

## Pink or Green? Evaluating gendered color differences in cyberspace multi-level marketing advertisements

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Article Info	Abstract
<p>Original Article</p> <p>Main Object: Media</p> <p>Received: 31 May 2025 Revised: 08 July 2025 Accepted: 09 July 2025 Published online: 14 July 2025</p> <p><b>Keywords:</b> health misinformation, online advertising, visual culture, visual misinformation.</p>	<p><b>Background:</b> Economic misinformation may result in people making poor financial choices. Multi-level marketing organizations often target women as potential salespeople. The majority of multi-level marketing organizations are predatory. Oftentimes, their online promotion effectively reaches people.</p> <p><b>Aims:</b> In order to better identify the differences in color used in online advertisements for multi-level marketing organizations, I chose to explore whether health multi-level marketing organization advertisements had colors that corresponded with traditional gender norms or traditional health advertisements.</p> <p><b>Methodology:</b> I obtained and analyzed exclusively online advertisements for multi-level marketing organizations. I found that there was indeed a difference in both color and brightness between organizations that targeted men and organizations that targeted women.</p> <p><b>Results:</b> Health multi-level marketing organizations pose a unique danger. Specifically, they promote both economic and health misinformation. Not only do these organizations recruit people to sell products using spurious techniques, but in many cases, these products may be directly harmful to consumers' health. As a result, more insight into detecting a health multi-level marketing advertisement is necessary.</p> <p><b>Conclusion:</b> Color is a major element in advertisements. Specifically, distinct colors may be used in advertisements that target different genders. Understanding the differences in multi-level marketing advertisement colors is important: if consumers can identify which organizations are multi-level marketing companies, they will distrust the advertisements.</p>

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## 1. Introduction

Multi-level marketing organization recruitment uses current advertising trends to target their audience. Specifically, multi-level marketing organization recruitment also utilizes the current internet and social media. While the traditional recruitment email, post or text is a well-known meme, little is known about their visualization recruitment methodology (Kelley, 2022). Advertisers often use gendered advertising when marketing colors. In the case of female-targeting advertisements, advertisers often use the phrase “shrink it and pink it”, which refers to making the product smaller and using pink to advertise the product (Price-Rhea, 2019). Pink is a major color in female-targeted advertisements. Packaging of products such as makeup and health supplements are often pink (Bayne & Winegar-Schultz, 2022).

The Federal Trade Commission defines a multi-level marketing organization as a business that requires salespeople or contractors to sell products specifically to a family, friends and acquaintances (FTC, n.d.). Specifically, many multi-level marketing organizations often rely on independent salespeople or contractors, rather than employees: “Multi-level marketing, also known as network marketing, refers to the practice of distributing, selling or supplying products or services through various levels of independent agents... paid commissions, bonuses, discounts, dividends or other forms of consideration in return for selling products or services and/or for recruiting other agents” (Koehn, 2001: 153). These salespeople may recruit using a variety of methods; however, a typical pitch is done online (Bradley & Oates, 2021). Often, while salespeople sell products, these products are secondary to recruitment of other sales agents: “in network marketing, the product is predominant, and sales of the product is emphasized whereas in the case of MLMs, the product often is irrelevant or secondary and the emphasis is not placed on selling product but on recruiting other salespeople to in turn recruit still others” (Herbig & Yelkurm, 1997: 17).

Similarly, online advertisements allow a farther reach for multi-level marketing organizations (Pavelko & Barker, 2022). Salespeople and other recruited individuals often lose money in these multi-level marketing organizations (Koehn, 2001). Wellness and health products account for roughly 35% of products sold by multi-level marketing organizations (Cardenas & Fuchs-Tarlovsky, 2018).

Overall, products from health multi-level marketing organizations are often advertised as healthy. However, health multi-level marketing organizations are often accused of making false claims about the efficiency and effectiveness of their products (Longworth, 2023). Furthermore, some health multi-level marketing organizations espouse conspiracy theories or anti-vaccination beliefs. Mastrangelo and Longo (2024) examined two health multi-level marketing organizations and found a connection between their marketing and Pastel QAnon. Health

multi-level marketing companies are a unique threat, as they can directly harm a person's well-being. For example, certain weight loss shakes may result in consumers developing dehydration.

