Intervention (EI) for developmental communication disorders is considered crucial to optimizing the effects of interventions and articles on the matter are informing traditional medical practice [23]. In that sense, the readers may be sensitized to recognize possible atypical behavioral/communication symptoms in their children and seek the necessary professional assistance. While it is not clear whether these articles are factually correct, and if readers should make health-related decisions based solely on their content, the mere mention of these issues raises public awareness and, as such, is generally a positive event.

Certainly, content needs to be carefully reviewed before determinations on validity can be made with any degree of confidence. Wilson *et al.* [24] examined 163 articles in Australian magazines that purported to offer advice on health matters and found that only about half of them provided evidence-based advice to their readership. Unfortunately, the publications that included the word “health” in their title had the least reliable information [24].

This is not the first time that the quality of health information content in popular magazines is being examined. The error rate is only slightly better than it was 25 years ago, when Gunderson-Warner *et al.*, [25] analyzed the content of 56 articles in 10 magazines and determined that 55% of them were deceptive [25]. The specific health information studied was exposure to teratogenic effects during pregnancy. While 46% of the articles were “alarming,” only 25% of them recommended that readers direct their concerns to their healthcare providers [25].

Further research is needed to determine the extent to which articles published within parenting magazines are truly reliable and if readers trust the health information put forth in these magazines. It is essential that healthcare advice in parenting magazines be accurate for three reasons. First, access and quality of healthcare are dependent on Socio-Economic Status (SES) and gender [26]. Mothers of lower SES may rely more on what they read in magazines than their higher SES counterparts. Second, the advice in parenting magazines can affect the entire family in important ways, such as delaying the provision of necessary services for developmental problems. Third, the female readers of *Parents* may lack the skills and knowledge necessary to identify reliable sources of health information, as only 30% of the female readers of *Parents* have completed a college degree [18]. Parents are encouraged to speak to their own doctor and their child’s pediatrician about their health

concerns rather than relying solely on mass media.

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