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Taiwanese Preferences and Cultural Factors Influencing Visuals in
Taiwanese Health Pamphlets

By

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This thesis paper has been examined and approved.

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Abstract

This study aims to discover what preferences Taiwanese people have for visuals in health documents, with the research question being, “What are Taiwanese preferences for visuals and visual elements in health documents?” Research is conducted through a mixed-methods approach with a comparative analysis of a collection of American and Taiwanese health pamphlets, surveys conducted with Taiwanese people inquiring about preferences concerning visuals in health documents, and interviews conducted with doctors educated and practicing in Taiwan. In this way, the study moves from what visuals are currently being used, to what kinds of visuals Taiwanese people prefer, to how health professionals relate to visuals. Consistencies found among all three studies such as mood and picture preference are found to be related to the Chinese principle of “Health equals Happiness.” Taiwanese prefer that health education stay positive in its presentation. Things such as real images, which could send a negative message, should either be removed or replaced with personified objects to give a document a more positive feeling. Research was conducted mostly with educated Taiwanese. Future work could be done with seniors, youth, or less-educated groups.

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Chapter 1: Introduction

Readers can learn about people or culture by studying or analyzing advertisements, magazines, and persuasive documents. Writers and document designers usually adhere to a style that is reflective of the culture¹ they grew up in or are most familiar with. This relates not only to the text of a document, but also to the pictures and visuals the writer or document designer chooses to include.

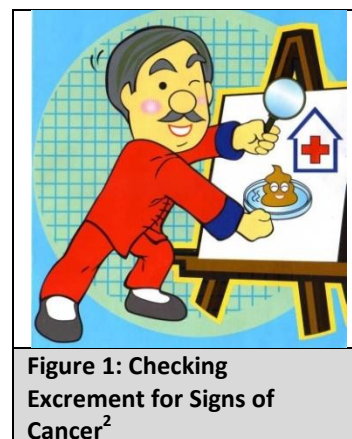
In relation to this, written language can sometimes be a difficult barrier. If a reader is not fluent or at least familiar with the target language, comprehension becomes problematic. However, when studying pictures, which don't have as much of a language barrier, the representation of ideas is much clearer. For example, when writing the English word *pencil* it might be *crayon* in French, *карандаш* in Russian, or 鉛筆 in Chinese. But when a French, Russian, or Chinese artist draws a picture of a pencil it would probably be some kind of long, thin cylindrical object that has an additional small cylinder at one end and a cone with a point at the other end. Even though we could probably recognize all three drawings as pencils, there would surely be differences in how each artist draws a pencil. Perhaps the Chinese artist's rendition of the pencil would be plastic with a clip to hang it on your pocket and a button to extend the lead,

¹ *Culture* refers to behaviors and beliefs characteristic of a social, ethnic, or religious group. (definition partially taken from www.dictionary.com. Accessed March 28, 2012.

showing that where he grew up, they didn't use wooden pencils. Perhaps the Russian artist's rendition of the pencil would include a worn-down eraser and tip, indicating that once you got a pencil in his school, you used it until it was unusable. Perhaps the French artist would draw a pencil in a writer's hand, reflecting his need for context. So even though we understand the general representation of each object, there would still be cultural differences. Qiuye Wang wrote, "Visual Communication is shaped by culture." (553) Every culture has its own visual identity, things that they expect to see or not to see when looking at pictures or other kinds of visual communication. This principle of visual cultural identity is especially true of visual communication intended to teach. If we want to teach or inform a certain audience, we must understand what expectations the audience has regarding visuals and in what context these expectations should be used.

I completed an internship with a company called Lis Automatics Controlled (立石自動控制機器股份有限公司), a company based in Taichung, Taiwan that sells machine parts internationally. During my internship, I spent most of my time improving the design of documents (making changes to text only when the visual design necessitated it) to make the documents more clear and usable. I also created separate documents in cases where a single document contained more than one language. Thus, I did not have to write very much original content. I mostly dealt with document design and visual representation of information. Since that time, I have been very conscious of document design and visuals and how they are presented in a document.

It was in this context that I noticed a Chinese-language health pamphlet lying on a counter at home. My wife had brought it home for her parents. It had a picture on the front that inspired very different reactions in me and my wife. On the cover was an aged man with a big smile holding a magnifying glass (see Figure 1). Directly below the



magnifying glass was a small piece of excrement, which was also smiling, that the man was presumably examining. Though I was slightly put off by the picture, since I'm not used to seeing pictures of happy excrement, my wife defended it saying that the picture clearly represented the content of the document, that seniors should examine their excrement to check for signs of cancer in the large intestine. The picture offered no ambiguity about what the pamphlet was trying to persuade seniors to do. The picture also supported the purpose of the pamphlet instead of just being aesthetic decoration. In addition, there were also several Chinese³ health values reflected in the picture such as wearing red clothes for luck and happiness being a result of good health.

I then decided to see if the qualities I saw in the picture were consistent among other health pamphlets, especially those from Taiwanese government bodies or other

² Image from "Regularly check your large intestine, cancer will have no place to hide" from Taiwan Bureau of Health Promotion

³ In this paper, the terms "Chinese" and "Taiwanese" are used interchangeably. I have done this because in regard to health issues, Chinese (mainland Chinese) and Taiwanese share many values.

Taiwanese groups, organizations or companies. With this question, I began my research and data collection for my thesis. My research question became, “What are Taiwanese preferences for visuals and visual elements in health documents, and how do these preferences differ from American preferences?” Because the visuals being studied are in a Chinese health context, chapter two, the literature review, has been divided into three sections: (1) Pictures Aimed at Teaching, (2) Pictures in a Health Context, and (3) Pictures in a Chinese Health Context. To provide a general background about how pictures should be used, the first section will review literature about visuals in documents that are aimed at teaching. Since the visuals being studied are from health pamphlets, additional context is necessary to understand their usage. Thus, the second section of the literature review will narrow the study to visuals in health literature. Research in this section will be limited to pictures and visuals that are in instructional or informative health-related literature. In addition, since the visuals being studied are in a Chinese health context, the third section of the literature review will review and discuss Chinese health principles, explaining how the discussed Chinese health principles affect visuals. Even though there are numerous Chinese health principles, the literature will focus on those principles that affect preferences in visual representation of information.

After providing a Chinese health context for visuals, a collection of visuals from both American and Taiwanese-produced health brochures will be analyzed and compared, comprising the third chapter. The differences in the types of pictures presented and how both groups of pictures adhere to the principles discussed in chapter

two will be discussed. The tendencies in the different groups of visuals will also be discussed. This chapter will also cover how the principles discussed in section three of chapter two (Pictures in a Chinese Health Context) are reflected in the analyzed Taiwanese health pamphlets.

After analyzing some of the literature commonly given to readers and patients, chapter four will introduce and discuss a study completed to discover the preferences of Taiwanese people regarding visuals in health documents. The study involves a questionnaire given to 105 Taiwanese adults in Taichung County, Taiwan to find out what kinds of pictures and visual elements Taiwanese adults prefer in health-related literature. In analyzing the questionnaires, consistencies between health preferences for visuals and actual usage of visuals will be shown.

While it is important to understand what users prefer, it is also important to understand how doctors use visuals generally and in health pamphlets. Thus, chapter five will introduce and discuss interviews conducted with doctors practicing in Taiwan. The interview focuses on visual presentation in health-related literature. Thus, the study will go from the user (patients) to content contributor and literature distributor (doctor). This is partially based on the recommendation from Helen Osborne, health literacy author and advocate of clear health communication, to collaborate with health professionals when creating health-related literature. (Osborne 2006, 31)

Chapter six, the final chapter, will draw conclusions from the studies and make recommendations for writers who include visuals in health-related literature intended

for a Chinese-language audience. After providing some background in chapter two, then analyzing pictures in literature used by patients in chapter three, then surveying users in chapter four, and finally interviewing content distributors in chapter five, conclusions will be based on consistencies found in all areas and intended for western writers to better help understand what kind of visuals to display.

Chapter 2: Literature Review

Section 1: Pictures Aimed at Teaching

In all literature review sections, recommendations are presented in numerical order for convenience. They are not in order of importance. In section one, sources are from various fields of study that may have different writing styles and audiences, but all of the fields use visuals with the intent to teach, which is relative to this study because health pamphlets are designed, “to educate... on some aspect of health and wellness issues or to promote greater understanding of specific diseases.” (Jimison and Sher 339)

In addition, various fields of study have been used because regardless of whether writing is expository or narrative “the influence of pictures on learning from text is similar in both cases.” (Reid 251)

The focus in this study is on static⁴ pictures intended to be printed out. There are recommendations for pictures used in different technological platforms such as animated pictures (Lin and Dwyer, Ayres and Paas) or interactive pictures (Rasch and Schnotz, Yeh et al.) But for this study, the focus is solely on print-ready static pictures.

Picture Recommendation #1: Use pictures with text to support the main text.

This statement has two implications. The first is that pictures should be used to accompany text if the text does not clearly serve the desired purpose. A big reason for

⁴ *Static* refers to pictures that are not moving; stationary pictures

this is “humans have a cognitive preference for picture-based rather than text-based information.” (Katz et al. 2391) Many studies have been done, including those done by Dowse and Ehlers, Houts et al. and Saleh and Chanlin that show the effectiveness of putting pictures with written text. Houts et al. wrote that pictures can facilitate comprehension because they give users a context for organizing information that is provided in a text. (179-180) This is especially true for readers who are considered low-literacy or readers who have limited or no prior knowledge of the information presented in a text.

Brotherstone et al. wrote that pictures work better than words for recall of items in a document because they have, “distinctive visual-sensory features which allow them to be encoded within memory in a unique way.” (332) For instructional or educational writing, text introduces information then pictures solidify the information. This was the case in Tawfik Saleh’s study. He stated, “Visual aids do seem to improve both retention of safety-related knowledge and an improvement in safe work practices.” (10)

Employees adhered more to safety practices when educational pictures accompanied text, reinforcing the need to include visuals with text.

Another benefit of using pictures is that they help with comprehension by allowing the brain to focus on processing information. A study done by Schwamborn et al. determined, “Students can learn better from text and pictures than from text alone because this promotes appropriate active processing during learning while reducing extraneous cognitive processing.” (92) When a student reads text, there is extraneous

cognitive processing such as grammar and individual word comprehension, which effect how efficiently text is processed in the brain. However, if there is an accurate visual accompanying text, the brain can focus directly on processing the meaning of messages.

Pictures can also draw attention. In a survey done in the United Kingdom by Garcia-Retamero and Dhami involving Polish immigrants, pictures helped divert attention to information that helped provide a better overall understanding of risk estimates. They concluded that, “the use of materials that included visual aids is an effective method of communicating medical risk information to immigrant populations.” (56)

Sometimes having pictures with text is a matter of preference. Chanlin examined the effect of using pictures in learning an online nutritional course. Two groups of sixty-one total students were assigned to two groups; one group was labeled text-with-pictures and the other was labeled text-without-pictures. In the conclusion, Chanlin noted, “Students preferred more pictures, and disagreed to read textual information as the only visual information.” (80)

However, this is not to say that instructions or content should be picture based. A second implication of the first recommendation is that the content should still be text based and the pictures should support the text. Levin et al. stated, “Pictures are intended as text supplements rather than as text substitutes.” (74) This idea was later confirmed in Carney and Levin’s study of pictorial illustrations. Underwood et al. studied the relationship between pictures and text. They performed two experiments where

participants validated the accuracy of information between text and pictures. In their conclusion, Underwood et al. wrote, “When inspecting combinations of pictures and text, processing is easier when the text is read first.” (180) In other words, when the goal is to teach, pictures should support the text and help to solidify knowledge that readers get from text. Pictures should support or clarify what has already been written.

Picture Recommendation #2: Pictures need to be adjacent or appropriately distanced from the corresponding text.

Filippatou and Pumfrey, and Carney and Levin both wrote that pictures need to be in an appropriate proximity to the picture. The latter stated that “adjunct aids need to be proximally adjunct.” (21) Dowse et al. in their study of illustrated leaflets also made the recommendation that pictograms “must be carefully positioned in relation to associated text.” (7) As an aid to the text, pictures should be reasonably close so that readers can easily discern what portion of text the pictures correspond with.







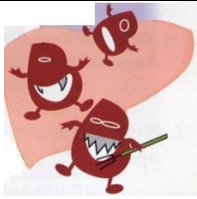
⁵ Images for figures 2 and 3 were taken by the author.

Spacing may be a concern for some documents, but if pictures are too far from their corresponding text, clarity is lost and the picture becomes less usable. Florax and Ploetzner's study showed the importance of picture-text proximity. Their study focused on when readers need to go back and forth from a labeled diagram to text. The study showed that it is more effective to use spatially integrated texts with pictures (Figure 3) rather than have a segmented text with a labeled picture (Figure 2). They concluded, "If instructional texts and pictures are presented in a format which requires learners to repeatedly search for segments in the text, for elements in the picture, and for mappings between text segments and picture elements, then extraneous cognitive load is enhanced and learning is impeded." (222-223) Studies done by Kalyuga et al. also support this conclusion. They wrote, "Instructions involving diagrams and text that need to be mentally integrated to be understood should be restructured into physically integrated formats with as small a number of units as possible." (352) So when the distance between a picture and its corresponding text is large enough that the reader must search for information, cognitive energy is wasted on trying to locate information when it should be spent on understanding text.

Whether pictures be in a part of a diagram or next to text, it is important to place pictures close to their corresponding text. If pictures are in the text, pictures should be close enough to their corresponding text so readers can easily see the relationship between picture and text and won't become confused by other elements.

Picture Recommendation #3: Pictures should not be decorative.

In their study, Carney and Levin categorized pictures into five different groups or as they called them, functions: **decorational** (pictures that only serve to add decoration to the page), **representational** (pictures that represent part or all of the context), **organizational** (pictures that in some way organize content of the text), **interpretational** (pictures that clarify difficult sections of text), and **transformational** (pictures that include mnemonic components designed to help readers recall information. (7) In table 1, the trees in figure 4 are decorative. The trees are added features of an outside environment, but do not add any additional insight to the content or represent the information being taught in any way. In figure 5, the raccoon is representational. The picture is from a brochure that teaches children how to wash their hands to prevent enterovirus. The raccoon is doing what the brochure is trying to teach; washing his hands. Figure 6 is organizational. The picture shows the steps people need to follow when mixing water and bleach to disinfect their bathroom. In figure 7, the cow's intestines are interpretational. They show where E. coli can be

				
Figure 4: Encouraging People to Exercise Every Day⁶	Figure 5: Encouraging Children to Wash Their Hands Frequently⁷	Figure 6: Showing Steps to Disinfect a Bathroom⁸	Figure 7: Showing Where E. coli Can Be Found in Cattle⁹	Figure 8: Personified Hepatitis B¹⁰

found in cattle. The personified E. coli helps to clarify what E. coli is and where inside the cow it is found. The personified livers in figure 8 are transformational. They are personified livers which can help show what part of the body is affected by hepatitis B. The livers are also in the shape of a letter B not only to show what type of hepatitis is being discussed, but also to help associate the letter B with the liver. Of the five types of pictures discussed, decorative pictures provide the least amount of benefit for readers or for comprehension. Carney and Levin wrote, "Decorational illustrations may help make the text more attractive or more marketable, but they are unlikely to enhance the

⁶ Image from "Ten thousand steps a day, your health is guaranteed" from Taichung City Public Health Bureau

⁷ Image from "Wash hands together, enterovirus will quickly go away" from CDC Taiwan

⁸ Image from "Prevent sickness in 3 steps" from CDC Taiwan

⁹ Image from "Enterohemorrhagic E. coli infection" from CDC Taiwan

¹⁰ Image from "Don't use too few prevention methods, hepatitis B prevention is great" from CDC Taiwan

desired outcomes related to understanding, remembering, or applying the text content.” (20) This was confirmed later in a study by Elia et al. They conducted a study with primary-aged children testing the usefulness of different pictures with math equations. They concluded, “Decorative pictures do not enhance understanding of the tasks they are attached to. (670) It is important to keep pictures as focused as possible in order to teach more effectively.

In their article about creating effective training content, Nokes and Sappington wrote, “If you choose pictures that aren’t relevant to the information in that part of the lesson, you end up creating unnecessary stimuli for learners. (33) Related to this idea, Osborne noted that not only do decorational pictures fail to enhance understanding, but they also waste space which could otherwise be used to educate readers. (2011) Thus, document space and reader effort are wasted when including decorational pictures. Pictures need to serve a purpose other than aesthetic design if the purpose of the literature is to teach. The effectiveness of decorational pictures may vary in other contexts, but if the goal is to educate, pictures should serve one of the four other functions mentioned by Carney and Levin.

Picture Recommendation #4: Information in the picture and text should be redundant.

This statement has two implications. The first is that when the intent is to teach, information provided in pictures should echo what has already been provided in writing.

In his study of science texts, David Reid made the comment that pictures “appear to be most effective when the material to be learned is present redundantly in both picture and text. (255) In their study of situation models (mental representations of text), Schroeder et al. noted that “a situation model needs to represent the state of affairs described in a text as accurately as possible.” (238) Though incongruent text and picture information affects all readers, Jae et al. determined that the group affected most would probably be low-literacy readers. They wrote, “Pictures in print advertisements, when incongruent with ad text, may degrade comprehension among low-literacy consumers.” (448) As supplementary items to the text, pictures should not portray more information than the text. Pictures should be as accurate to the text as possible so as not to confuse readers.

Since pictures should mirror content offered in the text, a second implication is that pictures need to be clear and unambiguous in their content, or as McCall put it, “immediately identifiable [and] relevant to the subject matter” (4) so that they can accurately reflect information presented in the text. In Mast and Kosslyn’s study about visual mental images, they stated that “images are more like descriptions than images.” (58) Meaning that a mental representation of what someone has read, may be completely different from what the writer intended. Thus, a clear, unambiguous visual representation of the text clarifies the writer’s intent. In their study, Mast and Kosslyn showed a group of people ambiguous pictures. After labeling the picture, they tried to discover if participants were able to identify alternate interpretations. In their

conclusions, they noted that “objects in mental images can in fact be ambiguous and that at least some people can detect a previously unrecognized interpretation...when partial stimulus cues are visible.” (69) Therefore, if pictures in a teaching text are ambiguous, readers may imagine an alternate meaning of the picture, defeating the writer’s purpose of including a picture.