Although advertisements and pitches for multi-level marketing organizations are found offline, they are present and prevalent online (Bradley & Oates, 2021). Since an image on a website, be it social media or informative site, can reach people quickly, more research discussing digital multi-level marketing advertisements is necessary (Chien, 2011).

While current research addresses verbal multi-level marketing recruitment, there is limited research on the colors and targeted advertising of online advertisements for multi-level marketing health organizations. I evaluated multi-level marketing advertisements. I found that although multi-level marketing advertisements that targeted men and both men and women used the color green prominently, multi-level marketing advertisements that targeted women used the color pink prominently. There was no major difference in hue between advertisements from health multi-level marketing organizations that targeted men and advertisements from health multi-level marketing organizations that targeted women. However, more research and exploration into the differences in advertising that targets men or women, specifically for recruitment into multi-level marketing organizations is necessary.

## 2. Literature review

I next discuss current research regarding gendered advertisements, color cues in advertising, and multi-level marketing advertisements. While much research has been done regarding each of these three areas, there remains a significant gap in evaluating the relationship between the three in visual misinformation.

Feminist media scholarship has often explored the use of color in advertisements (Mendes & Carter, 2008; Varghese & Kumar, 2022). As a form of communication, advertisements are often gendered (Price-Rhea, 2019; Grisard, 2017; van der Tas & Furrer, 2021). Price-Rhea summarizes "shrink it and pink it" advertising as the following: "to market to women, all a brand had to do was to make a product smaller and pink" (Price-Rhea, 2019: 3). Grisard (2017) explained that with regards to children's clothing, designers use blue for boys' clothing colors, and use pink for girls' clothing colors. Lafferty (2019) identified the pink tax as a tax that targets products meant for women: these products are often associated with pink packaging. Bideaux (2019) discussed the shade millennial pink, explaining that a lighter pink is now used for gendered marketing toward women. Manufacturers of health and hygienic products often use the "shrink it and pink it" mentality when packaging products. van der Tas and Furrer (2021) explored gendered hygiene products and their packaging, finding that

women were sensitive to female gendered advertising and men were discouraged to prefer female gendered razors. Men also generally rejected items that were presented as female gendered, while women were more open to using items presented as male gendered. Researchers agree that gender often presents as color in advertising: specifically, lighter colors and the color pink are used to market products for females, while darker colors and the color blue are used to market products for males.

Huntington and Brooks (2023) explained that often, multi-level marketing agencies use gendered images when advertising. These organizations implicitly arguing that women can succeed both in and out of the home. However, current discussion of color trends in advertising for multi-level marketing organizations remains relatively underexplored.

Color is essential in the spread of information or misinformation (Zak, 2024). Consumers respond to color cues when evaluating a product's perceived health benefits (Kunz et al., 2020). Kunz et al. conducted a survey where participants compared pictures with high saturated colors to pictures with low saturated colors, finding that "products with increased compared with decreased color saturation were rated as both healthier and tastier, mediated by the products' perceived freshness" (Kunz et al., 2020: 900).

Huang and Lu (2013) found that when presented with foods in either red or blue packaging, users rated the food in blue packaging as healthier than those in the red packaging. Lunardo et al. (2021) also found that consumers associated the color red with feelings of food-related guilt. They perceived food in red packages as more unhealthy than foods in blue packages.

Wansink and Robbins (2016) argue that color advertisements are not more memorable than black-and-white advertisements. Orquin and Scholder (2015) also found that color had no significant impact on someone's interest in a health product. Tijssen et al. (2017) explored package hue, brightness and saturation on expected and perceived properties. They found that consumers associated warmer, saturated and less bright colors with attractiveness and healthier products. Chan and Zhang (2022) evaluated recent empirical findings in health beliefs and found that blue and green muted lighter colors were often associated with healthiness. These colors are also cool colors, which show a cursory relationship between cool colors and health advertisements.

While researchers discuss color in advertisement, they often do not explicitly discuss the importance of difference in hue (Schindler, 1986). Sokolik et al. (2014) discussed warm and cool colors, stating that red box ads were more likely to generate user interest than blue box ads. More research into relationship between advertising and hue is necessary. Singh (2006) also explained that red and blue was a preferred

color combination of health products by both men and women. They also found that blue could be used to deter overeating.