In a study conducted by Crisp and Sweiry among sixteen-year old secondary students, the writers found that pictures in test questions could sometimes be misleading and resulted in confusion instead of clarity. They concluded, “It is important to ensure that, when used, visual resources are accurate and complete, contain minimal irrelevance and do not cause ambiguity.” (152) Thus, it is essential that pictures which aid text be clear and unambiguous.

These recommendations are the base for effective use of pictures when the intent is to teach. The next section will further define picture usage in a health context, focusing not so much on *how* to use pictures, as was discussed in this section, but on *when* to use pictures.

Section 2: Pictures in a Health Context

Pictures used in health-related literature have a different context than those to be used in other education-related literature. This section will introduce and discuss additional recommendations regarding *when* to use pictures in a health context.

Health Visual Recommendation #1: Pictures should be used when explaining difficult or essential concepts or procedures.

Health literacy has been an issue for those creating health-related literature. Lee and Stucky et al. state, “A significant proportion of adults in the United States have a difficulty navigating the health care system and managing personal health issues because of inadequate health literacy.”(1106) In fact, according to the U.S. Department of Health and Human Services, only 12% of adults in the United States have proficient health literacy¹¹. The ability to read and comprehend health topics becomes difficult because of the health literacy rate. The issue of low literacy related to health issues is not limited to the United States. Lee and Tsai et al., in their analysis of a national health survey in Taiwan discovered that “low health literacy is widespread even in countries like Taiwan that have a high rate of literacy.” (620) Thus, it becomes increasingly important for writers to find ways to help readers improve comprehension, especially when dealing with material that is difficult. When to include visuals and what type of visuals to use in complicated or difficult content is especially important. Wilson and Wolf shared this opinion in their study about the effective design of health materials. They noted that for print-based materials, “situations where procedural content requires explicit, detailed depiction of actions to ensure accurate comprehension may

¹¹ “Health Literacy Basics.” Accessed February 14, 2012.

www.health.gov/communication/literacy/quickguide/factsbasic.htm

best be served by the use of...thoughtfully chosen static images.” (321) It is vital that document writers choose appropriate visuals to go along with text.

In a study conducted to compare text-only and text-picture instructions for an inhaler and peak flow meter (asthma devices), Kools et al. found that participants using the text-picture instructions had significantly better recall than those using text-only instructions for the inhaler chamber, which was the more difficult of the two devices. This leads the authors to conclude, “Pictures contribute to a textual instruction, especially when the to-be-used device itself is relatively ambiguous.” (111) Therefore, pictures clarify the process of the object being used as well as the text.

Even though, generally speaking, health literacy is low among readers, if writers know that their intended audience is low-literacy, pictures accompanying complicated material become even more important. Kripalani et al. conducted a study analyzing the effectiveness of an illustrated prescription schedule. They found that even though all patients benefited from what they referred to as the “pill card,” those “with inadequate or marginal literacy skills, fewer years of schooling, or cognitive impairment appeared to derive the greatest benefit from the pill card.” (374) Thus, low-literacy readers especially need pictures when processing material that is complicated or difficult to understand.

According to this research, though it is advisable to include pictures with all health materials, it is vital to include pictures or other visual explanations when the content is difficult. Doing so helps readers understand the content more easily.

Health Visual Recommendation #2: Pictures should be culturally and socially sensitive.

One of the difficulties in writing for a general audience in any country is sensitivity to different cultures and different people. There are two ways to approach this issue; write culture free or consider a diversity of cultures. The most recent popular belief has been that the former statement is impossible. Dan Jones tells us, "Writing technical prose is an inherently biased activity." (216) From the time we start writing, we are biased. This especially applies to pictures. What kind of people should be in the picture? How old? Should they be disabled in some way? What should they be doing? Answering any one of these questions could give writers the appearance of bias or diversity. If readers feel that pictures are inappropriate for them, they may be less willing to read or use the material. In their book, Stith et al. write, "When sociocultural differences between patient and provider aren't appreciated, explored, understood, or communicated in the medical encounter, the result is patient dissatisfaction, poor adherence, poorer health outcomes, and racial/ethnic disparities in care." (200) In an article written to discuss the importance of delivering culturally-sensitive messages to readers of health-related literature, Yancura wrote, "The integration of cultural beliefs and practices into health education and intervention programs can increase participation rates." (401) This was supported by Houts et al. when they said, "Culturally relevant pictures increase acceptance of a health message, as well as adherence to medical instructions." Whether or not a writer intends it, culture will be a part of writing. The question is, "What

culture(s) should we include and/or depict?” a question that can only be answered by understanding the audience.

McCall told us one way to make health documents appropriate. “Include positive representation [with] visible minority groups...as well as those with disabilities.”(4) Houts and Shankar wrote that “culturally relevant pictures increase acceptance of a health message as well as adherence to medical instructions...These effects are most pronounced among people with lower levels of education.” (317) So writers need to understand the culture and education levels of our audience to ensure that pictures are appropriate. In an article focusing on pictures for low-literacy populations in South Africa, Dows states that developers “must work in collaboration with representatives of the target population, as this affords valuable insight into the most appropriate, culturally acceptable, and familiar images to use.” (25) Writers need to collaborate with members of a target audience in order to ensure that visuals are appropriate. Not doing so may cause unintended harm or decrease patient participation.

Writers need to consider not only the cultural background, but also the age-group. Ireland and Teijlingen, who did a study about breast-feeding pictures that would be presented to children, concluded that images must be acceptable to the target group. (212) A child viewing a picture will have a different interpretation than an adult or a senior citizen. Turner, in her study of health in children’s picture books, stated that “children are often presented with limited information.” But an adult would want

additional information from a picture. Thus, in addition to being culturally sensitive, visuals also need to be age-appropriate.

Cultural sensitivity relates not only to the picture itself, but also to the design. Springston and Champion, in their study of cultural document design state that both form and content should be culturally sensitive. (490) For example, a Chinese audience might prefer a more aesthetic design (Arno), a Mexican audience might prefer a friendly design (St. Germaine-Madison 185), and a western audience might prefer a more professional straight-forward design. Just as all other visual elements in a document, preferences of the target audience need to be considered even for the document design.

There is a lot for designers to consider when selecting images to include in a document. Cultural background, education, and age are among the most important factors when choosing when and where to include pictures. One important reason for being so sensitive is that writers need to be careful not to inadvertently create negative feelings in a document, which brings us to the third recommendation.

Health Visual Recommendation #3: Pictures should not induce negative responses.

With health literature, the goal is to encourage participation of a target audience. Pictures are included to aid in achieving this goal. However, in order to have a greater affect, writers will sometimes include pictures that are emotionally negative. There is

research that suggests negative pictures aid memory performance, but they also tend to push readers away. Humphreys et al. in their study showed that emotional pictures showed increased attention and better memory performance, but participants paid less attention to the negative pictures. (1235) Negative pictures might promote better retention, but they push away more readers and do not encourage participation.

Creating positive health literature is a large part of increasing participation and improving behavior for a target audience. In their paper, Houts et al. wrote about a picture depicting a handicapped child on contribution requests for the March of Dimes. They stated, "Positive emotional responses will increase the target behavior while negative responses will decrease behavior." (187) They also commented on the large amount of negative responses to the handicapped child. They speculated that negative response to the picture was because users may have felt that their emotions were being manipulated. (186) Caroline Wang suggested that, "Injury control images may unintentionally stigmatize those groups who already possess attributes targeted for prevention." (158) So writers should be careful to not turn away readers through unintended negative messages in their pictures. Pictures should be well chosen and carefully considered.

Writers can also induce negative response by association. In her study of pictures portraying disabled people, Phillips suggests that when we picture disabled people in an isolating way, where they are different by association (standing outside the fence of a normal school) we are also sending negative messages. (198-201) Therefore, when

dealing with injured or handicapped people, writers must be especially careful not to show them in a negative light. To remedy this, Schormans, from her study of public images of people with intellectual disabilities, suggests that pictures be “meaningful encounters between people with and without intellectual disabilities.” (64) Arneil suggests that when it comes to picturing those with disabilities, writers should purge dependency and substitute interdependency. (234) However pictures are used, writers should be even more careful about how disabled or handicapped people are depicted. There should be a positive effect from including them in pictures.

Regarding positive images, Montazeri and McEwen, from their study of two anti-smoking advertisements, concluded that young people especially preferred positive images because, “they perceive [them to be] more personally relevant.” (34) Fox and Newton had similar results from their study of positive images of dentistry. They found that showing positive pictures before dental visits reduced anxiety and increased participation. (455) If participation is the goal, it is important to include positive pictures. Positive pictures make readers feel safe and as a result encourage participation. It is essential that writers consider the opinion of members of the target audience when including pictures to make them more positive and effective.

Now we have seen how pictures in a health context have a more specific use than pictures used in a general sense. Now that the research has provided a health context for pictures, the next section can provide the third level of context; pictures in a Chinese health context.

Section 3: Pictures in a Chinese Health Context

According to Alice Chen et al., cultural differences are the biggest factors for Chinese people not adhering to medical advice. (636) If we want to communicate with Chinese people, we need to understand more about their background and culture. This section will focus on how Taiwanese people view and understand health. Even though there are many differences between Chinese and western views of health, in this section I will focus only on those principles that are directly related to visuals and this study.

Chinese Health Principle #1: A healthy life means a happy life.

Though Chinese health principles have often been associated with religion (Visscher), over-time they have also become part of Chinese culture regardless of an individual's religion. The statement, "Chinese people's understanding of illnesses and their belief in Chinese traditional medicine were integral parts of the Chinese culture," (Bu 26) was intended to apply to Chinese people eighty years ago. However, it is still valid today. More recently, Hsiao et al. suggest that health professionals "need to have a cultural understanding and the ability to identify the cultural elements of interpersonal harmony." (1005) To begin to understand Chinese health, health professionals need to first understand the principle of harmony, which is the base for happiness and health.

This health principle is rooted in the Taoist principle of harmony. Yu-chich Chen tells us, "Health is viewed as harmony between the forces Yin and Yang within and between the body and its environment." (271) Reid added, "When human energy

remains in harmony with the primal forces of heaven and earth, it flourishes and protects the health of the body...Humans who follow the Tao fulfill their spiritual destiny while also enjoying the fruit of their earthly nature.” (35) If our bodies are in harmony then so are our spirits. A harmonious body and spirit equals a happy and healthy person. It is crucial to understand that for Chinese people, “Health and happiness are inseparable.” (Bu and Fee 424) On the cover of their book about Chinese health, Ting and Jas show a picture of a man (see figure 9).



Figure 9: Ting and Ja's Book Cover

On the man's right side are the characters “健康” (Jian Kang) which mean health. On the man's left side are the characters “快樂” (Kuai Le) which mean happiness. Thus the authors have equated health with happiness.

Happiness comes as a direct result of leading a healthy, harmonious life. When showing healthy people, those people should be happy. Adversely, if someone is unhappy, they are probably unhealthy or trying to fight some kind of disease or illness. Writers who create documents for Chinese readers should be careful of context if they choose to show unhappy people since they might send additional messages associated with unhappiness.

Chinese Health Principle #2: Healthy living comes as a direct result of a healthy diet.

Food is very important in Chinese health. Ting and Jas state, “Regular nourishment and nutrition keep energy flowing freely...This even flow of energy is the key to helping [a person] stay healthy and strong.” (Ting and Jas 87). Reid adds, “When any of the various essential fluids upon which all vital functions depend is deficient, the first place to seek replenishment is diet and nutrition.” (Reid 100) Food is the base of health. The things we eat directly affect the way our body acts and feels. There are foods that harm the body, and there are foods that help the body. Foods in the former category are treated the same way as germs. If you eat junk food, you and your body will both be unhappy. However, if you eat right, you will feel and look better. Visually, when writers choose to show food, the food should be healthy, such as vegetables or fruit in order to show a positive message.

In relation to this principle is the Chinese view of Traditional Chinese Medicine (TCM). TCM is not viewed as a cure or medicine so much as it is a dietary supplement. Benedict and Heller describe TCM as, “health maintenance or disease management.” (57) TCM is additional help to maintain health. Jiang wrote, “TCM aims to correct maladjustments and restore the self-regulatory ability of the body.” (558) TCM helps to maintain or restore health in the body so the body can do its own work. TCM is seen as an extension of the natural diet, and not manufactured medicine, which is how most Chinese view western medicine. One author wrote that taking (western) medication is thought to be aversive. (Wong 1) Emphasis is placed first on a person’s own stewardship to take care of their body through natural ways. Deferring to Chinese medicine is not so

much seeking out medical scientific treatment as it is a temporary change in diet to include natural supplements in what should be an already healthy diet.

The first visual implication of this principle (a healthy diet equals a healthy person) is that that western medical procedures or medicine would rarely be shown on the cover of a prevention brochure. Western medicine is not the way to prevent disease. A healthy lifestyle is the way to prevent disease. If there are procedures shown on a brochure, they would be only in the context of a check-up.

Also, it is not uncommon to see visual representations of various principles of Chinese medicine or natural foods included with health pictures. Vice versa, unhealthy foods would only be shown in a negative context. They would also not show signs of an unhealthy lifestyle. An unhealthy lifestyle would especially include obese¹² people (Ming Zhu Wu 24) (Huang 32), people who are tired (Reid 87) (Ting and Jas 247) or those involved in unhealthy activities such as drinking alcohol, smoking cigarettes (Ko et al. 762) or chewing betel nuts (I. C. Wu et al. 241). People involved in these types of activities would not be shown on a health brochure. (32) Only healthy people with healthy habits and a healthy appearance should be included in Taiwanese health pamphlets.

¹² There are some conflicting studies regarding obesity. Some sources suggest that traditionally a fuller body reflects health and prosperity such as Marsh et al. and Sung et al. But other sources suggest that obesity is a sign of unhealthiness, such as Hu et al., and Ko and Chan. In a modern context, the latter is more often accepted, though some still accept the former.

Chinese Health Principle #3: A healthy lifestyle can prevent most forms of sickness or disease.

This statement is related to the second principle, but has additional implications. A healthy diet and lifestyle makes people happy, and can prevent numerous diseases. Ding Xing Chen wrote, “Our immune system is like our personal bodyguard, protecting us from invasion from viruses or germs.” (2) Responsibility for prevention lies in maintaining a healthy immune system. In her book about preventing cancer, Taiwanese health writer Nan Jun Chen wrote, “Diet and life-habit errors help develop cancer cells...If people, in their normal lives, can be alert and adjust their diet and life-habits, and have regular health examinations, cancer cells can then be suppressed from growing.” (13) In support of this, Papadopoulos et al. found that eating the wrong foods and not eating the right foods can cause cancer (427) Li added that cancer “is the result of life’s bad habits.” (9). Lee and Shen add that applied TCM principles can prevent different forms of cancer. (80) Many Taiwanese health professionals agree that a healthy lifestyle and diet helps with disease prevention, especially cancer.

The visual implication here is that being healthy is important. Health pamphlet designers should not only exclude unhealthy pictures, but also include pictures that are positive and healthy. Since healthy habits are so important, exercise, healthy foods, or a healthy environment would be positive things to show. The definition of positive varies from culture to culture, so designers and writers should be careful to choose culturally appropriate, positive pictures.

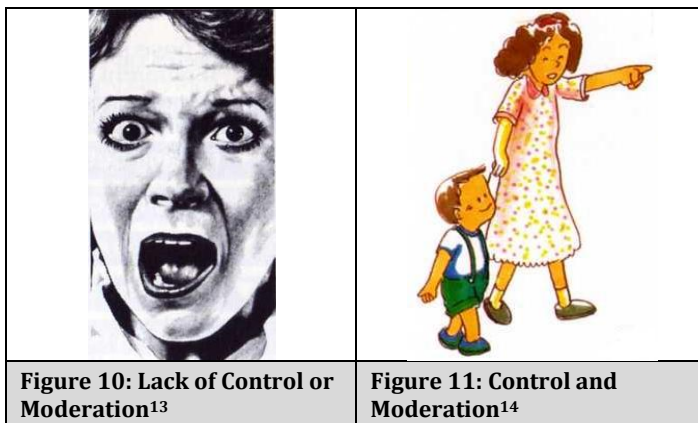
Chinese Health Principle #4: Moderation, discipline, and control are essential elements of a healthy lifestyle.

In order for people to live a healthy lifestyle, they need to exercise moderation, discipline and control. This principle is related to Chinese culture. Lu et al. noted, “The social participation of Chinese people is characterized...by the constant striving for self-improvement.” (279) Lu and Yang added that Chinese culture “rewards self-control, diligent role performance, and rigorous self-cultivation.” (167) These principles of moderation, discipline and control are all essential characteristics of a healthy lifestyle. In her book about Chinese medicine Wei Ling Chen wrote, “The best thing to do, if you want your body to be healthy, is constant maintenance” (3) Ding Xin Chen wrote, “If people know there are germs on their bodies, they will control eating habits and moderate their lives, so their lives will be healthier.” (18) Thus, with healthy living there is a constant monitoring of health, not just taking action when something is wrong. Tian Tian Song wrote about this. “There is a kind of neglect. We only pay extra attention to our own health when there is a certain specific situation...I am my body’s biggest thief...because I stole my health.” (005) Paying attention to health not only means a healthy diet, but the discipline to make proper health decisions and not indulge in unhealthy practices.

The visual implication here is moderation. Health images need to be moderate. A moderate picture will show control and discipline. Figure 12 is a moderate picture. The

child is disciplined and happy. The mother is able to teach and control the child to encourage him to go see the dentist. Even their clothes are moderate. In Figure 11, the woman is not moderate. She has

lost control of her emotions and does not express herself in a controlled fashion. Chinese people would be more apt to read moderate and controlled



pamphlets since they reflect Chinese values.

Chinese Health Principle #5: Speaking too much about negative things can make those negative things appear in our own lives.

This statement is related to the principle of harmony in Chinese culture. In the context of medical communication, Liu describes harmony as “avoid[ing] conflicts.” (295) It is important that pictures be positive and not introduce negative feelings or ideas, in order to maintain harmony because for Chinese, as Kwok et al. noted, “References to negative thoughts are considered to disturb the emotions and the mind.” (269)

This principle applies especially when talking about death or things that could eventually lead to death (Tse et al. 340) In their study, Yeo et al. wrote about various

¹³ Image from “Adolescence is not an easy time for anyone” from Parenting Adolescents Wisely

¹⁴ Image from “Love your eyes from a young age” from Taiwan Department of Health

beliefs of cancer among patients. Speaking of patients, they said, “Speaking about cancer could bring on the illness, and two felt that talking about cancer would increase their anxiety that could result in their falling ill. (178) Visscher wrote Chinese people “fear that openly acknowledging an impending death is like casting a death curse upon the person: it will make the person despair and die even sooner.” (684) Something that might be “realistic” for westerners could be devastating for a Chinese audience. It is important to be careful bringing up things that are too negative or that have very negative effects.