Khattak et al. linked specific colors to health advertisements, explaining that “Different colors have been linked to heal different ailments. For example, red color has been considered to energize the liver, purple color lower blood pressure, orange color is considered to strengthen lungs and increases calcium metabolism. Green color plays role in sympathetic nerves system and yellow color is effective an energizing the alimentary tract” (Khattak et al., 2018: 185). This identification of color denotation for specific ailments is helpful for both consumers and researchers. Specifically, because these advertisements are color coded, they allow information seekers another method to identify products for conditions. However, current research has not explored the use of color in advertisements by exclusively health multi-level marketing organizations.

Many multi-level marketing companies offer health-related products, such as vitamins, supplements, and energy drinks. Although these are physical products, their marketing is largely online. Researchers have explored the language used when recruiting and discussing these products. Although multi-level marketing health companies, the colors of their advertisements are underexplored. Bergquist (2021) explored the language used in multi-level marketing recruitment, stating that flattery, support, and empowerment were prominent themes. Similarly, Yanike (2020) identified social media and other online platforms as useful to enterprising multi-level marketing recruiters; however, discussions of the visual aspects of these advertisements were ignored.

Pearce (2024) evaluated online multi-level marketing advertisements, and found that many of them use white, maternal imagery to advertise both products and sales opportunities. Pavelko and Barker (2022) explored the themes found in multi-level marketing online advertising, as these themes differ from physical advertising. Chudleigh examined multi-level marketing recruitment in India, specifically differentiating between male and female stereotypes. They found that while many advertisements showed women selling the product, the majority of the advertisements featured “men in corporate roles, women as distributors, and women being pictured as consumables with the products they are supposed to sell” (Chudleigh, 2019: 56).

Mastrangelo explained that multi-level marketing organizations that target women often use pink: “from logos to websites to Instagram stories, girlboss aesthetics dress qualities we associate with masculinity-- assertiveness, aggression, dominance-- in visuals that are culturally defined as feminine. For instance, phrases such as “crush competitors” or “build your empire” are set in pink, delicate fonts (Mastrangelo, 2021: 35). Enblad and Öhlander (2019) discussed

deceptive tactics used by some multi-level marketing organizations, identifying exaggeration about the health benefits of the products as a prominent deceptive tactic. Winter also found that pink was a major color in advertisements for makeup multi-level marketing organizations: “Juxtaposed with the smiling, beautiful women that are in the arms of their loved ones, there is also imagery related to luxury including the esteemed pink Cadillac, designer handbags, and golden office decor” (Winter, 2021: 55). Their online nature only increases their accessibility: someone deciding whether or not to join the organization need only re-examine an advertisement at their fingertips.

Researchers have further identified pink as an indicator of a female-targeted multi-level marketing organization (Bayne & Winegar-Schultz, 2022). Zak (2023a) explored color in visual misinformation; however, this research was not focused on specific colors. However, researchers have not explored the relationship between health-related multi-level marketing organizations and colors used in marketing.

After evaluating the literature, I identified the following questions:

- What colors are found in advertisements released by multi-level marketing organizations?
- Do health multi-level marketing organizations conform to the “shrink it and pink it” mentality of advertising or the current mentality of using cool colors when advertising health products?
- Are health multi-level marketing organizations’ advertisements gendered by hue: that is, do these advertisements use darker colors when advertising to men and lighter colors when advertising to women?

### 3. Methodology

While all multi-level marketing organizations are dangerous, I chose to evaluate specifically health multi-level marketing organizations. Cardenas and Fuchs-Tarlovsky (2018) identify wellness multi-level marketing organizations as a substantive portion of multi-level marketing organizations. Like all multi-level marketing organizations, health multi-level marketing organizations are exploitative toward their contractors. When discussing health multi-level marketing organizations, Hardon et al. states: “The unchecked positive health imagery of food supplements disguises...exploitative processes” (Hardon et al., 2019: 439). However, because these health supplements are often consumed or absorbed, they present a unique health risk.

Groß and Vriens identifies a major concern regarding multi-level marketing companies that sell health supplements and nonprescription pills, stating that “A lack of truthfulness becomes particularly problematic, when distributors make illegal claims, for example that nutritional supplements cure all sorts of severe health problems” (Groß & Vriens, 2019: 338). Health multi-level marketing companies often purport specific benefits of their supplements, such as weight loss or

better sleep (Groß & Vriens, 2019). Currently, this promotion is unregulated, and current legislature and rules do not prevent health multi-level marketing companies from making duplicitous claims about their products' benefits. The products sold by marketing-level marketing organizations may be unnecessary or ineffective. In worst cases, these products may cause direct bodily harm to consumers (Chopra et al., 2022).