Visually speaking, pictures that could produce a negative reaction or are about things that could have negative consequences should not be shown, or they should be adjusted in a way that they can be shown. Pictures should be made positive in order to maintain harmony through positive emotion.

It is important to understand how Chinese people relate to health and visuals, in order to better understand how pictures are used in Chinese health documents. The questions of how to use pictures, how to use pictures in a health context, and how to use health pictures for a Chinese audience have been discussed. The next chapter will introduce and discuss a comparison two collections of health pictures, one collection from American health pamphlets and one collection from Taiwanese health pamphlets.

Chapter 3: Taiwanese and American Pamphlet Analysis.

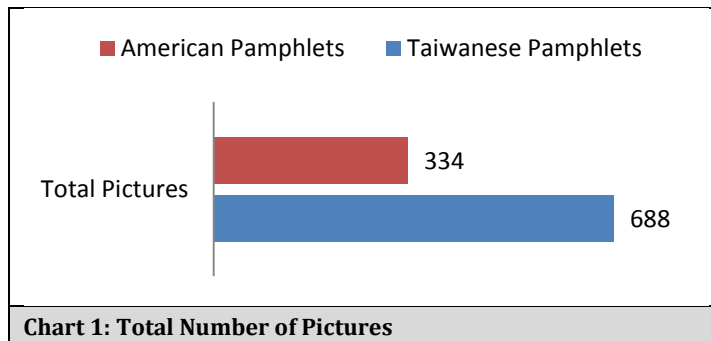
As part of my research, I analyzed a collection of Taiwanese health pamphlets, and a collection of American health pamphlets¹⁵. I chose to analyze American pamphlets to provide an example of something that most Americans would either be familiar with or have come in contact with. I can also use the more familiar American pamphlets as a basis for comparison to show how Taiwanese pamphlets differ.

I analyzed fifty-six Taiwanese-produced health pamphlets from six different publishers in Taiwan. I went to two different branches of the Taichung City Health Department and three private clinics to collect the pamphlets. In both branches of the Taichung City Health Department, separate pamphlets were kept on separate shelves. I selected all the different health pamphlets I could see. I kept only those pamphlets that had pictures in them, discarding two out of fifty-nine pamphlets. I also did not choose more than four pamphlets about the same topic. I did not look at the publisher until I was ready to analyze the pictures. Appendix A lists the Taiwanese health pamphlet publishers used and how many pamphlets were used from each publisher. I discarded one of the pamphlets because the publisher could not be verified, bringing the total number of Taiwanese pamphlets analyzed to fifty-six. Appendix B lists each Taiwanese pamphlet included in the analysis.

¹⁵ In my research the words *pamphlet*, *brochure*, and *leaflet* were used in the same context. In this study I will use *pamphlet* because that is the word I used in the questionnaires.

For the American pamphlets, I searched online for pamphlets that were print-ready. I selected mostly pamphlets that, when printed out, would be in a folded six-page format, but did not search exclusively for that style. Because I often had to search for pamphlets using the name of a publisher (for example, I searched for many pamphlets by first searching for different state health departments. After I found a health department, I searched for pamphlets those health departments provided), I also limited the number of pamphlets from a single publisher to four, and often only had one pamphlet from a single publisher. I selected pamphlets on various topics but did not limit the number of pamphlets on a certain topic to a specific amount. I also had four pamphlets sent to me from the United States. In total, I analyzed fifty-six American pamphlets, equaling the number of Taiwanese pamphlets analyzed. Appendix C lists the online pamphlets included in this analysis, and Appendix D lists the four pamphlets sent to me from the United States that were included in this analysis.

Since this study focuses on visuals in pamphlets, the analysis will be limited to visuals and visual information. I defined a visual as any image or picture that was not part of a background, heading, or bullet point. Each separate image was counted as a visual. If separate images were clustered together, all images were treated as individual pictures if they were created separately. If the same visual appeared more than once in the same pamphlet, I counted it as a separate picture each time it appeared.

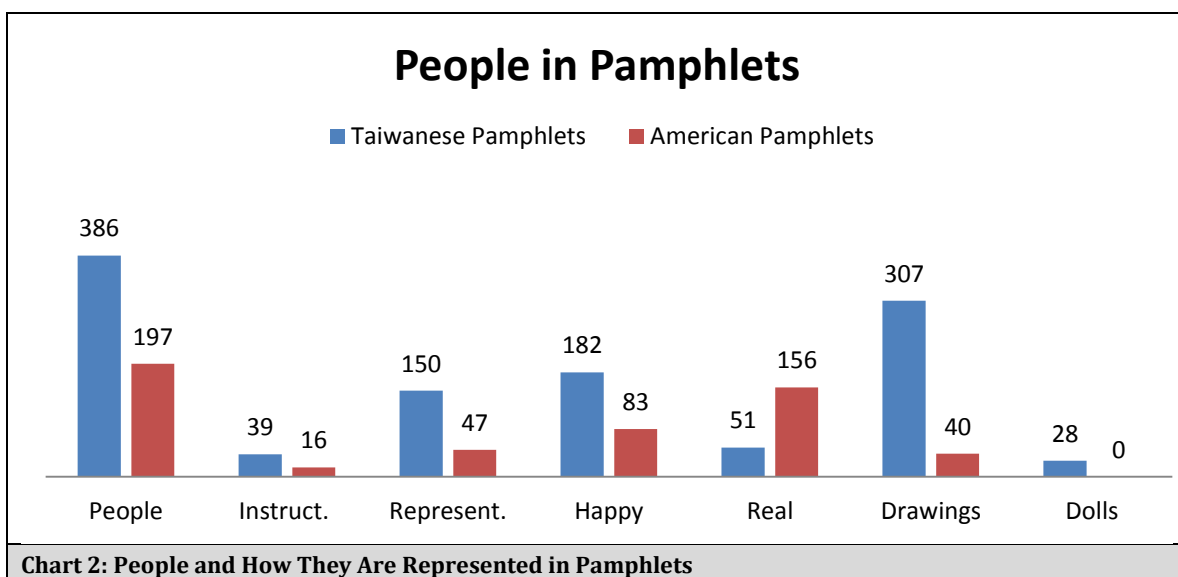


For the overall picture analysis, pictures were separated into three groups: people, animals, and personification. An analysis on visual information was also conducted, which will be discussed after the picture sections.

Chart 1 shows the total number of pictures from the American and Taiwanese pamphlets. There were 5.96 pictures per American pamphlet while there were 12.29 pictures per Taiwanese pamphlet. The American pamphlet with the most pictures was a 12-page pamphlet with 21 pictures. The Taiwanese pamphlet with the most pictures was a 21-page pamphlet with 53 pictures.

I initially attributed the difference in the number of pictures per pamphlet to culture. One quality of Chinese style is visual excessiveness. Speaking of Chinese web design, Rau et al. mentioned that “excessive visual stimuli” characterized Chinese design. (195) Usually, Chinese visual design includes a large number of pictures or other visual elements. However, I also found that the American pamphlets relied much more on text to deliver content. Not only did the American pamphlets use fewer pictures, but, as we will further see in the next section, they used them less effectively.

Chart 2 shows the people and how I categorized them in the Taiwanese and American brochures. For *Instructional* pictures, I have partially followed the definition from Carney and Levin for *organizational* picture, as mentioned in picture recommendation #3. However, Carney and Levin's definition includes maps or related



pictures which organize information. Because in this section I focus only on people, I have narrowed the definition to include only those pictures where a person is demonstrating how to complete a task, and thus have redefined the pictures as *instructional (instruct.)*. A *representational (represent.)* picture follows Carney and Levin's definition and is a representation of a person mentioned in the text. I counted a picture as representational only if the picture was of someone who was directly mentioned in the text or who was doing a task that was mentioned in the text. A *real* picture is one that shows a photo of a real person. A *drawing* is any picture of a person

that has been drawn by hand or on a computer¹⁶. *Dolls* are photos of dolls used to depict people. *Happy* means that the person in the picture is visibly happy. If a person's expression is neutral, I did not include them as being happy. They had to be visibly happy. In single pictures that had more than one person, if at least one person was happy and the others were at least neutral, I counted the picture as happy.

Of the three hundred ninety-nine people in the Taiwanese pamphlets, a total of one hundred ninety pictures were instructional or representational, 47.6% of the pictures. Of the one hundred-ninety-seven people in the American pamphlets sixty-three were instructional or representational, 32% of the pictures. So even though there were more pictures per pamphlet in the Taiwanese pamphlets, the Taiwanese pamphlets followed picture recommendation #3 better and had a higher percentage of instructional and representational pictures. Overall, visuals played a more important role in the Taiwanese pamphlets than in the American pamphlets. Not only were there more pictures per pamphlet, but there was a higher percentage of instructional and representational pictures.

It is also important, especially for the instructional pictures, that the text and picture(s) be close enough that there is no ambiguity about which section of text goes with which picture as stated in Picture Recommendation #2. Of the thirty-nine

¹⁶ In the Chinese health surveys I distributed, I used the Chinese translation 卡通 which translates into English as *cartoon*. So the words *cartoon* and *drawing* are used interchangeably throughout this paper.

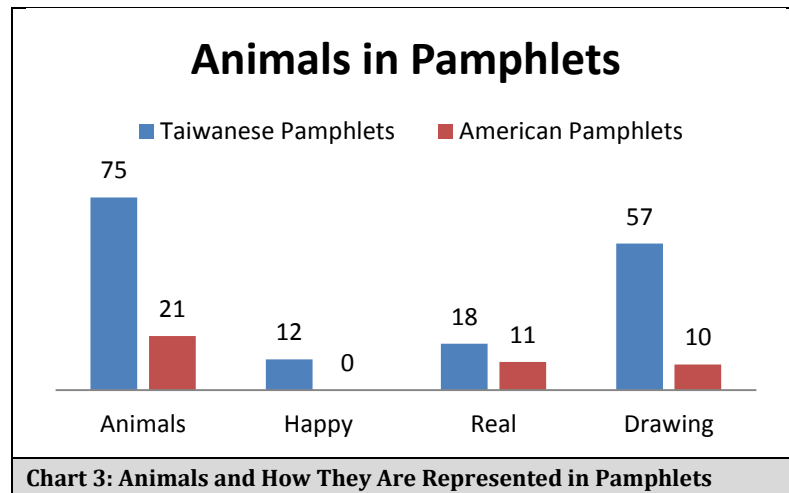
instructional pictures in the Taiwanese pamphlets, thirty-eight of the pictures were adjacent to the text. The one that was not adjacent to its instructional text was on a cover and had a diagram instead of the same picture next to the instructive text on the inside of the pamphlet. Of the sixteen instructional pictures from the American brochures, only three were adjacent to their corresponding texts.

In the Taiwanese pamphlets, 49.4% of the people were happy. In the American brochures, only 42% of the people were happy. Of the thirty-nine Chinese pamphlets that had a person on the cover, 30 (77%) were happy. This can be attributed to Chinese Health Principle #1, "A healthy life means a happy life." When it comes to health in Chinese culture, things should be kept positive.

Chinese health principle #1 and Chinese health principle #3 are also related to why there were so many drawings. In the Taiwanese brochures, 83% of the pictures of people were either drawings or dolls. Only 20% of the people in American brochures were drawings. Drawings can decrease the shock of a real image. As one doctor interviewed put it, pictures that are hand-drawn "decrease [the] impact of unpleasant images." Drawings can have more visual appeal because not only are they "cute," but they are less offensive. Health, especially Taiwanese health, should be positive. If a Taiwanese person picks up a health pamphlet and sees a shocking image or someone that looks unhappy, he or she will rarely be inclined to read further. This is a very important issue when dealing with Chinese health, as we will see later in the survey section and in the doctor interview section.

Regarding people, Chinese Health Principle #2 stated that only people with healthy habits and a healthy appearance should be shown in a health pamphlet. In the Taiwanese health pamphlets, none of the people were obese, which supports the statement that in a modern health context, obesity is seen as unhealthy. There were eight instances where people were unhealthy. Four of them were sick people, two showed the results of oral cancer, one was a crying child, and one was dizzy. Only one of them was on the front cover. There were also five instances of western medical procedures in the pamphlets. All of them were with dolls, and none of the images were on the front cover. Besides the principle of positive health in health pamphlets, another possible reason few western medical procedures were shown could be because of the Chinese believe that health is your own responsibility. Jette and Vertinsky (275) and Wong et al. (123) explained that for Chinese patients, health is first the individual's responsibility. There is also a similar opinion from those surveyed in the next chapter. So an individual should first look to take care of the problem first, then look to a doctor for care or treatment. A western medical procedure would send a message of being doctor-dependent, instead of the Chinese belief that people first take responsibilities themselves.

Chart 3 shows how I categorized the pictures in the animal group. My main reason for including a group about animals is to show how the Chinese health principle



of health and happiness includes everything in a pamphlet, not just people. *Animals* refers to total number of animals. Here, *animals* is defined as any non-human member of the kingdom Animalia. If an animal was personified in any way, I still counted it as an animal. *Real*, *Drawing* and *Happy* follow the same respective definitions as the categories in chart 2. Of the sixty-six animals pictured in Taiwanese pamphlets, 12 (20%) were visibly happy and 50 of them were drawings (84%), which support the Chinese principle of health and happiness.

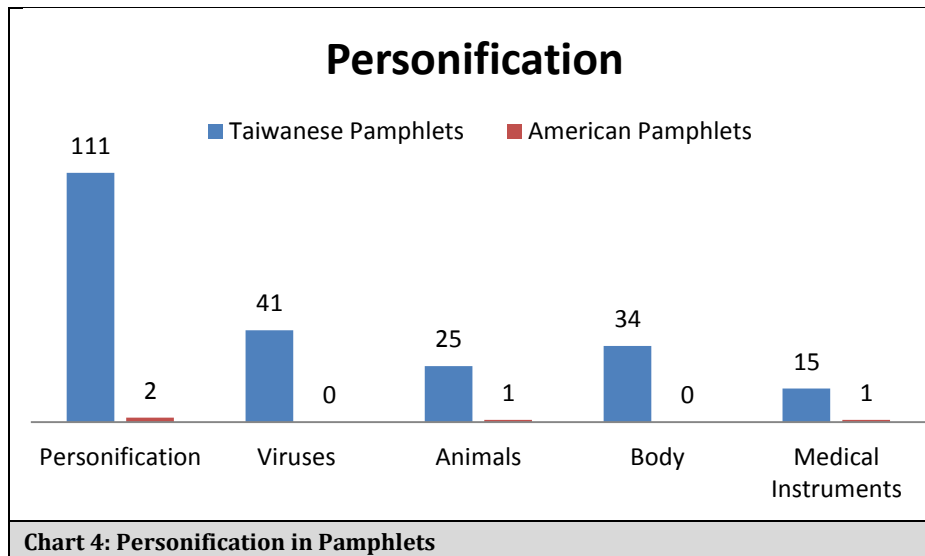


Chart 4 shows how I categorized the pictures in the personification group. I counted all non-human pictures that had human qualities as *Personification*. I included any foreign internal biological agent as *Viruses*. *Animals* follows the same definition as the column of the same name in Chart 3. In *Body* I included anything that was a natural part of the body, internally or externally. In *Medical Instruments* I included any tool that would be used by a doctor or that would be recommended by doctors for use by patients. For the personification group, there were significant differences between the Taiwanese and the American pamphlets. There were only two instances of personification in the American pamphlets compared to one hundred-eleven in the Taiwanese pamphlets.

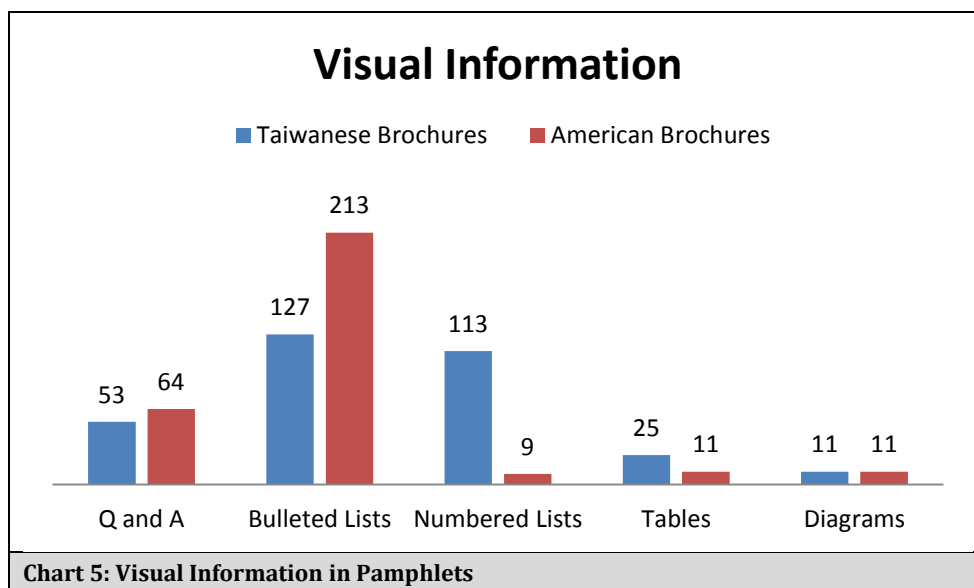
Personification is another way to keep the mood positive in a pamphlet. For example, instead of showing a needle, which might stimulate negative memories of needles, a document designer could personify the needle to make it happy and less

repulsive. A real virus or sickness of any kind would be a dangerous thing to show to a Chinese audience because of its negative implications. However, when you personify it to give it villainous qualities, people can recognize it as negative without the risk of the object being repulsive. Showing a real image of such things could introduce feelings of unhappiness or discomfort. In the Taiwanese health pamphlets, all viruses were personified. There were no real viruses shown. One doctor I interviewed in reference to drawings said that “patients fear real pictures.” That fear of real pictures would increase if there was a picture of a real virus in a pamphlet. Showing an image of a real virus in a health pamphlet would probably significantly decrease patient participation with that particular pamphlet.

In most western countries we would probably not take personification in a health pamphlet very seriously, or we would assume that the pamphlet was for children. However, the instances of personification in Taiwanese health pamphlets were not just limited to pamphlets for children. Of the twenty-two Taiwanese pamphlets containing personification, seven were for children and fifteen were for adults. Thus, personification can be an appropriate design quality for Taiwanese pamphlets intended for children or adults.