Unfortunately, due to the largely unchecked health supplement market, the often-manipulated online advertisements, and a general lean toward health misinformation, multi-level marketing companies effectively recruit consumers and sell product (Sweeb, 2017). As a result, more discernment regarding health products, and specifically health products sold by multi-level marketing organizations is necessary. Due to social media networks, online multi-level marketing advertisements reach more consumers than traditional billboards and flyers (Prime MLM Software, n.d.). Likewise, visual advertisements are more effective than verbal advertisements at communicating a product's message (American Psychological Association, 2002). Therefore, I searched online for visual multi-level marketing advertisements.

I first found a list of current known multi-level marketing organizations that sold health products. I exclusively focused on multi-level marketing organizations that had an online presence including, but not limited to, websites or social media profiles. After identifying these multi-level marketing organizations, I then used a prominent search engine to attain visual advertisements for health multi-level marketing organizations. I obtained eighty visualizations from health multi-level marketing organizations. I used visualizations from health multi-level marketing organizations that originated in the United States and had an international market. For each organization that targeted both men and women, I obtained twenty visualizations: ten that targeted men and ten that targeted women. (Multi-level marketing organizations predominantly utilize either men or women as a target audience. They also often use gendered roles to advertise specific products for men or women.) For each organization that targeted either men or women, I obtained ten visualizations. Therefore, I had eighty visualizations; a sufficient sample size for the research. Because I exclusively used advertisements available online, I chose not to compare advertisements that could be found on social media, or advertisements that could be found exclusively through search engine.

I evaluated color for all visualizations and compared color between advertisements for health multi-level marketing organizations that targeted men, advertisements for health multi-level marketing organizations that targeted women, and advertisements for health multi-level marketing organizations that targeted men and women.

When evaluating color, I compared the colors used in the

visualization to current depictions of color. Color is often described with three terms: hue, saturation, and brightness. Hue often refers to the color itself (red, yellow, blue, etc), while saturation describes the intensity, and brightness represents how dark or light the color may appear (Wilms & Oberfeld, 2018).

Although this terminology is valuable, I chose to avoid discussing color in terms of saturation, instead focusing on hue and brightness. In the case of colors such as black and orange, which are easily identifiable, I was able to compare the color presented to a predefined color list. Specifically, if confused when identifying a color, I compared the colors in the visualizations to color hex codes found online. Although there is no specific threshold separating light or dark colors, I similarly relied on cultural and color hex interpretations of brightness. While I did not use a specific formula, I utilized a grayscale method. I was able to identify which colors were lighter, or closer to white, and which were darker, or closer to black (Kuehni, 2001). In the case of colors such as pink or magenta, I compared the two shades against their codes: however, if two relatively indistinct shades of pink were already prominent in an image, I did not note it as used twice. This allowed me to ensure that I had a relatively accurate depiction and understanding of the colors presented.

#### 4. Results

I now present the results. I evaluated the colors in advertisements, and the number of warm, cool and neutral colors in advertisements. This allowed me to present a more complete understanding of the use in color of multi-level marketing organizations.

Overall, I found that all of the colors found in advertisements for the health multi-level marketing organizations were white, which appeared 54 times, black, which appeared 42 times, pink, which appeared 27 times, green, which appeared 22 times, blue, which appeared 21 times, orange, which appeared 19 times, yellow, which appeared 14 times, red, which appeared 13 times, purple, which appeared 10 times, magenta, which appeared 6 times, grey, which appeared 3 times, light blue, which appeared 2 times, brown, which appeared 2 times, silver, which appeared 1 time and gold, which appeared 1 time.

The colors used in advertisements for health multi-level marketing organizations that targeted men were black, which appeared 13 times, white, which appeared 12 times, orange, which appeared 12 times, blue, which appeared 6 times, green, which appeared 3 times, yellow, which appeared 2 times, brown, which appeared 1 time and red, which appeared 1 time.

The colors used in advertisements for health multi-level marketing organizations that targeted women were pink, which appeared 15 times, white, which appeared 13 times, black, which appeared 10 times, purple, which appeared 7 times, magenta, which appeared 3 times, blue,

which appeared 3 times, light blue, which appeared 2 times, yellow, which appeared 2 times, orange, which appeared 1 time, grey, which appeared 1 time, and red, which appeared 1 time.