Since the Taiwanese pamphlets included such a substantial number of pictures, it is reasonable to assume that the written information would also be visual. Chart 5 depicts how written information was made visual for Taiwanese and American

pamphlets. In *Q and A* I included instances where a question was asked and then answered immediately following the question. If several



questions and answers appeared in sequence and were clearly related, I recorded it as only one instance. If it was not clear whether one question was related to another, I counted them as separate instances. *Bulleted Lists* were lists that had vertical bullet points separating information. If there was a list with no visible bullets, I didn't count it as a bulleted list. *Numbered Lists* (counted separate from *Bulleted Lists*) were bulleted lists with numbered points. Tables were a group of columns and/or rows used to display information. *Diagrams* were pictures with explanatory or organizational text on the picture or with indicators directing the reader to explanatory text.

If we combine the bulleted lists and numbered lists, there was no significant difference in the visual display of information between the Taiwanese and American pamphlets. Even though there is an obvious difference in preference of bullet points,

whether they are bullets or numbers, it is clear that both sets of pamphlets formatted information to be visually accessible. Since medical pamphlets are meant to be quick, accessible pieces of information (Young et al. 78 and Brown et al. 218), it fits that the written information was made visually accessible.

Chinese communication is often described as being high-context, meaning that in verbal communication some things are left unsaid, with the cultural context filling in the rhetorical gaps. The cultural and rhetorical contexts become a significant factor for communicating even essential information. In a high-context culture, there is “pre-programmed information that is in the receiver and in the setting, with only minimal information in the transmitted message.” (Kittler et al. 66) On the other hand, low-context communication relies more heavily on the textual message. Words, not context, play the most important role. If there is a picture that accompanies the message, it is not part of the essential message, but an extra element added to reinforce textual messages. This was generally true of the American pamphlets. In those pamphlets, there were fewer pictures and the pictures that were used were not used as effectively. However, in the case of the Taiwanese pamphlets, there was a lot of cultural context, but the context was not necessarily used to communicate unwritten information, but rather to set the mood of the document. Visual mood is essential for a Taiwanese audience. If the visual mood of a public document is not positive, a Taiwanese reader will probably not use it. Several things affect the visual mood of a document, including the color of the background and the pictures, the style of the pictures, the facial

expressions of the people in the pictures, and the style and form of taboo items. Having a positive mood encourages participation.

After a document establishes mood, there needs to be purpose. I mentioned earlier that pictures in Taiwanese health pamphlets did not communicate unwritten information. That isn't to say that they were void of any information. But rather the pictures did communicate information, but it was redundant with the text, making them a more integral part of the message. Pictures may have been carefully selected to lessen the emotional impact, but the message itself was clear, and in some cases even clearer than they could have been had a "real" picture been used. One common generalization of high-context culture is that messages are "stated indirectly." (Thatcher 88) This was not the case with the pictures in the Taiwanese health pamphlets. The main message was clearly stated. There were several other indirect cultural messages that were also a part of the pictures such as the use of color, the mood of the people, and personification, but those things were indirectly related to the message. When a reader sees a crossed-out picture of personified viruses the message is pretty clear to avoid viruses.

Even though high-context communication does explain some elements of the Taiwanese pictures, such as gaining the trust of the reader (achieved in large part through appropriately non-offensive pictures and color) and making communication engaging, selection and usage of pictures relates more to wanting to convey a clear, harmonious message to the reader. Harmony (often meaning the absence of conflict or

negative feelings) plays a major role in Chinese communication, especially visual communication. If a message is harmonious, its context, content, and result will make you feel positive. With pictures, since they play a role in the context, content, and result, it is imperative that they are effective. Since they are the first things readers notice, pictures should invoke a positive mood in their appearance. They echo or clarify the message in the text. And the result of the pictures should be positive.

In the next chapter we will see how Taiwanese readers react to pictures that are in health pamphlets and see if the things discussed in this chapter are indeed how Taiwanese readers relate to pictures.

Chapter 4: Surveying Taiwanese Regarding Preferences in Health

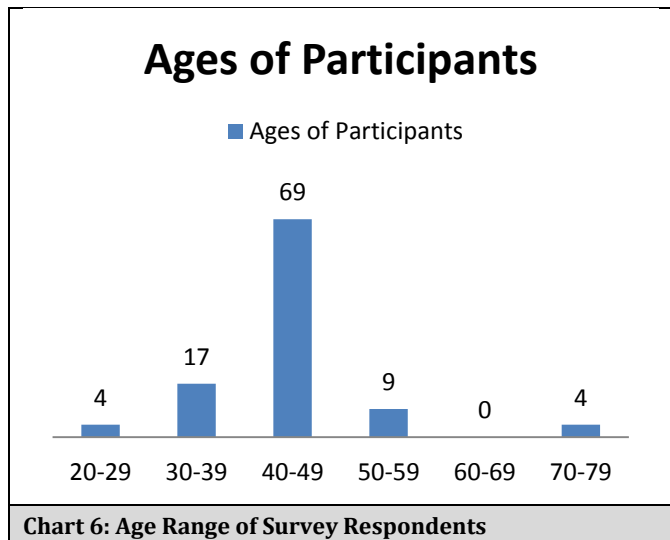
Pamphlets

For the second part of my research, I passed out surveys to Taiwanese adults to find out their preferences regarding visuals in health pamphlets. While I was doing my research, I was employed as a fifth grade teacher at Wagor Bilingual Academy (Wagor), a private Chinese/English bilingual elementary school in Taichung, Taiwan. I received permission from the principal and the English department director to pass out surveys to parents of students at Wagor. When conducting the surveys, I first passed out questionnaires to students. I took about ten minutes of class time in different classes, and I instructed the students to give the questionnaires to their parents. I stressed that their parents were not obligated to participate, but rather that participation was voluntary. If parents chose not to participate, I asked that they return the blank questionnaires to me so that I could reuse them. Accompanying the survey was a consent form informing participants why the survey was being performed and whom they could contact if they had questions. If the parents desired, they could keep the consent form. When those parents who chose to participate completed the questionnaire, I instructed the parents to put the completed questionnaire in an envelope, which was attached to the questionnaire, seal the envelope, and return it to me. In the end, I received one-hundred-five completed or mostly completed surveys.

The surveys were written in English and then translated into Chinese. Both languages were on the surveys. I told the students that the questionnaires could be completed in either Chinese or English. When I received completed surveys, I recorded the information in English, and then put the surveys in a secure place until after I finished recording all the data. When I had difficulties with either vocabulary or handwriting, I asked a native-speaking colleague for help.

Appendix E contains a copy of the questionnaire that was handed out. Appendix F contains the consent form. The questionnaire was mostly open-ended questions. I tried to not be leading, but for some questions, sample answers were provided to give respondents an idea of the kinds of answers I was looking for. Most respondents answered all the questions. Only five questionnaires were returned incomplete and three or less questions were incomplete in each of those questionnaires. When I received incomplete questionnaires, I recorded the information from the answered questions only. Because the questions were open-ended, I received a large variety of answers. For some questions, I received thirty-one different answers. It is impractical and unnecessary to include all answers to every question in this analysis. Instead, I have categorized the answers for those questions that have a large number of answers. In this analysis, I will present only the categories of answers unless individual answers are significant. For convenience in discussing individual questions, I will present the questions in a *Q and A* format, giving the question first and then discussing the answers.

Personal Information Question 1: Age



There is a statement on the consent form which says, “By filling out this questionnaire you are also acknowledging that you are at least eighteen years old.” However, I included this question to get an age range of respondents and to make sure that respondents were indeed at least eighteen years old. Chart 6 gives the age range of respondents. Because I gave out surveys to parents of fifth-grade students, most respondents were in their 40s, which left young adults and senior citizens underrepresented in this study.

Personal Information Question 2: Birthplace

The main reason for including this question was to make sure that respondents were Taiwanese. Since I was focusing on Taiwanese preferences, I wanted to make sure that I included answers from those people who were born in Taiwan. This question was

answered in all the questionnaires, and all the answers were a place in Taiwan, thus confirming that all respondents were from Taiwan.

Personal Information Question 3: Occupation

I included this question to understand the types of people filling out the questionnaires. Because I interviewed doctors, no doctors filled out questionnaires. There were a large variety of professions from respondents. Appendix G is a list of the occupations of those surveyed and the number of people from each occupation. Only four occupations had more than four respondents: business (20), housewife (12), teacher (8), and education (8). Twenty occupations had one or two respondents. Only five of the respondents had blue-collar jobs (manufacturers and telephone technician), making those with blue-collar jobs underrepresented in this study.

Personal Information Question 4: Education

Overall the respondents were highly educated with 73 of the respondents (70%) having at least a bachelor's degree. Uneducated people were underrepresented in this study, and it would be interesting to see how their answers would differ from a more educated group of respondents.

Survey Question #1: How often do you read health pamphlets?

In Taiwan, health pamphlets are mostly available at hospitals, clinics, government health offices, and drug stores. It is not uncommon for someone to browse through brochures

at a health clinic or hospital while waiting to see a doctor. Even though pamphlets are available at drug stores, a large number of them are from private companies and act mainly as advertisements for certain products. Despite that, it is not difficult to find a free pamphlet on any given health topic. A person would simply have to go to a government health office or hospital to find one. Since health is a concern for many Taiwanese people, I expected that most people would read health pamphlets at least occasionally. There was a large variety of answers to this question, but only six respondents said that they never read health pamphlets. All other respondents (94%) stated that they read health pamphlets at least occasionally.

Survey Question #2: Do you feel it is your responsibility to get informed about health issues, or is it the government's responsibility to inform you? Why?

Ninety respondents (87%) answered that it was either their responsibility or both their and the government's responsibility. This falls in line with the Taiwanese belief stated previously that health is a person's own responsibility. This also helps to explain the responses to Survey Question #1 as to why most respondents will read health pamphlets at least occasionally.

Survey Question #3: What do you expect to find when you read a health-related pamphlet? What kind of information?

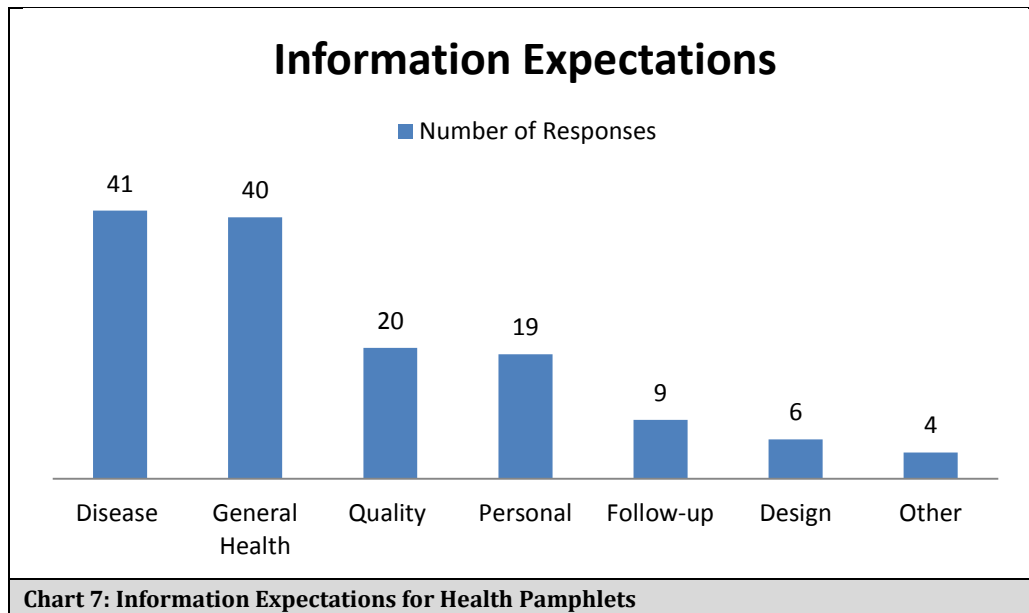


Table 2: Definitions of Categories from Chart 7	
Disease	Information about disease or sickness
General Health	Information not on a specific topic
Quality	Information that meets a certain standard
Personal	Information for own use
Follow-up	Where to find additional information
Design	Comments about design or format
Other	Diet, blood, and medicine

I included this question to get a general idea of what kind of information a Taiwanese reader expects to find when reading a health pamphlet. Based on the Chinese Health Principle #3, I anticipated that a lot of the respondents would want information about prevention.

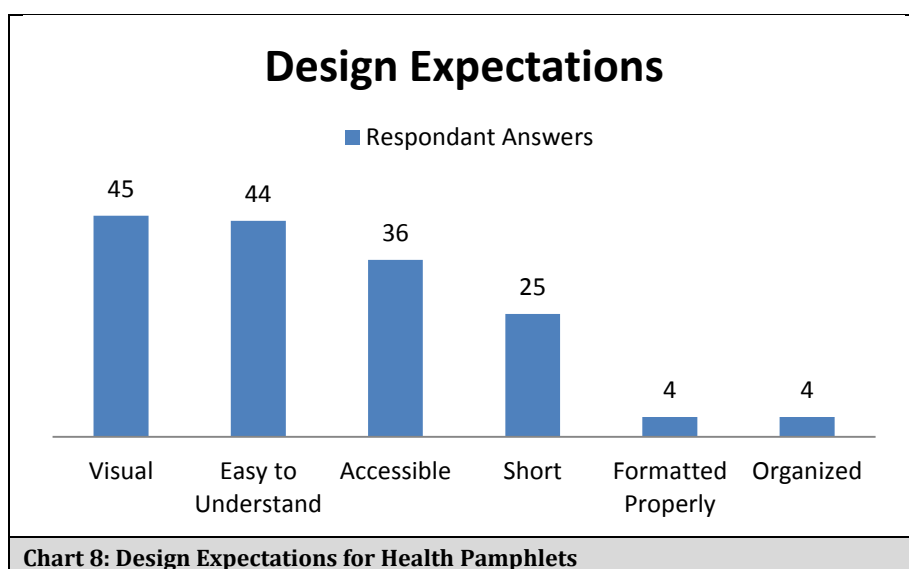
Chart 7 shows how respondents answered this question. Table 1 shows how I defined each category. *Disease* refers to information about diseases or sickness. This

may include but is not limited to symptoms, prevention, or causes. *General Health* refers to health information not on a specific topic but on a general level, for example, general solutions to health problems or health reminders. *Quality* refers to information that meets a certain standard, for example, correct information or easy to practice information. *Personal* refers to information for an individual's own personal use. *Follow-up* refers to information about places readers can go to find additional information. *Design* refers to comments about the design or format. *Other* includes information about diet, blood, and medicine. If a respondent had more than one expectation in their answer, for example if they said they expected recent information and information about cancer, I separated the answers and grouped them accordingly.

It was not surprising that many people wanted to know about diseases. Knowing more about diseases can help in prevention. In total, there were thirty-eight respondents who asked specifically about prevention. Some respondents asked about disease prevention, and others asked about general daily preventative actions. It is interesting to note that none of the responses related to cost or money. Over half of the American pamphlets analyzed mentioned cost in some way. However, Taiwan has publicly-funded health care which is called National Health Insurance (NHI). This means that anyone with a proper Taiwanese ID number (including foreigners who have been in the country at least three months) can receive health care for a relatively small fee (usually three to five US dollars), but this fee may be waived if necessary. In most cases,

cost of treatment would not be an issue, which leaves people to focus on health issues, without being troubled with cost.

Survey Question #4: What are your expectations when you are reading a health pamphlet? (i.e. should it be short, should there be visual explanations, should you be able to find information quickly, etc.)



I included this question to steer respondents in a visual direction. Before moving on to pictures, I wanted to find out more about visual expectations. In order to differentiate between this question and survey question 3, I provided some sample answers which led some people to give those same answers, and may have influenced the general outcome. For this question, I include only those answers that related to design. There were several answers about information content, but I did not include them in the analysis.

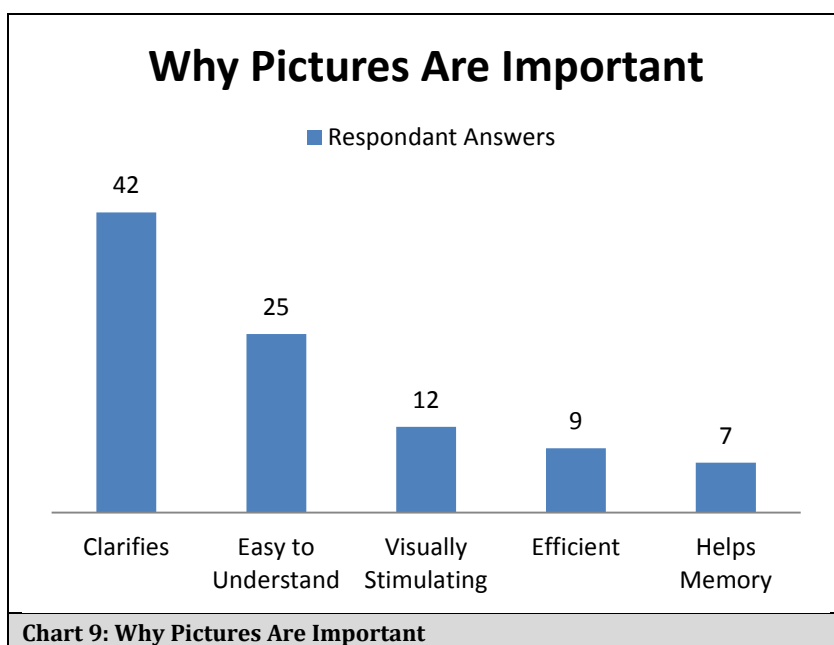
Based on the health pamphlet analysis, I expected that most people would want easy visual information. There were numerous visual elements in the Taiwanese pamphlets analyzed in this study that serve both a decorative purpose and made the information easy to understand. If respondents expected easy visual information, it would further explain why there were so many pictures in the Taiwanese pamphlets, since pictures play an important role in fast comprehension.

Chart 8 shows how people responded to this question. Since the categories are more straight-forward than in Chart 7, there is no table with Chart 8 to explain the categories. *Visual* included any answer that requested information including pictures or visuals. *Easy to Understand* includes expectations about how the information in a pamphlet should be easy to understand. *Accessible* includes expectations about finding information quickly. *Short* includes expectations that a brochure should be short or concise. *Formatted Properly* includes expectations about font size, tables, and other text-related visual elements. *Organized* includes expectations about how information should be organized in a professional way or in a way that will makes it easy for readers to easily scan through information.