The colors used in advertisements for health multi-level marketing organizations that targeted men and women were green, which appeared 13 times, black, which appeared 11 times, white, which appeared 11 times, pink, which appeared 8 times, red, which appeared 5 times, blue, which appeared 5 times, orange, which appeared 4 times, yellow, which appeared 2 times, magenta, which appeared 1 time, silver, which appeared 1 time and purple, which appeared 1 time.

I divided the types of colors into warm colors, cool colors and neutral colors. I found that in advertisements for health multi-level marketing organizations that targeted men and women, warm colors appeared 20 times, cool colors appeared 20 times and neutral colors appeared 22 times. I found that in advertisements for health multi-level marketing organizations that targeted men, warm colors appeared 16 times, cool colors appeared 12 times and neutral colors appeared 25 times. I found that in advertisements for health multi-level marketing organizations that targeted women, warm colors appeared 23 times, cool colors appeared 14 times and neutral colors appeared 23 times.

I also identified if the advertisements available were for the products or recruitment into selling for the multi-level marketing organization. For health multi-level marketing organizations that targeted men, 17 of the advertisements advertised a product, while 3 advertised selling for the organization itself. For health multi-level marketing organizations that targeted women, 19 of the advertisements advertised a product while 1 advertised selling for the organization itself. For health multi-level marketing organizations that targeted both men and women, 32 of the advertisements advertised a product while 8 advertised selling for the organization itself.

## 5. Discussion

I now discuss the colors used in the advertisements and the inherent association with wellness culture. I further discuss the gendered aspect of the colors used in the advertisements, and the co-opting of health and wellness color associations, and specifically, which colors were most prominent. Finally, I explore the ramifications of this research for further discussion into misinformation.

### 5.1. Gendered aspect of colors used

The colors used in advertisements for health multi-level marketing organizations show the use of gendered colors. Specifically, the colors used denote the gender divide in advertising. These colors show that multi-level marketing organizations focus on advertising to either men or women, rather than both.

Consumers associate colors such as blue, orange, and red with

masculinity, while associating colors such as pink, purple, and magenta with femininity. Colors such as pink and purple were more prominent in the advertisements of multi-level marketing companies that targeted women, while colors such as blue and orange were more prominent in the advertisements of multi-level marketing companies that targeted men. Overall, the colors used in the advertisements for multi-level marketing organizations that targeted women were lighter than the colors used in the advertisements for multi-level marketing organizations that targeted men. The results clearly demonstrate that multi-level marketing organizations use gendered color in their advertising.

These findings are supported by the current literature. While the colors used are gendered, pink is more prominent in advertisements for many products targeting women, and blue and black often more prominent in advertisements for products targeting men (Price-Rhea, 2019; Moss et al., 2006). Specifically, these health multi-level marketing organizations that target women use pink, just as their non-health multi-level marketing organization counterparts do.

One valuable aspect of this research is its applicability for information seekers. Potential multi-level marketing customers could identify whether a health product appears similar to other health products in advertisement color, or whether it appears similar to multi-level marketing products in advertisement color. This may be rather difficult, however, as advertisement color is often gendered, and the presence of pink or purple alone does not denote whether the product is sold as part of a multi-level marketing organization (Van der Tas, 2021). Color is one important facet in recognizing whether or not a product is sold by a multi-level marketing organization. However, potential multi-level marketing customers must practice vigilance, rather than focusing on one facet of packaging.

As a result, the gendered colors used in the advertising of the multi-level marketing organizations are typical with current understanding and discussion of gendered advertising.

## 5.2. Warm and cool colors

I further analyzed the use of warm and cool colors in each health multi-level marketing organizations' set of advertisements. When evaluating the colors used in advertisements targeting men and the colors used in advertisements targeting women, I found a gendered difference. Specifically, the colors used in advertisements targeting women were overall lighter than the colors used in advertisements targeting men.