Based on the responses, it is clear that most respondents preferred fast, easily accessible information. This falls in line with the purpose of a pamphlet, which is to introduce medical information. One doctor interviewed said, "Pamphlets can introduce important information at a glance." Visual accessibility is an expectation of both the reader (respondents) and from those who contribute to the information (doctors).

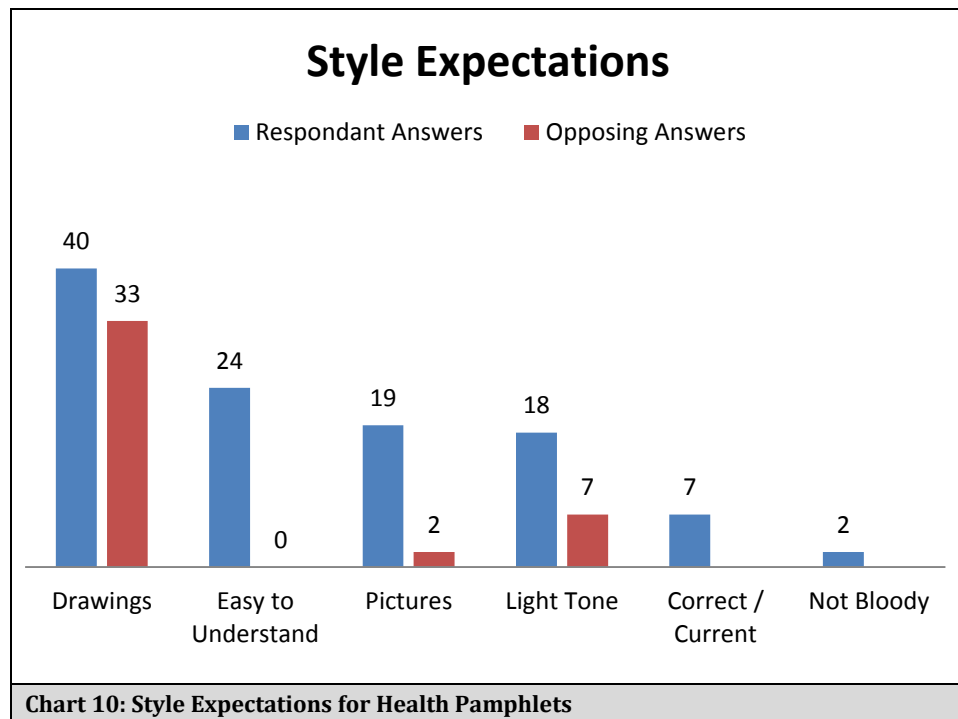
However, it is possible that many respondents were led to answer in this way because the question was leading them in this direction.

Survey Question #5: Do you feel pictures/visuals are important when reading health pamphlets? Why or why not?



One hundred respondents answered this question. Of those hundred, ninety-five wrote that pictures are important. As can be seen from Chart 9, most respondents felt that pictures clarify information or help readers better understand content. Overall, respondents felt that pictures are effective. Many of the responses the respondents wrote support the picture recommendations from section 1 in chapter 2. A major reason for this is probably the educated audience. An educated audience would be more familiar with how a picture should be used in a document.

Survey Question #6: What are some qualities that health pamphlets should possess? (i.e. should they show real people or animals or should they be drawings; should the mood be serious?)



I included this question mainly to ask about picture and visual tone preferences. In order to differentiate between this question and survey questions 3 and 4, I included some sample answers, which may have led some people to give the sample answers. I expected to find some cultural preferences from this question. For example, I expected there to be answers about a lighter tone and positive pictures. Chart 10 shows how respondents answered this question. *Drawings* has the same definition as in Chart 2. *Easy to Understand* has the same meaning as the category of the same name in Chart 9. *Pictures* includes preferences to see pictures accompanying text. *Light Tone* includes all

answers about wanting a light, non-serious mood. *Correct / Current* includes requests that the information be accurate or up-to-date. *Not Bloody* were two specific responses that there be no blood in pamphlets.

In the responses, there were some cultural preferences such as the desire for a light tone, but there were also some surprising results. I expected most people would prefer drawings, but I was surprised at the amount of conflicting responses about whether pictures should be cartoons or real. One respondent wrote¹⁷, "Using drawings...will make it attractive so people will be willing to read it." Another wrote, "Drawings help people feel relaxed." Many respondents who preferred drawings had similar answers. A common opposing response to this was, "Real people give real feelings." I attribute the division to the high level of education. Many people with education, especially those with advanced degrees, have become somewhat westernized, meaning that they accept or agree with many western ideas (Altbach 27 and Shenghong 577). Wanting things to be "real" is a western concept that is commonly accepted by a lot of educated Taiwanese.

Another area with conflicting responses was regarding the mood. Eighteen respondents thought the mood should be light, and seven respondents thought the mood should be serious. Once again, I attribute the difference to education. A serious

¹⁷ In cases where I translated Chinese responses, I translated to reflect the Chinese meaning as accurately as possible. I did not translate for English style if the English style changed the Chinese meaning.

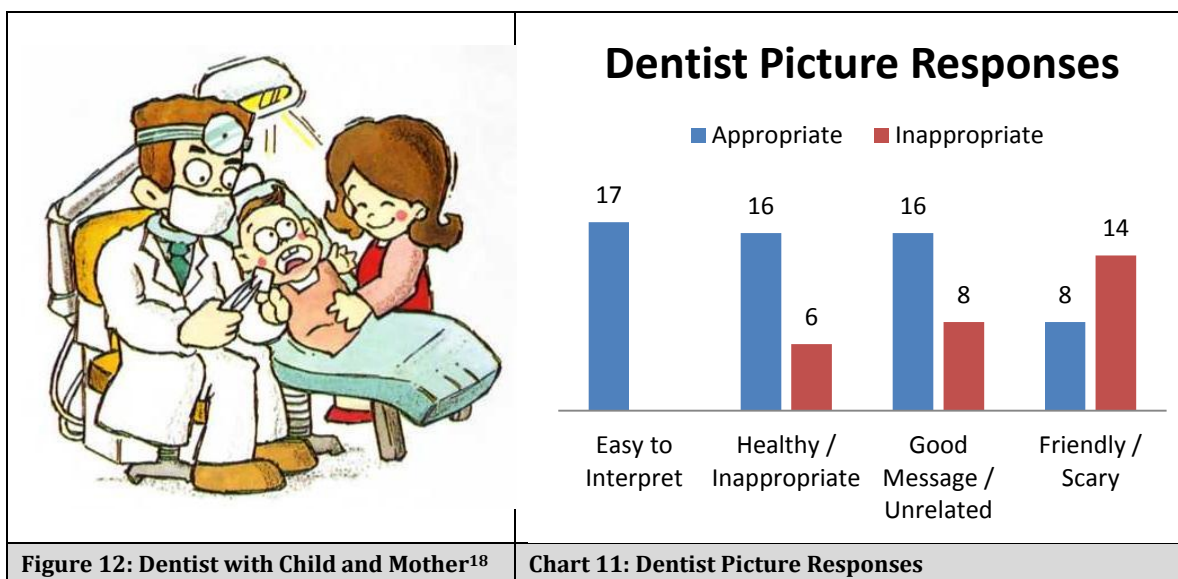
mood would be more western whereas a lighter mood supports the Chinese “healthy equals happy” principle. I don’t think that many traditional Taiwanese people would be interested in reading a serious brochure, especially if it was casual reading.

Survey Question #7: When locating information, do you prefer to read paragraphs (A) or glance at information that is made visually accessible (B) like numbered lists or chunking? Why?

Visual representations of information, for example pictures, would go hand in hand with visual presentation of information. I included this question to confirm that since brochures, by their nature, should be sources of fast information, visual cues would also be a preference of most readers. This was confirmed as 95% of the respondents preferred B, easily accessible, visual information.

Survey Question #8: Is this a picture you think should be in a health pamphlet?

Why or why not?



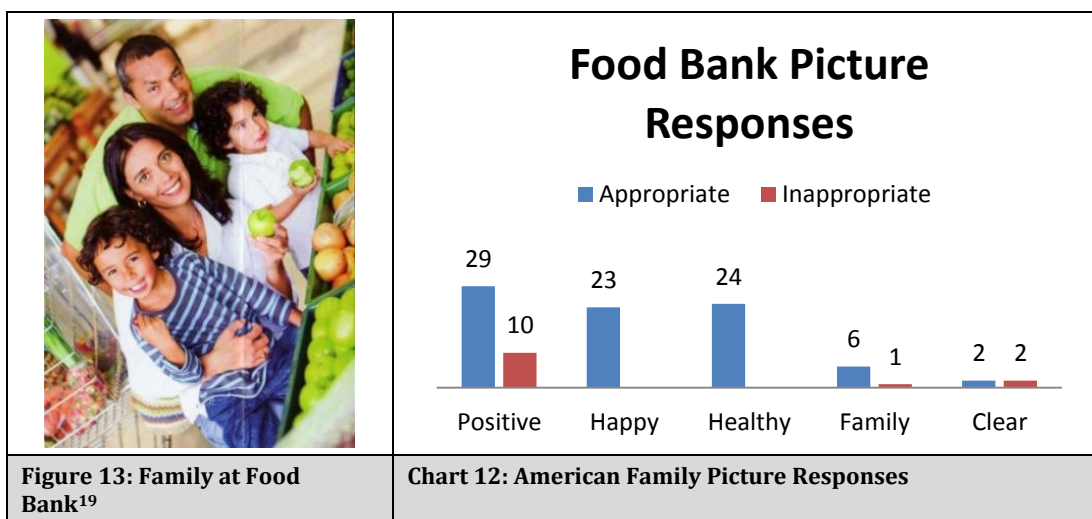
I included this picture (See Figure 13) because of its divided mood. It was from a Taiwanese brochure encouraging mothers to take their children to the dentist. The picture was not on the cover of the pamphlet; it was on the inside. The mother is happy about taking the baby to the dentist, but the baby is clearly unhappy about being taken there. Overall this picture had mixed responses. 65% said that they thought the picture was appropriate, while 30% thought that it was not appropriate. 5% were unsure. Chart 11 shows the different reasons respondents gave as to why the picture was appropriate or inappropriate.

¹⁸ Image from "The benefits of regularly checking your mouth" from Taiwan Bureau of Health Promotion

One respondent wrote, “It looks like that mom is ‘happy’ about her baby’s suffering.” Putting elements of reality (a crying baby) and happiness (a smiling mother) together in the same picture would create a mixed response, which was confirmed by the responses. A picture that has such divided opinions about being appropriate is probably not appropriate.

Survey Question #9: Is this a picture you think should be in a health pamphlet?

Why or why not?



This picture is from an American brochure encouraging people to visit their local food bank. I included this picture because the mood is positive but there is no health

¹⁹ Image from “Food bank of Northern Nevada” from Food Bank of Northern Nevada

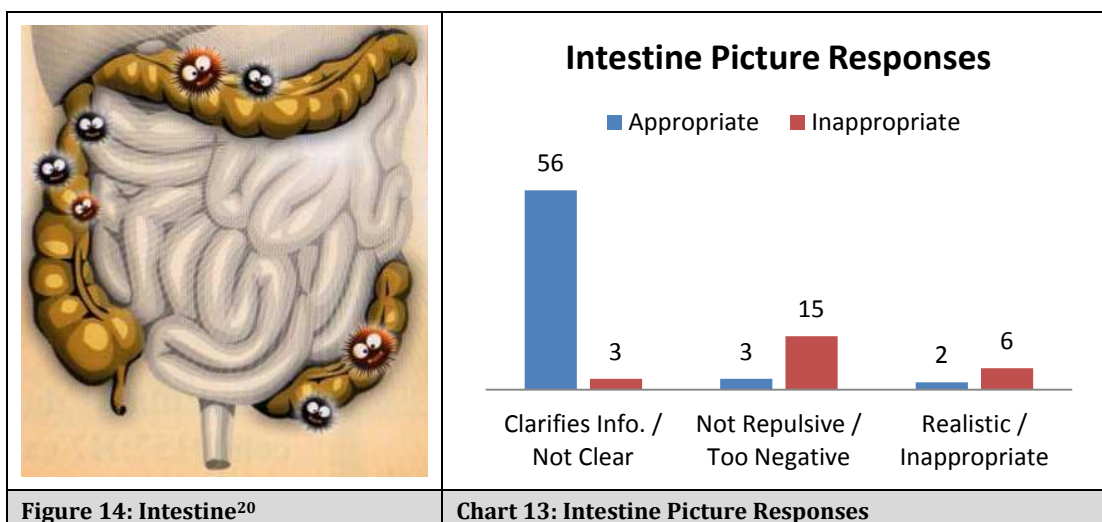
information in the picture. It would be considered decorational. Despite that, a large percentage of respondents still preferred this picture.

Eighty-eight respondents thought the picture was appropriate compared to only fifteen who thought that it was inappropriate. Respondents' comments about why it was appropriate were that it was: positive, healthy, happy, and family-oriented, all of the responses related to being positive. One respondent wrote, "You can tell that it is a family pamphlet." Another respondent wrote, "It gives people the trust of the health pamphlet." The second comment is an interesting cultural insight about this type of picture. Trust is gained by the reader being assured that he or she will not encounter negative feelings when reading a health brochure.

Respondents' comments about why it was inappropriate were that it: didn't have meaning, wasn't useful, was difficult to understand, and was racially biased. One notable point about the responses to this picture was that only one respondent commented about the people in the picture not being Asian. Racial ethnicity, in regards to pictures is not normally a concern with Taiwanese. The message and mood are far more important than the people in the picture.

Survey Question #10: Is this a picture you think should be in a health pamphlet?

Why or why not?



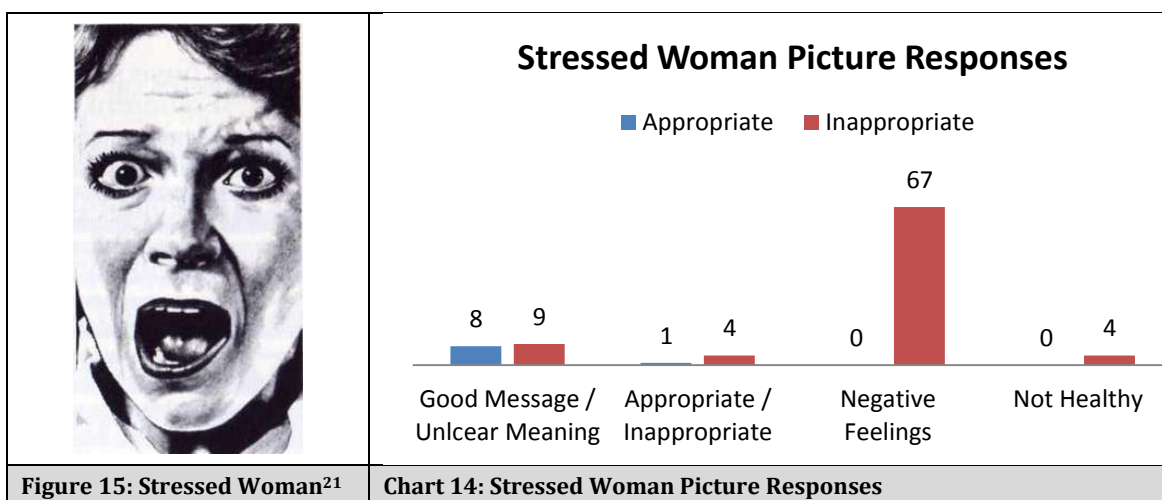
I included this picture because it had a drawing of an internal organ. Even though there were personified viruses in the picture, I was curious to see how many people would still be turned off by the picture of the internal organ. Most respondents did indicate that this picture was appropriate. Seventy-three respondents (72%) thought that the picture was appropriate, while twenty-eight (27%) thought that it was inappropriate. Chart 12 shows more specifically, for those respondents that included reasons, how respondents reacted to the picture. Since the picture is a drawing, and the virus has been personified, it becomes less “real” and more appropriate for a Taiwanese audience. In

²⁰ Image from “Enterohemorrhagic E. coli infection” from CDC Taiwan

fact, there were two respondents who thought the picture was appropriate because it was “real.” There were still respondents who thought the picture was too “gross,” but most thought it was appropriate.

Survey Question #11: Is this a picture you think should be in a health pamphlet?

Why or why not?



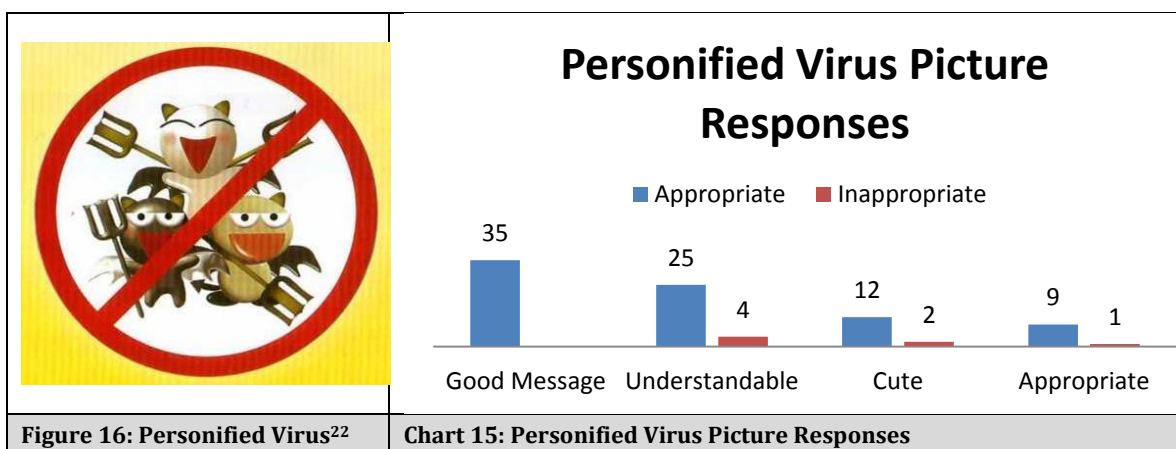
I included this picture to show cultural difference. The picture is from an American health pamphlet. The writer probably assumed that because it shows how people feel when dealing with stress, people would relate to it and want to read the brochure. However, I thought that Taiwanese people would react differently to the picture. Of the one hundred-two respondents that answered this question, ninety (89%) didn't think

²¹ Image from “Adolescence is not an easy time for anyone” from Parenting Adolescents Wisely

the picture was appropriate. The main reasons given as to why the picture was inappropriate was that it was either too negative or too terrible. Once again, showing “true” emotion is not necessarily a good idea for an Asian audience. A healthy person is a positive person. A healthy person is also in control and exercises moderation, which includes emotional moderation.