Overall, advertisements for health multi-level marketing organizations contained more neutral colors than warm colors or cool colors. Neutral colors were most prominent in all the advertisements. In both the advertisements for health multi-level marketing organizations

that targeted men and the advertisements for health multi-level marketing organizations that targeted women, warm colors were more present than cool colors. However, the advertisements for health multi-level marketing organizations that targeted men and women used an equal number of warm and cool colors. This shows that while there was no difference in warm and cool colors in the advertisements for multi-level marketing organizations that targeted men and the advertisements for multi-level marketing organizations that targeted women, there was a difference in warm and cool colors between these advertisements for different gendered organizations and advertisements for multi-level marketing organizations that targeted men and women. This shows that multi-level marketing organizations that target both men and women may be more likely to mimic traditional health advertisements than multi-level marketing organizations that target either men or women.

The findings of warm, cool and neutral color content are consistent with current literature. Alt (2008) explained that neutral colors are considered passive and as such may be used in different visualizations, while warm colors excite. Cool colors are more subjective to different viewers. Gunina et al. (2017) explained that neutral colors are considered more masculine; this may partially account for the large proportion of neutral colors in advertisements for health multi-level marketing companies targeting men. White et al. (2021) explored literature discussing color and explained that more research into warm, cool and neutral colors is necessary. While color is often used in advertising, more research into shade and hue is essential to understanding their prominence and effectiveness in communicating information.

### 5.3. Wellness culture associations

Multi-level marketing organizations co-opt the colors used in health advertisements for legitimate products. The presence and prominence of colors such as green and orange demonstrate an alignment with current health trends. This is particularly concerning-while consumers may not know the nutritional facts of a product, its advertising conveys implicit health benefits. Furthermore, because these colors are so associated with health, potential information seekers will implicitly believe that the products are safe.

Often, advertisers use green, blue and white to denote health products (Indeed, n.d.). Specifically, advertisers use green to promote longevity and calmness (HART Design & Mfg, n.d.). This is particularly interesting as blue was an incredibly popular color in the advertisements. Green was the most prominent color in advertisements for organizations that targeted both men and women and blue was prominent in advertisements for organizations that targeted men and organizations that targeted women. Another major color in current health products is black, as black can be used in advertisements for

health beverages such as Monster (Hart Design & Mfg, n.d.; Meyers, n.d.). Black was a popular color for organizations that targeted men, and often present in advertisements for sports drinks. These findings align with the current literature: someone interested in Monster might also be interested in a health drink.

Consumers associate green with health products, which supports its prominent appearance in health multi-level marketing advertisements, regardless of gender. Other prominent colors in health products, such as blue, were prominent in both male-targeting and female-targeting multi-level marketing organizations. This presence shows that current multi-level marketing organizations use colors similar to those used by health marketing professionals.

These associations, while not inherently harmful, may result in consumers believing that the products offer more health benefits than they actually do. While the most prominent danger of joining a multi-level marketing company is losing money, consuming a product that may cause bodily harm is another major danger. In the event that the product is not harmful to someone's health, and has no effect on someone's body, purchasing the product is still a waste of someone's economic resources.

#### **5.4. Gendered vs. Wellness color associations**

While no one color is specifically a color used to denote gender or wellness, understanding the typical association with the colors used allows consumers to detect the implicit message of an advertisement. Using gendered colors demonstrates a focus on the gender binary, and potentially a focus on recruiting consumers based on gender. Meanwhile, the use of colors typically associated with wellness brands would demonstrate a focus on health and physical wellness. Identifying the relationship between these uses of colors is valuable, as it allows potential information seekers to identify the focus of the advertisement.

These color findings also show that health multi-level marketing companies use both health-related marketing tactics and multi-level marketing tactics. However, these findings align closer to that of non-health related multi-level marketing companies than health companies. This is particularly interesting, as language of health multi-level marketing companies often align closer to health companies than non-health related multi-level marketing companies (Nitisara, 2023; Fluegel, 2022). Health multi-level marketing companies often use pink to target women; while green was present, it was not as prominent as colors such as pink, purple and magenta. Conversely, health multi-level marketing companies that targeted men used colors such as black, white, and orange. Each of these colors may be used to convey different, specific messages.

The color findings for health multi-level marketing companies that targeted men also show that health multi-level marketing companies do

not use health-related marketing tactics: orange is not a prominent color in health-related advertising. Instead, a bright color such as orange may be meant to elicit excitement and interest in the product. Furthermore, colors such as orange may evoke the fruit itself (LitHub, 2018). This allows an information seeker to make a link between their relationship with the fruit and the multi-level marketing companies' products' health value.