Survey Question #12: Is this a picture you think should be in a health pamphlet?

Why or why not?



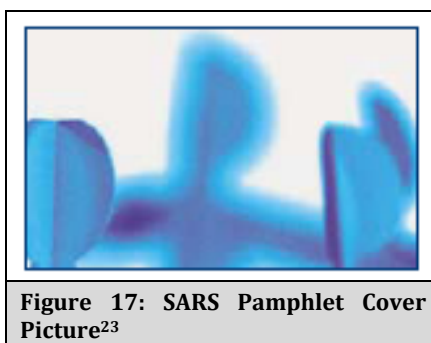
I included this picture because it shows personification and would probably not be received very seriously by American adults. The picture is from the front cover of a Taiwanese pamphlet encouraging people to wash their hands to prevent enterovirus. I anticipated that Taiwanese adults would accept it as being appropriate. Ninety-four

²² Image from “Wash hands together, enterovirus will quickly go away” from Taichung City Public Health Bureau

(93%) of the one hundred-one respondents who answered this question thought that the picture was appropriate. Chart 17 shows the different reasons why they thought it was appropriate. One interesting reason that also came up in several other questions, though not as often as in this question, was that it was “cute.” Even though cute might not be a reason to include a picture for Americans, Taiwanese people (not just women) would pick up and read something because it was cute. Something that is cute would also be considered harmonious, following Chinese cultural principles.

Survey Question #13: Is this a picture you think should be in a health pamphlet?

Why or why not?



I included this picture because I was confused about its meaning. It is from the front cover of an American health brochure about severe acute respiratory syndrome (SARS). I anticipated that most Taiwanese would also not understand its meaning. Of the 99 respondents that answered this question, eighty-eight said that the picture was not

²³ Image from “Information about SARS” from Georgia Department of Public Health

appropriate, four said they were unsure, and seven said it was appropriate. The most common reason for it being inappropriate (94% of the answers) was that they didn't understand its meaning. Of the seven who said it was appropriate none gave a reason. In a health pamphlet it is very important that pictures mean something and help support the text, otherwise they will confuse readers.

Survey Question #14: Is color important to you in a health pamphlet (Are there certain colors you think should be in a health pamphlet?)

Survey Question #15: Are there colors you would prefer not to see?

Color is a very important part of the mood of a pamphlet. Dark or cool colors can be interpreted as more serious than brighter colors. There may be other colors that hold different meanings in different cultures. Therefore, these questions were included. Most respondents preferred to see lighter colors. The darkest color they preferred was blue, a cool dark color. Overall, the most commonly preferred colors were green (21), blue (18), red (9), and yellow (6). The most common colors respondents didn't want to see were black (36), red, (17), gray (10), and purple (5). Appendix H contains a chart that shows all the color preferences. In this section I will only discuss the results that were significant.

Red was a common answer for both categories. Traditionally red is a lucky color for Chinese people. Chinese people commonly use red during Chinese New Year and other occasions for luck. However, in a health pamphlet, red can also signify blood, which is why a lot of people didn't want to see red. Of the fifty-six Taiwanese health

pamphlets I analyzed, sixteen had red somewhere on the cover. Ten used red in the writing to make the Chinese characters stand out, six used red with a crossed out symbol to show warning, one used a red cape with a personified liver, one used red clothing, and one had red blood. None of them had red in the background and only two used red in a decorative way. So even though red might be a lucky Chinese color, red should be used with caution in Taiwanese health pamphlets.

White was also a bit controversial. Three respondents said that they prefer to see white. Generally, white is a positive color, but there are situations where white is negative depending on the context and on how predominant it is. For example, white is used at funerals, but a lot of Chinese people also use white at weddings. For casual dress, a white shirt would be appropriate, but white pants, would only be appropriate attire in a hospital or at a funeral. A person would just have to learn when to use white. This also applies to document design. White paper would be acceptable for internal documents or for short informal documents. However, short, public documents such as menus or pamphlets, should not be on white paper. When I invested in a small café in Taichung, Taiwan, I printed the menus on white paper. There were people who used the menu, but there were several people, most of whom were older, who would not touch the menus because they were printed on white paper. I went around the area to try and see if other cafés used white paper or colored paper. All of the other menus were either light blue or pink. Regarding pamphlets, of the fifty-six Taiwanese pamphlets, only four had a white background. Forty-four of the American pamphlets had an all-white or

predominately white background. It makes sense for American pamphlets to have a white background, since that shows good document design by providing good appropriate contrast for dark text and eliminates document noise (Kostelnick 53, Misanchuck 173). But a Chinese audience would feel different about a white background. Most Chinese readers might ignore the white background, but others, especially those who are more traditional, would not. Because white is associated with death, some Chinese readers would not even pick it up. For a Chinese audience, white may be used in a health context, but definitely not predominantly throughout a document. It must be used carefully.

There was another bit of controversy over cool colors. One respondent wrote, "Cool colors should not be used in a health pamphlet. These kinds of colors violate Taiwan's customs." Cool colors evoke a sad emotion. Brighter colors would be more culturally sensitive and more appropriate for the context. Forty-nine of the Taiwanese pamphlets had bright colors as the background. It's not enough to have not white; color and shade must be carefully considered. Appropriate colors need to be used to create a positive, happy mood.

Survey Question #16: Is it important to you whether a health pamphlet is from Taiwan or from a foreign country?

I included this question to see how respondents would feel about pamphlets from foreign countries. Pamphlets from other countries would not be as sympathetic to

Chinese values or culture as a pamphlet made in Taiwan would be. However, as mentioned before, educated Taiwanese are more accepting of foreign ideas, and Taiwanese people in general are accepting of information from western countries. Of the one hundred-three respondents that answered this question, seventy-one (69%) said that it isn't important where the pamphlet is from, twenty-six (25%) said that it is important where the pamphlet is from, and four (4%) said that both are important, indicating that both foreign and domestic health pamphlets should be considered. Most respondents indicated that it doesn't matter where brochures are from, but it is clear from Survey Questions 8 to 13 that their Chinese beliefs are still a large part of how they relate to visuals.

One thing we can see from the survey questions is the importance of harmony. In fact, most readers preferred a harmonious mood over appropriate content when it came to pictures. In Figure 13 we saw a family at a food bank. The picture was harmonious from the happy family to the fresh food. However, there wasn't really a health message. The family wasn't really doing anything healthy other than being at a food bank. Eighty-eight respondents preferred this picture. In Figure 12, we saw a mother and child at the dentist. The message was clear; even small children should go see the dentist. But the child was upset about being at the dentist, even though the mother was happy about taking the child. There was a positive message but a divided mood. And the responses from the respondents were equally divided. So most readers

preferred Figure 13 more than Figure 14, even though Figure 13 contained significantly less health information.

Concerning mood, the type of picture—drawing or real—does not necessarily determine whether the mood will be positive or not. It is the physical emotion of the picture which determines the mood of the picture. All three of the pictures that were perceived as emotionally divided or negative (Figures 12, 15, and 17) were drawings. Figure 13—a real picture—was well-received by most respondents because the positive emotion could be seen. Thus it is not necessarily whether a picture is real or drawn, but rather what feelings the picture conveys.

Drawing pictures is a design choice to help decrease the negative impact of necessary content. By drawing a picture instead of including a real one, writers can save incidental inharmonious pictures from being included. For example, had Figure 12 been a real picture instead of a drawing, there would have inevitably been some dental instruments that would have stirred negative feelings about going to the dentist. By using a drawn picture, most of those things which stir negative emotions can be excluded leaving only the dental visit. This picture probably would have been better received had the child been happy or at least neutral.

This same principle of drawing pictures to exclude inharmonious feelings is the main reason for personification. Personification becomes a necessary design choice so that essential material, which would be inharmonious to the mood of the document, may be included in pictures. There were two pictures that included personification,

Figures 14 and 16. In both instances, personification was used to make something that was inharmonious (viruses) more positive, and both pictures were well-received with 76% and 72% of surveyors feeling they were appropriate. In both instances the viruses were happy, which also contributed to the overall mood of the picture. It would be very difficult to maintain a positive mood by including a real virus or a drawing of a real virus because they are too negative.

So, generally, for a Taiwanese audience, mood can be more important than content. Mood not only gives a reader the trust of a document because the reader knows that nothing negative will come from this document, but it also instills a feeling of confidence about the health topic. Since a reader sees a positive mood from this health issue, perhaps the reader can also have a positive experience in overcoming or dealing with this health issue. Design decisions, especially when it comes to pictures and other visuals, should be conducive to or not detract from the mood of a document. Even when essential pictures are included, they should be designed in a way that would maintain a positive, harmonious mood.

So now a collection of the available health literature has been analyzed, and a group of Taiwanese people have been surveyed about their preferences regarding health visuals. The next chapter will discuss a series of interviews done with doctors (those who relay information to patients) and how they feel about and use pamphlets.

Chapter 5: Interviewing Doctors Regarding Use of Health Pamphlets

I interviewed ten doctors to get their opinions about visuals in health-related documents. I recruited parents of students at Wagor Elementary School. In most cases, I sent a letter home with students asking if I could interview the doctor parent(s) and when and how such interviews would be convenient. After they replied, I would contact them to arrange an interview time and place. Some interviews were conducted in person. Some doctors were too busy to be interviewed in person and requested that I give them a list of questions they could answer on paper. In those cases, I sent the consent form (see Appendix I) and interview questions (see Appendix J) home with the students to give to their parent(s). After answering the questions, they then returned the appropriate forms to me.

All interviews were conducted in English. Most doctors in Taiwan speak English well because their textbooks are in English and often need to travel to English-speaking countries to further their medical education and to keep up on the latest research and technology. None of the doctors mentioned difficulty with communicating in English, and I don't think it hindered the doctors by conducting the interviews in English.

For the doctor interviews, I didn't limit interviews to only Taiwanese doctors. However, they had to be practicing in Taiwan. Nine of the doctors were Taiwanese and one was Malaysian.

In addition to the four background questions, there were six base questions that all doctors answered. After the first three doctors were interviewed, three more

questions were added to the base questions based on information received from the first three interviews. So the last seven doctors had nine base questions.

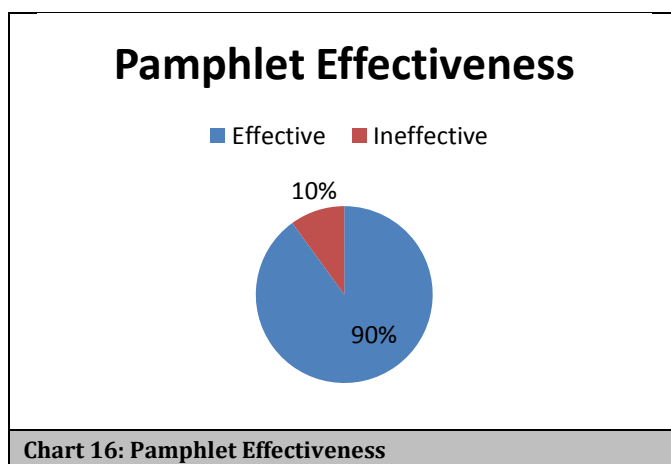
Unlike the previous chapter, all of the background information from the doctors is in a single table. This was done for convenience, since the number of doctors interviewed is considerably less than the number of survey respondents. The information is also in a separate table because the information is not directly related to the data. Data from the doctor interview questions will be in a question and answer format similar to the format in the previous chapter. Where prudent, (such as when the data are easily compared) the data are presented in a chart.

Position		Medical School	
Attending Doctor ²⁴	4	Yang Ming Medical School	3
Visiting Doctor	3	China Medical University	2
Attending Surgeon	2	Kaoshiung Medical University	2
Pediatric Consultant	1	Zhong Shan Medical College	1
		Cheng Kang University	1
		Taipei Medical School	1
Years Practicing		Principle Place of Practice	
11-15 years	4	Hospitals	8
16-20 years	3	Clinics	2
More than 20 Years	3		

²⁴ In Taiwan, an attending doctor or surgeon has the same authority and rank as a visiting doctor or surgeon. Both attending and visiting doctors have responsibility to train resident and intern doctors.

There were background questions to give context to the answers. For example, a doctor working in a clinic will have very different experiences from a doctor who works in a hospital. I also wanted to be sure that the doctors were educated in Taiwan, which all of them were.

Doctor Interview Question #1: Do you feel medical pamphlets are an effective way of informing the public about health issues? Why or why not?



Nine of the doctors (90%) said that pamphlets are effective. The one doctor who said that pamphlets are not effective wrote, "They are useful but not effective. They can only inform about simple concepts, and most people don't read the materials seriously." In relation to this statement, two of the doctors commented that, "Pamphlets are only meant to be introductions to information, not information providers." Because of their short, concise nature, pamphlets cannot be in-depth. They are only meant to introduce material.

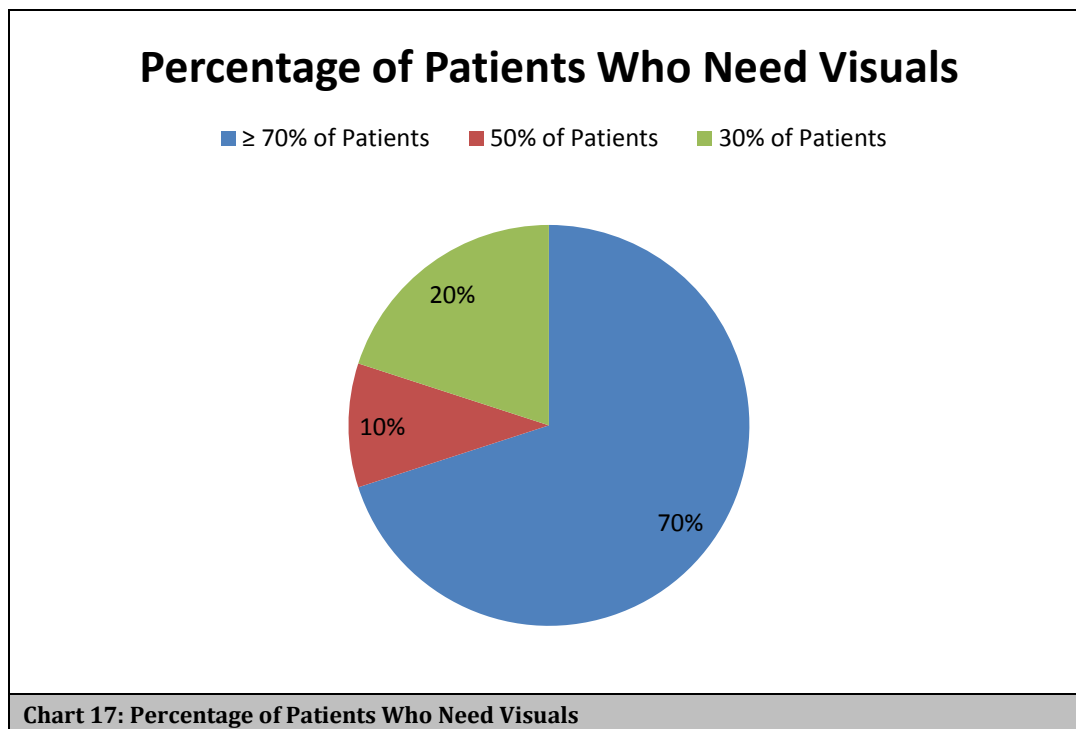
Six doctors commented that pamphlets are an easier way to communicate with patients because they are easy to understand and they contain visuals. Generally, doctors do not have much time to spend with patients, so they sometimes rely on pamphlets as sources of information for patients. One doctor wrote, “Doctors (or health workers) do not have much time to explain diseases to patients in Taiwan.” So health pamphlets can save time for doctors.

All of the doctors interviewed in person mentioned that making content understandable was a challenge. All three doctors I interviewed in person (one attending surgeon, one clinical optometrist and one attending doctor) mentioned that supplemental material is vital for doctors to help patients understand content. All three of them also had pamphlets or fliers that they regularly hand out to patients.

Doctor Interview Question #2: How important are visuals when communicating with patients?

All of the doctors wrote that visuals are important, and three of the doctors (30%) said that visuals are very important. One doctor wrote, “Visuals are there to support your verbal communication. Visuals are able to add information and ambiance and to set the tone of communication.” Thus, for doctors, visuals can add a lot of support and reinforcement to what they are saying. Five of the doctors specifically said that visuals are easier to understand, echoing the responses in the surveys. Both doctors and readers agree that visuals help with understanding.

Doctor Interview Question #3: About what percentage of your patients need a visual to understand medical/health information?

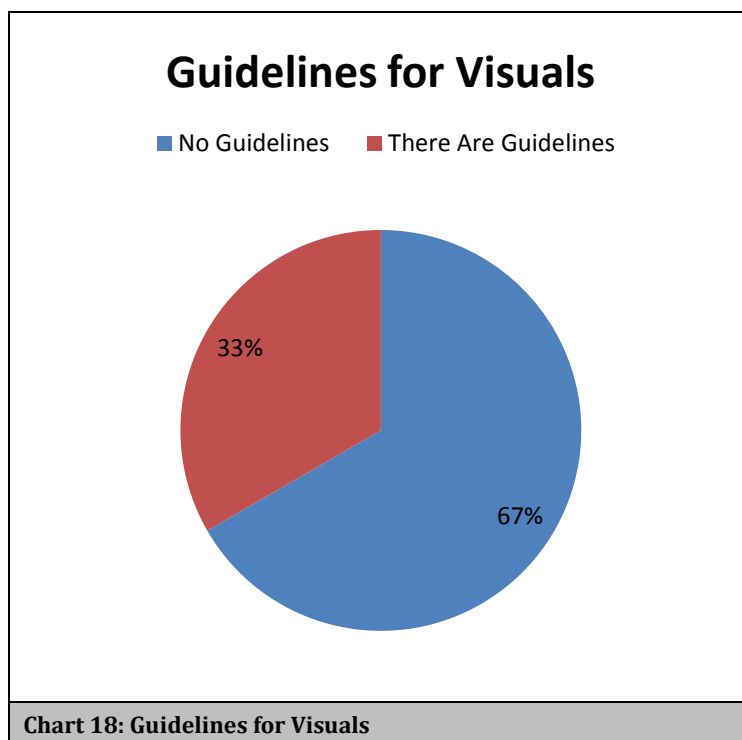


Seven of the doctors answered that at least seventy percent of their patients need visuals. One doctor said about fifty percent of his patients need visuals, and two doctors said that about thirty percent of their patients need visuals. One doctor noted that “the more [patients] see, the more they understand.”

Another doctor wrote, “Patients prefer visuals more than words for health information.” Therefore, the more visuals a doctor can use, the easier the communication becomes. Two doctors even replied that almost one hundred percent of

their patients need a visual to understand health information. Thus we see how important visuals are for doctor-patient communication.

Doctor Interview Question #4: Are there guidelines as to what kinds of visuals you should show to patients?



Six doctors said that there are no guidelines, but three did mention that there are some guidelines. Most of the doctors who mentioned no guidelines were referring to general written guidelines in Taiwan. However, as we will find out in Doctor Interview Question #5, there are clearly unwritten guidelines that doctors do follow or at least know about.

Two doctors did say to be careful when using pictures with real people, even for a last-line²⁵ doctor. They mentioned that it is best to use models or drawings because people will be too scared to see anything that would suggest negative or uneasy feelings. One doctor added that “people are scared of real pictures.”

One doctor noted that one important guideline was, “All aspects of a picture should be related to the content.” He further went on to say that visuals should not “have too many topics.” In other words, the meaning of visuals should be focused. All aspects of a visual should be related to the content. This comment takes Picture Recommendation #3 from chapter 2 bit further. Not only should pictures not be decorative, but rather all aspects of a picture need to be related. In health communication, clarity is paramount. Regardless of whether a doctor is a last-line doctor or a first-line doctor, even the smallest misunderstanding or miscommunication could potentially cause a large amount of grief.

Doctor Interview Question #5: A large number of the pictures of people from the pamphlets I gathered were drawings or dolls. Why is that?

Three doctors noted that drawings reduce the impact of unpleasant pictures. One of those doctors wrote that drawings reduce the “shock” of a picture. We can compare this

²⁵ In Taiwan, doctors can be referred to as first-line, second-line, last-line, etc. A first-line doctor would be seen for a check-up or when a problem initially arises. A last-line doctor would be one that deals with life or death situations, i.e. a surgeon.

to Survey Question #6, where forty people indicated that they prefer drawings instead of real pictures. Regarding real picture in health pamphlets, three doctors said that most Taiwanese people would be ashamed to be in a health pamphlet, related to the issue of maintaining face in Chinese culture. Two doctors mentioned that drawings are clearer. One of those doctors said that it is “easier to make things clear with drawings.” Another doctor mentioned how drawings “attract attention.” He also gave the example of cute animals, going back to using cute things to attract attention in the previous chapter. According to the doctors, the reasons for using drawings are similar to why most respondents thought certain pictures were inappropriate or appropriate in the previous chapter.

Doctor Interview Question #6: How much influence do health professionals like you have in what gets printed in health pamphlets?

Four doctors answered that it depends how much influence a doctor wants to have. A doctor can choose to be more involved in public health pamphlets if a doctor so desires. Two noted that the pamphlets are written by a board of medical staff and if a doctor is someone of importance, content will be passed by them for approval. Two wrote that they are very involved in health pamphlets. One doctor wrote that he has very little influence. Basically, if doctors wish to have influence over the content of health pamphlets, they may.

Doctor Interview Question #7: How often are you involved in prevention?

Only six doctors answered this question. Two doctors responded “sometimes,” three responded “most of the time,” and one doctor responded “never.” The majority of the doctors surveyed are involved in prevention in one way or another. One doctor teaches CPR to the public and teaches dispatch assistants about how to help patients before they arrive at the hospital. Another doctor, a cardiologist, noted that “prevention of cardiovascular disease is of paramount importance.” All of these situations give doctors ample opportunities to use visuals as part of their education.

Doctor Interview Question #8: How well-informed are patients about health issues?

Only six doctors answered this question. Three of them wrote that patients are not very well-informed. The other three indicated that they have to explain a great deal to patients. This is in line with Lee and Tsai et al. that health literacy (or in this case health knowledge) is low in Taiwan even though it is considered a high-literacy country. (620) In addition to this, one doctor noted that because of time constraints, many doctors do not have adequate time to discuss health issues thoroughly with their patients. Considering low health literacy and time constraints for doctors, there is a great need for clear, useful pamphlets and clear visuals that help to understand content.

Doctor Interview Question #9: Several doctors have commented that it is difficult to communicate with seniors. Do you feel this to be true? If so, why?

Seven doctors answered this question. Six of them said that it was true. The most common reasons were hearing loss (5), lack of education (3), an unwillingness to listen to someone younger than them (1), language barrier (1), and traditional thinking (1). It is possible that most of these problems could be more easily dealt with if doctors made use of clear visuals. The issues of hearing loss and language barrier could be solved with a clear visual. Concerning seniors with a lack of education, a visual could help doctors educate their patients about complicated or essential content in a more efficient manner.

It is clear that visuals are a very important part of a doctor's work. Most of the doctors (90%) felt that pamphlets are important, and all of the doctors noted that visuals are an important part of medical communication. Some of the doctors in this study mentioned being involved in prevention. These doctors especially are constantly trying to educate patients about prevention, disease, life-threatening decisions and other health issues. The doctor responses suggest that visuals can greatly aid in communicating such essential information. Since there can be barriers between doctors and patients, be it because of low health literacy, spoken language, physical disabilities, or an unwillingness to listen, visuals help break those barriers and make communication more efficient between doctor and patient. But visuals should not be used simply as decorations, regardless of whether it is first-line or last-line communication. Visuals are a tool used to clarify and improve understanding. In order to get the most out of a picture, it must accurately reflect the information being communicated.

Cultural sensitivity is also an important part of doctor-patient communication, even when both sides are from the same culture. Doctor Interview Question #9 lists some of the communication barriers when dealing with seniors. However, some of the barriers, such as lack of education, apply to many age groups. In a health context, pictures need to be sensitive to cultural needs so that doctors can get a positive response from patients.

Chapter 6: Conclusion

Pamphlets are an important source of health information for doctors and patients. Essential introductory information found in health pamphlets needs to be efficiently communicated to patients for them to use. Pictures play an important role in pamphlets because they are usually the first thing readers notice and they can aid a reader in comprehension. Pictures can also guide readers through the information, so it is important that images are clear in their meaning and accurate in their information. The questions of what pictures to use, how many pictures to use, and when to use pictures depend on both the context of the document itself and the intended audience.

From the health pamphlets comparison, the surveys, and the doctor interviews it is obvious that there are important cultural differences between Chinese and American preferences regarding health pictures. Based on the data in this study, there are a number of conclusions, consistent across the pamphlet analysis, surveys, and interviews which can be drawn in regards to visual health communication. (1) Pictures for a Chinese audience need to be positive and healthy. A positive picture for a Chinese audience shows control, happiness and positive health.

(2) Showing real pictures to a Chinese audience is risky because they might turn some readers away. Drawings are more appropriate for people of all ages because they give a document a friendly atmosphere and trustworthy tone.

From the pamphlets and surveys, we can conclude that (3) color, even though it is not consciously recognized by all readers, could also have a subconscious effect on

how readers react to a document. Red might traditionally be a lucky color for Chinese festivities, but in a health context it symbolizes blood and should not be used prominently, especially in the background. Light and friendly colors such as yellow or light blue should be used. White is often appropriate for a western audience, but is not appropriate in a health setting for a Chinese audience, especially for a dominant background. All colors need to be used appropriately and carefully.

(4) Visual appeal is also something to consider. Having “cute” pictures or several personified characters helps Chinese people to have positive feelings, which would make them willing to read a pamphlet. A lot of pictures might seem unprofessional to westerners, but a lack of visual appeal would be unprofessional for a Chinese audience. Use appropriate pictures to help explain the content of a pamphlet and to add to the positive mood.

Most of the Chinese health principles discussed in this study revolve around the Chinese health principle that “Health equals Happiness.” For Chinese people, health and happiness are inseparable. This applies to how they live, what they eat, and how health information is communicated. A Chinese person wants to be healthy because being healthy would make them happy. If a health pamphlet is included as part of that path to happiness, it should reflect those values and be happy or positive. By making pictures happy, health communicators can increase participation of health pamphlets by Chinese users.

Generally, Taiwanese people feel that it is a person's own responsibility to find out about health issues and take care of their own body, but those who present health information also have a responsibility to present the information in an appropriate way. Just as pictures should be as free as possible of ambiguity, the tone of a pamphlet should be as free as possible from negativity so that it may present information positively. A needle, which could be perceived as a negative instrument because it brings pain, could be turned into something positive through personification. If a needle is personified with a smile, people would understand that the needle is trying to help them prevent sickness. The message should not be, "If you don't allow this vaccination, you will suffer," but rather it should be, "The needle is here to make you happy and virus free."

While the data and conclusions in this study do not necessarily apply to all Taiwanese or Chinese people, they do provide a basic understanding of how some Taiwanese people feel about health, especially as it relates to visual communication, and especially for educated Taiwanese people. It would be interesting to see how a younger group of respondents would reply to the questionnaires, and how a younger group of doctors would answer the doctor interview questions, especially since the younger generation is generally more westernized. It would also be interesting to see how a group of seniors would reply to the same questions about visual preference. Most of the doctors mentioned difficulties in communicating with seniors. How do seniors themselves feel about visual health communication? Another group to contrast with

those in this study would be those without college degrees. Would they feel the same way about visual communication? Finding out how underrepresented other Taiwanese groups differ and what health principles are consistent among the different groups could be an appropriate follow up to this study.

For the doctor interviews, most of the doctors worked in hospitals. Only two had a private clinic. Further study could be done to find out how doctors who work in hospitals and doctors who work in clinics differ in how they relate to visual communication. Their environments and medical situations differ immensely. Perhaps their use of visuals and how they communicate with visuals also differ.

When I first became interested in choosing health visuals as a topic for my thesis paper, I mostly was interested to find out more about Chinese health values and how they differ from western health values. But more often than not, my research led me to see the flaws in visual American health communication. For the most part, in the American pamphlets, pictures were used only as aesthetic decoration or when absolutely necessary. It surprised me to see that even though the Taiwanese pamphlets had more pictures per pamphlet, the pictures were used more effectively. Generally the Taiwanese pamphlets were made with care. The pictures were carefully chosen, and in most cases, pictures that appeared in a pamphlet were drawn specifically for that pamphlet, which would be given out for free. In the Taiwanese pamphlets, there were only four of the fifty-six pamphlets that had similar formats or designs. All the other pamphlets had their own design and format. A large number of the American pamphlets

fit into one of two categories; a preformatted document or a carelessly created document. But these perceived flaws only came about by comparison. In the end, I didn't necessarily see the flaws which I once viewed as weaknesses in American visual health communication, but rather what I saw were strengths in Taiwanese health communication. I saw how important health is for Taiwanese people. For Taiwanese people, health is a major concern that everyone shares. Document creators want others to be happy and healthy, so they create effective documents with a positive design and an informative message that people will use, which should be the end goal of any document.

This research could not have been conducted without the help of my native Chinese-speaking colleagues at Wagor, especially Jamie Yang, who frequently took the time to assist me with translation into Chinese and to help me with Chinese vocabulary or handwriting. Also, I would like to thank Jeremy Wang who sacrificed so many lunches to help me with the surveys. And also a gracious thanks to the doctors who would take the time out of their day to come to school to be interviewed or who carefully answered the interview and follow-up questions despite it not being their native language.

Appendices

Appendix A : List of Taiwanese health pamphlet publishers examined

Publisher (English)	Publisher (Chinese)	Number of Pamphlets
Center for Disease Control (CDC) Taiwan	行政院衛生署疾病管制局	20
Taiwan Bureau of Health Promotion	行政院衛生署國民健康局	17
Taichung City Public Health Bureau	台中市衛生局	11
Taiwan Department of Health	行政院衛生署	5
Food and Drug Administration	行政院衛生署管制藥品管理局	2
Taichung City Social Welfare Department	臺中市政府社會局	1

Appendix B: List of Taiwanese pamphlets analyzed (grouped by publisher)

English Title ²⁶	Chinese Title
Center for Disease Control (CDC) Taiwan	
Be careful of how it is passed, earnestly avoid hepatitis C! Understand how to prevent it	傳染途徑要小心避免C肝有一套!預防知識要明瞭
Control the flu, guard your health	駕馭流感, 守護健康
Diligently wash your hands, sanitation is important, enterovirus won't come	勤洗手, 重衛生, 腸病毒不會來
Don't get addicted to heroin	喝美沙冬海洛因不纏身
Don't use too few prevention methods, hepatitis B prevention is great	預防措施不能少! B肝防治有一套
Enterohemorrhagic E. coli infection	English pamphlet
Every family needs to prevent rats, "rat disease" will disappear	家家防鼠 "鼠病" 絕跡
Have you been coughing for three weeks?	咳過三週?
Leptospirosis	鉤端螺旋體病
Love your liver, you don't want hepatitis A	要愛肝, 不要A肝
Love your liver, you don't want hepatitis B	要愛肝, 不要B肝
Love your liver, you don't want hepatitis C	要愛肝, 不要C肝
Prevent sickness in 3 steps	防疫3步驟
Prevent sickness without borders	防疫無國界
Prevent the flu, a new type of flu	預防流感, 新型流感
Prevent the spread of hantavirus	預防感染漢他病毒

²⁶ Just like the survey answers, all of the English titles except one (the pamphlet titled "Enterohemorrhagic E. Coli Infection" was an English pamphlet.) were translated to reflect the Chinese meaning as accurately as possible. They were not translated for English style.

Rift valley fever	裂谷熱
Sending away your life with both drugs and AIDS	致“命”組合毒品與愛滋
Wash hands together, enterovirus will quickly go away	一起來洗手腸病毒快走
West Nile Virus	西尼羅病毒
Taiwan Bureau of Health Promotion	
Breast milk: a baby's best meal	母乳：嬰兒最好的食物
Breast self-examination knowledge	乳房自我檢查的認識
Cervical cancer	子宮頸癌
Defeating oral cancer	打倒口腔癌
Don't let your baby's teeth decay	別讓寶寶的牙齒長壞了
Enjoy health, elegance won't be limited	享受健康風華無限
Health and life, you are the most beautiful	健康一生妳最美
Kidney Health	腎臟保健
Leave HPV; a magic book	離開HPV魔法書
Maternal blood screening for down syndrome	母血篩檢唐氏症
Prevent tooth decay caused by baby bottles	預防奶瓶性齲齒
Regularly check your large intestine, cancer will have no place to hide	大腸定期查，癌症無處藏
Smoking is prohibited in indoor workplaces and in public places	室內工作與公共場所禁止吸菸
The benefits of regularly checking your mouth	定期口腔檢查好處多
The more you exercise, the healthier you are, the more you live, the happier you are	愈動愈健康愈活愈開心
The revelation of healthy exercise	健康運動啟示錄
Understanding postnatal depression	認識產後憂鬱症
Taichung City Public Health Bureau	
Breast milk is the best	母乳最好

Child preventative health care services	兒童預防保健服務
Controlling betel nut hazards and oral cancer prevention	檳榔危害防制及口腔癌防治
Health information station	衛生保健資訊站
Leave depression forever	遠離憂鬱症
Life is valuable, do not give up on life easily	珍重生命別輕易跟生命說再見
Mothers and babies should have skin contact right after birth	母嬰早期肌膚接觸
Oppose AIDS together	全局一起反愛滋
Ten thousand steps a day, your health is guaranteed	每日一萬步健康有保固
Wash hands together, enterovirus will quickly go away	一起來洗手腸病毒快走
Taiwan Department of Health	
Diabetes and me, self-monitoring blood sugar	糖尿病與我, 自我血糖監測
Eye trauma, prevention and taking the initial steps	眼部外傷, 預防與初步救助
Introduction to serious mental illness treatment	精神疾病嚴重疾人強制區治療簡介
Love your eyes from a young age	診愛眼睛從小開始
Prevent baby bottle tooth decay	防止奶瓶性蛀牙
Respect you, me, him for healthy sex	尊重你我他性福一百分
Food and Drug Administration	
Be careful! Don't abuse drugs	小心! 別把頭搖掉了
Refuse drugs, you can do it!	拒絕毒品你就能
Taichung City Social Welfare Department	
A ten-year plan for long-term care in Taiwan	我國長期照顧十年計劃

Appendix C: List of online American health pamphlets examined

Publisher	Pamphlet Title	Web Link
Alameda County Vector Control Services District	“Lyme disease (Lyme borreliosis)”	www.acgov.org/ehs/vector_control/lymedisease02.pdf
American Association for Retired Persons (AARP)	“Managing Acid Reflux”	www.walgreens.com/images/pdfs/pharmacy/aarp/acid_reflux.pdf
	“Cirrhosis”	www.liverfoundation.org/downloads/alf_download_133.pdf
American Liver Foundation	“Hepatitis A: what you need to know”	www.ausdbenefits.com/assets/pdf/Hepitatis%20A%20Brochure.pdf
	“Hepatitis B information”	www.liverfoundation.org/downloads/alf_download_22.pdf
Arizona Department of Health Services	“What to do during a fire”	www.azdhs.gov/phs/oeh/pdf/duringfire.pdf
Association of Reproductive Health Professionals (ARHP)	“Understanding the HPV vaccine”	www.arhp.org/uploadDocs/UnderstandingHPVVaccine.pdf
California Department of Health Services	“Ways to protect yourself from flu and pandemic flu”	bepreparedcalifornia.ca.gov/NR/rdonlyres/A81E19B1-F19C-4498-8C51-2EB8F9604BE1/0/IMM853_final121906.pdf
California School Nurses Organization	“Type 2 diabetes: what every parent should know”	www.arusd.org/2025106112162967/lib/2025106112162967/diabetes_type2.pdf
	“2009 H1N1 flu and you”	www.homelandsecurity.noaa.gov/2009_h1n1fluandyou.pdf
Center for Disease Control (CDC)	“Genital Herpes: the facts”	www.cdc.gov/std/Herpes/the-facts/herpes-the-facts-2007.pdf
	“Hepatitis A general information”	www.health.state.ny.us/publications/1859.pdf
	“HIV and AIDS: are you at risk?”	www.cdc.gov/hiv/resources/brochures/pdf/at-risk.pdf
Eaton Orthopedics, LLC	“Arthritis: pain management and treatment options”	www.eatonortho.com/pdfs/arthritis.pdf