In the case of the advertisements for health multi-level marketing organizations, colors associated with specific genders were more prominent than colors associated with health organizations. This provides evidence for the idea that multi-level marketing organizations may advertise for their audience, rather than advertising the specific product. These findings also show that specific audiences may have been targeted, due to their potential selling and buying power.

These findings are particularly interesting, as they are directly opposed by the content of the advertisements. The majority of these advertisements were for the products themselves rather than specific recruitment. However, the gendered colors clearly denote a subtextual message meant to encourage consumers to purchase the products and invest in the multi-level marketing scheme. This shows that although the products are important for a multi-level marketing company, the recruitment for selling and participation is prioritized. As a result, information seekers must practice vigilance and understand that these advertisements are meant to pique their interest on multiple levels: not only as a consumer or customer, but potential employee.

### **5.5. Ramifications for online misinformation**

I now discuss the implications of beliefs in this online misinformation. Although the financial ramifications of belief in misinformation spread by multi-level marketing organizations are obvious (loss of money, inability to recoup investment) one understated concern is resulting distrust of mainstream healthcare (Taylor, 2011). Mastrangelo and Logno (2024) explained that multi-level marketing organizations spread misinformation and disinformation that is often directly contradictory to the information provided by health professionals. Another danger of believing online misinformation is false information literacy. False information literacy, as defined by Zak (2023b) as the use of critical thinking and information literacy skills to believe in and spread misinformation. Using ineffective and potentially harmful products instead of safe medical products is an example of false information literacy. When presented with health multi-level marketing products, medical professionals may explain why health multi-level marketing products are ineffective or unsafe (Now, 2024). Rather than trusting safe methodology, participants in health-related multi-level marketing trust company leaders, their "upline," or other participants in the organization (Mastrangelo & Longo, 2024; Taylor, 2011). This

distrust in medical professionals, especially those who present factual evidence against the efficiency of health multi-level marketing products can result in further belief in health misinformation, belief in conspiracy theories, and perhaps even refusal of safe and beneficial preventative care and medicine (Now, 2024; Soveri et al., 2021). Therefore, it is essential to continue studying multi-level marketing organizations' online advertisements, and the misinformation that they spread in order to curtail the spread of not only their misinformation, but the false information literacy promoted

## 6. Conclusion

Multi-level marketing organizations are directly harmful for their contractors. By not only advertising products, but the opportunity to work for the company, multi-level marketing companies present a unique threat. Since health multi-level marketing organizations may harm people both financially and physically, they pose a unique threat. While health misinformation spreads in both its presence and prominence, it is essential to identify multi-level marketing health companies, and their deceit. Furthermore, online multi-level marketing advertisements are both less expensive and wider ranging than physical advertisements. After evaluating eighty advertisements for health multi-level marketing organizations, I found a major color difference between those that target men, those that target women and those that target both men and women. The prominence of pink in advertisements for multi-level marketing organizations that targeted women may serve as a signifier that a health multi-level marketing organization is not solely faced on health. Neutral colors were the most prominent set of colors in each set of advertisements. While neither the health multi-level marketing organizations targeting men or women differed in their use of bright, cool, and neutral colors, health multi-level marketing organizations that targeted both men and women used an equal amount of warm and cool colors, rather than more warm than cool colors. More research into multi-level marketing organizations, specifically health multi-level marketing organizations, is necessary. Further research identifying the specific concerns regarding online health misinformation is likewise essential. This study has a number of limitations: eighty visualizations is a relatively small sample size. However, I was still able to identify and discuss different elements of the visualizations. Evaluating only health multi-level marketing organizations is also a limiting factor. Furthermore, since many multi-level marketing companies have health-related products, future research could explore if these products are advertised differently than the non-health related products. Another minor limitation is that these advertisements often use the same colors that their corresponding products use: as a result, these findings may also be the result of the colors of the products themselves. Finally, because this research

focused on the visual elements of the advertisements themselves, I did not identify how effective or ineffective the visualizations were. The effectiveness of different colors and textual elements must be further explored at a later date. While this research presents preliminary findings into health multi-level marketing organizations, future work must expand on their presentation. More research discussing multi-level marketing companies, their gender-aligned advertising, and their predatory nature is necessary.

### Conflict of interest

The author declared no conflicts of interest.

### Ethical considerations

The author has completely considered ethical issues, including informed consent, plagiarism, data fabrication, misconduct, and/or falsification, double publication and/or redundancy, submission, etc. This article was not authored by artificial intelligence.

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