Florida Department of Health	“Are you passing tooth decay to your baby?”	www.doh.state.fl.us/family/dental/materials/MCOH_brochure_final.pdf
Florida Health Care Plans	“Diabetes: detection, control and treatment of diabetes”	www.fhcp.com/health/documents/brochures/Diabetes%20Brochure.pdf
Georgia Department of Public Health	“Information about SARS”	health.state.ga.us/pdfs/epi/sars.brochure02.03.pdf
Gynecological Cancer Foundation	“You can prevent cervical cancer: vaccinate early, screen regularly”	www.wcn.org/downloads/CC_Vaccine_Brochure.pdf
Hawaii Department of Health	“Dengue fever”	hawaii.gov/health/family-child-health/contagious-disease/dengue/brochures/dengue_brochure.pdf
Hepatitis B Foundation	“Someone you know has Hepatitis B”	www.hepb.org/pdf/someone_brochure_2010.pdf
Hepatitis C Association	“Facing hepatitis C: info you need”	www.hepcassoc.org/brochure2.pdf
Idaho Department of Health and Welfare	“I can’t remember when: ask your doctor about IRIS”	healthandwelfare.idaho.gov/LinkClick.aspx?fileticket=u55CNi9VUzs%3D&tabid=383&mid=2725
Illinois Department of Public Health	“Women and heart disease”	www.idph.state.il.us/about/womenshealth/pubs/HeartHealthybrochure.pdf
Indiana University School of Medicine	“Unraveling the mysteries of bipolar disorder”	www.iupui.edu/~bipolar/pdf/brochure.pdf
Jefferson County Department of Health and Environment	“Teen shop: because unexpected pregnancy and STDs and HIV don’t have to happen”	co.jefferson.co.us/jeffco/health_uploads/hplmbrochures/teen_shop_brochure.pdf
Lung Cancer Alliance	“Lung cancer: understanding the diagnosis”	www.chestfoundation.org/lib/downloads/LungCancerBrochure.pdf
Marcus L. Welby, M.D.	“Women and heart disease: are you at risk?”	www.u-write.com/1108o_6.html
Measles Initiative	“Measles initiative”	www.nwnc-redcross.org/measles_brochure.pdf
Minnesota Board of Animal Health	“Anthrax: in Minnesota”	www.bah.state.mn.us/bah/brochures/anthrax.pdf
Mississippi Department of Mental Health	“Shatter the silence: suicide, the secrets you shouldn’t keep”	www.dmh.state.ms.us/pdf/ShattertheSilenceBrochure.pdf
National Drug	“Drug abuse and mental	www.justice.gov/ndic/pubs7/7343/7343p.pdf

Intelligence Center	illness fast facts”	
Nevada County Health & Human Services Agency	“Nevada county public health department”	mynevadacounty.com/ph/
New Mexico Department of Health	“Dust storms and health”	www.health.state.nm.us/eheb/documents/DustStormsAndHealth.pdf
New York State Department of Health	“HIV and AIDS facts”	www.health.state.ny.us/diseases/aids/docs/hivfacts.pdf
North Dakota Department of Health	“Family planning program”	www.ndhealth.gov/publications/prevent/familyplanning2000.pdf
Ohio’s Medicare Quality Improvement Organization	“The pneumonia vaccine: it could save your life”	www.ohiokepro.com/shopping/pdfs/pneumonia_brochure_508.pdf
Patients Against Lymphoma	“Lymphoma awareness day”	www.lymphomation.org/ganda.pdf
Pennsylvania Attorney General	“Inhalant abuse and children”	www.attorneygeneral.gov/uploadedFiles/Drugs/inhalant.pdf
Quest Diagnostics	“Sexually transmitted diseases and you”	www.questdiagnostics.com/library/files/std.pdf
Rollback Malaria Partnership	“Fight malaria: take action now”	www.malariafreefuture.org/resources/factsheets/MalariabrochureEnglish.pdf
Saint Louis University Cancer Center	“Prostate cancer”	www.slu.edu/Documents/SLUCare/Prostate.pdf
Saint Louis University Cancer Center	“What you should know about breast cancer”	www.slu.edu/Documents/SLUCare/Breast.pdf
Saratoga County Public Health	“Tuberculosis program”	www.saratogacountyny.gov/upload/tb brochure.pdf
State of Minnesota Office of the Ombudsman for Mental Health and Developmental Disabilities	“Suicide Prevention: information for individuals and families”	www.ombudmhdd.state.mn.us/reports/suicidepreventionbrochure8x14updated.pdf
Sutter-Yuba Mosquito & Vector Control District	“Malaria ‘intermittent fever’”	www.sutter-yubamvcd.org/Files/Brochure_Malaria.pdf
Texas Department of State Health Services	“Rocky mountain spotted fever”	www.dshs.state.tx.us/WorkArea/DownloadAsset.aspx?id=23185
The Florida	“The tuberculin skin test”	www.doh.state.fl.us/disease_ctrl/tb/TBForms/Bro

Department of Health		chures/TST_new/DH150-161-TBskintest-English.pdf
The Office of Health, Safety and Security (HSS)	“Get heart healthy”	www.hss.energy.gov/cmo/hearthealth_brochure.pdf
Tulsa Health Department	“Chickenpox”	www.tulsa-health.org/media/files/epi/102E%20-%20Chickenpox.pdf
United States Department of Agriculture	“Avian influenza: protecting the United States”	www.usda.gov/documents/AvianFluBrochure.pdf
Utah Department of Health	“Pneumonia hospitalizations: 2006 Utah hospital comparison report”	health.utah.gov/myhealthcare/evaluation/Pneumonia_brochure06.pdf
Virginia Department of Health	“Rabies and animal bites: what you should know and what you should do”	www.vdh.state.va.us/epidemiology/factsheets/pdf/Rabies-brochure.pdf

Appendix D: List of printed American health pamphlets examined (listed alphabetically by publisher)

Publisher	Pamphlet Title
Access to Healthcare Network	“In need of affordable dental and vision care?”
California Department of Mental Health	“Schizophrenia”
Food Bank of Northern Nevada	“Food bank of northern Nevada”
Parenting Adolescents Wisely	“Adolescence is not an easy time for anyone”

Appendix E: Survey

Age / 年紀	Birthplace (city, county, country) / 出生地 (城市, 縣, 國家)			Occupation / 工作	
Education (circle highest completed) / 教育程度(請圈選已完成最高的教育程度)					
Less than Primary	Primary	Secondary	Some College	Bachelor's	Advanced Degree
小學肄業	小學畢業	中學畢業	大學肄業	大學畢業	研究所以上

1. How often do you read health pamphlets?

您多久閱讀健康小冊子？

2. Do you feel it is your responsibility to get informed about health issues, or is it the government's responsibility to inform you? Why?

您覺得是自己的責任去獲得健康的相關資訊，還是政府的責任來告知您？為什麼？

3. What do you expect to find when you read a health-related pamphlet? What kind of information?

當您閱讀健康小冊子時，您期待從其中找到什麼？什麼樣的訊息？

4. What are your expectations when you are reading a health pamphlet? (i.e. should it be short, should there be visual explanations, should you be able to find information quickly, etc.)

當您閱讀健康小冊子時，您的期待是什麼？（應該要短，應該要有圖解，應該要能快速找到所需資訊）

5. Do you feel pictures / visuals are important when reading health pamphlets? Why or why not?

當您閱讀健康小冊子時，您覺得圖片或視覺效果是重要的還是不重要的？為什麼？

6. What are some qualities that health pamphlets should possess? (i.e. should they show real people or animals or should they be drawings, should the mood be serious?)

健康小冊子應該要具備有哪些特質？(應該以真人或真實動物圖片或是以卡通圖案呈現，情境應該要嚴肅?)

7. When locating information, do you prefer to read paragraphs (A) or glance at information that is made visually accessible (B) like numbered lists or chunking? Why?

當您接收訊息時，您傾向閱讀整段式(A)，或者是編號式，分段式的文章(B)？為什麼？

A	B	
Paragraph / 段落	Numbered List 編號式	Chunking 分段式
先寫你的名字再閱讀該段，閱讀完以後回答問題，然後把你的論文拿給老師。	<ol style="list-style-type: none"> 1. 寫你的名字 2. 閱讀該段 3. 回答問題 4. 把你的論文拿給老師 	<p>如果你生病了，你應該戴上口罩，你也應該去看醫生。</p> <p>常常洗手，以防止疾病。</p>

8. Is this a picture you think should be in a health pamphlet? Why or why not?

您覺得這個圖片應該出現在健康小冊子嗎？為什麼或為什麼不？



9. Is this a picture you think should be in a health pamphlet? Why or why not?

您覺得這個圖片應該出現在健康小冊子嗎？為什麼或為什麼不？



10. Is this a picture you think should be in a health pamphlet? Why or why not?

您覺得這個圖片應該出現在健康小冊子嗎？為什麼或為什麼不？



11. Is this a picture you think should be in a health pamphlet? Why or why not?

您覺得這個圖片應該出現在健康小冊子嗎？為什麼或為什麼不？



12. Is this a picture you think should be in a health pamphlet? Why or why not?

您覺得這個圖片應該出現在健康小冊子嗎？為什麼或為什麼不？



13. Is this a picture you think should be in a health pamphlet? Why or why not?

您覺得這個圖片應該出現在健康小冊子嗎？為什麼或為什麼不？



14. Is color important to you in a health pamphlet? (Are there certain colors you think should be in a health pamphlet?)

健康小手冊裡的顏色對你而言重要嗎？(有甚麼顏色你覺得應該在健康小手冊裡嗎？)

15. Are there colors you would prefer not to see?

有甚麼您希望不要看到的顏色嗎？

16. Is it important to you whether a health pamphlet is from Taiwan or from a foreign country?

健康小手冊來自於台灣或外國對您而言重要嗎？

Appendix F: Survey Consent Form

My name is Lucas Baclayon. I am pursuing my master's degree in technical communication. I am now writing my master's thesis paper about visuals in Taiwanese health pamphlets. As part of my paper, I am researching what kinds of visuals Taiwanese people prefer in health pamphlets. I would appreciate your help and time in filling out this questionnaire. There are no direct benefits for participation.

There are a series of questions that I would appreciate your help in answering. The questions are to find out generally how Taiwanese people feel about visuals in health-related literature. I anticipate that it should take no more than fifteen minutes to fill out the questionnaires, depending on how much you choose to write.

I have provided an envelope for you to place the questionnaire in when you are finished. I would also encourage you to seal the envelope once the questionnaire is inside. You do not need to label the envelope in any way.

I will keep all records personally and will not share them with anybody. After I finish writing my paper, all the questionnaires will be shredded. I anticipate that there is less than a minimal risk involved with your participation.

If you have any questions about the research after the interview or if you have questions about your rights as a participant, you may contact:

Lucas Baclayon at (886)09-1135-0026 or Lee Tesdell at (1)(507)389-5219.

In the event of a research-related injury, you may contact:

Lucas Baclayon at (886)09-1135-0026 or Lee Tesdell at (1)(507)389-5219.

If you have questions or concerns about the treatment of human subjects, please contact:

the IRB Administrator at (1)(507)389-2321.

Your decision whether or not to participate in this research will not affect your relationship with Minnesota State University, Mankato.

In order to protect people's privacy I have not asked people to leave their names. I would appreciate it if you answered all the questions. However, if there are questions you do not want to answer, you do not need to answer them. Please be as honest as possible.

You do not need to sign this consent form. Filling out the questionnaire is a sign of consent. By filling out this questionnaire you are also acknowledging that you are at least eighteen years old.

Thank you for your help.

我的名字是貝路可。我現在正在攻讀我的碩士學位，主修科技交流。我的碩士論文是有關台灣健康小手冊的視覺效果。在我的論文一部分，我在調查台灣人喜歡健康小手冊有甚麼樣的視覺效果。感謝您花時間幫忙填寫這份問卷。參與這份研究將不會有直接利益。

感激您花時間回答下面一系列的問卷問題。這些問題是要了解一般台灣人對於健康相關文獻的視覺.....我預計填寫這份問卷將不會花超過您 15 分鐘的時間，端視您選擇回答多少的問題而定。

當您完成問卷時，請將其放入我提供的信封內，您不需要簽名或寫任何字，只需要在將問卷放入信封內後將其密封。

所有的個人資料都會被秘密保存，並不會公告出來，在我完成我的研究論文後，所有的問卷都將會被消毀。我預計您的參與將不會有最小的風險。

如果在訪談後，您有任何有關這次研究或者是您對於您的權利有任何問題，請用以下電話聯絡：
貝路可(886)09-1135-0026 或是 Lee Tesdell (1)(507)389-5219.

如果有任何因此次訪談而發生的相關傷害，請聯絡：
貝路可(886)09-1135-0026 或是 Lee Tesdell (1)(507)389-5219.

如果您有任何的問題或考量，請聯絡：
IRB Administrator: (1)(507)389-2321

不論您是否決定參與這份研究，將不會影響您與明尼蘇達州立大學的關係。

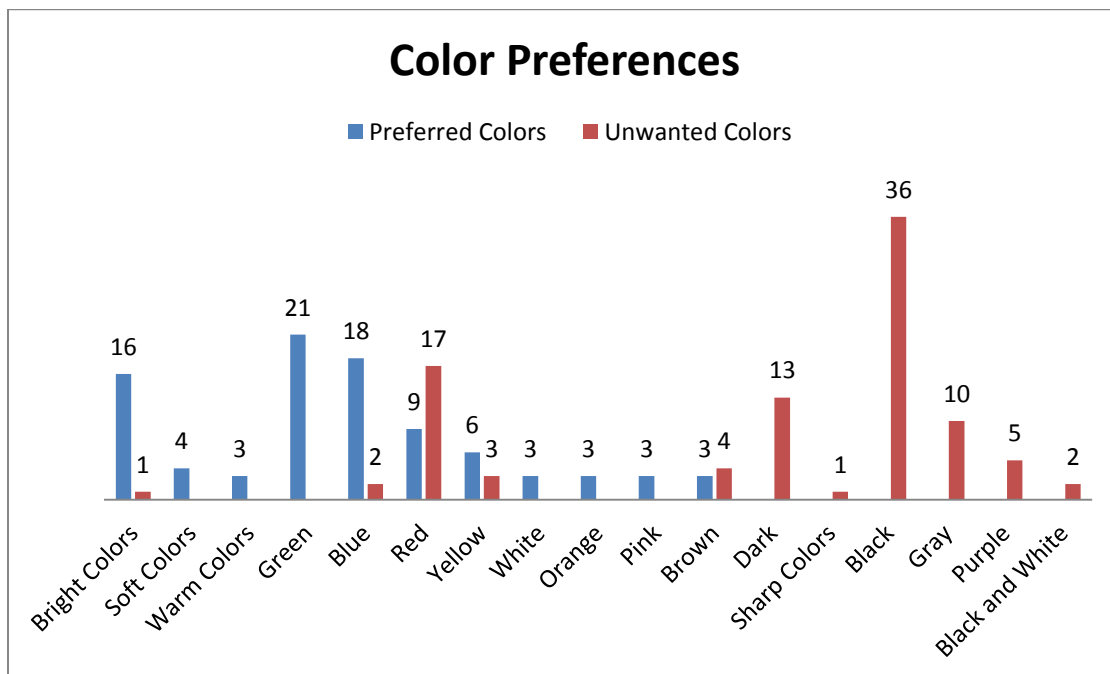
為保護填表人的隱私，我不要求填表人留下姓名。儘管我會很感謝您填寫整份問卷，但是如果有任何的問題您不願意回答，您可以不回答。請您盡量誠實作答。

您不需要在這份同意書上簽名，完成這份問卷就代表您的同意了。您必須要年滿 18 歲才能填寫這份問卷。

感謝您的幫忙

Appendix G: List of occupations of people surveyed

Occupation	Number of People	Occupation	Number of People	Occupation	Number of People
Business	20	Bank	2	Investor	1
Housewife`	12	Government Employee	2	Lawyer	1
Education	8	Medical Profession	2	Librarian	1
Teacher	8	Professor	2	Manager	1
Finance	4	Student	2	Project Coordinator	1
Manufacturer	4	Architect	1	Ral Estate	1
Service Industry	3	Business Owner	1	Retired	1
None	3	Editor	1	Scientist	1
Sales	3	Employed	1	Telephone Technician	1
Accountant	2	Information Technology	1	Trading	1

Appendix H: Color preferences from Survey Questions 14 and 15.

Appendix I: Doctor Interview Consent Form:

My name is Lucas Baclayon. I am pursuing a Master's degree in Technical Communication. I am currently writing a paper about visuals in Taiwanese health brochures. As part of my research, I would like to interview Taiwanese doctors, dentists and other health professionals about their experiences and opinions regarding visuals in health-related literature. I will be conducting the interviews and doing the research myself. There are no direct benefits for participating.

I have a series of questions that will be the base of the interview, though I may vary at times from these questions based on answers or experience. The interviews are mainly to get feedback about visuals in health-related literature in Taiwan. The interview should take between five and fifteen minutes.

If there are any questions that you do not want to answer you do not need to answer them. I understand that doctors and health professionals are busy. Therefore, if you feel you are too busy to participate, I will respect your wishes.

There will be no audio or video recordings made of any of the interviews. I will keep all records on paper and will not record them electronically. I will keep all records personally and will not share them with anybody. After I finish writing my paper, all interview documents will be shredded. Also, in order to protect people's privacy, I will not record any names on the interview papers. I anticipate that there is a less than minimal risk involved in participation.

If you have any questions about the research after the interview or if you have questions about your rights as a participant, you may contact:

Lucas Baclayon at (886)09-1135-0026 or Lee Tesdell at (1)(507)389-5219.

In the event of a research-related injury, you may contact :

Lucas Baclayon at (886)09-1135-0026 or Lee Tesdell at (1)(507)389-5219.

If you have questions or concerns about the treatment of human subjects, please contact:

the IRB Administrator at (1)(507)389-2321.

Remember that participation is voluntary and if you feel you do not want to participate, or if you want to withdraw from the interview at any time, please feel free to do so.

Your decision whether or not to participate in this research will not affect your relationship with Minnesota State University, Mankato.

I appreciate your time and help in answering these questions. By signing below, you indicate that you are at least eighteen years old.

Lucas Baclayon

Signature of Participant

Date

Appendix J: Doctor Interview Base Questions

Position	Principal Place of Practice	Years Practicing	Medical School

1. Do you feel medical pamphlets are an effective way of informing the public about health issues? Why or why not?

2. How important are visuals when communicating with patients?

3. About what percentage of your patients need a visual to understand medical / health information?

4. Are there guidelines as to what kinds of visuals you should show to patients?

5. A large number of the pictures of people from the pamphlets I gathered were drawings or dolls. Why is that?

6. How much influence do health professional like you have in what gets printed in health pamphlets?

7. How often are you involved in prevention? _____

8. How well informed are your patients about health issues? _____

9. Several doctors have commented that it is difficult to communicate with seniors. Do you feel this to be true? If so, Why? _____

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