



PLUM PRESS



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WASTE NOT, WANT NOT

Food waste is food that is thrown away even though it is still edible. According to the Food and Agriculture Organization of the United Nations, one-third of the total food production for human consumption is wasted or lost every year, which is equivalent to about 1.3 billion tons.

In Japan particularly, as much as 6.21 million tons of food waste is generated a year, which is about twice as much as the food aid sent from around the world a year for people who are suffering malnutrition.

Food waste causes carbon dioxide emissions because of the need for incineration, and thus reducing food waste needs to be done as strenuously as possible even aside from ethical concerns.

The Japanese government makes efforts to tackle food waste. To reduce food waste produced in the process of distribution, the Ministry of Agriculture, Forestry and Fisheries (MAFF, one of the Japanese government sections that oversees major industries, such as those related to food) holds workshops for companies in the food industry.

Also, MAFF has been revising a conventional rule regarding food product distribution. Under the former rule, the delivery deadline is one-third of the duration of the shelf life (time from production



Kitchen garbage in the cafeteria at Ochanomizu University.

Credit: Kino Fujii

date to “best-before” date), and the sales time limit is at the two-thirds point of the shelf life. This rule, called the “one-third rule” in Japan, causes large amounts of food waste. MAFF recommends changing the delivery deadline to “half of the product’s remaining shelf life.”

The Consumer Affairs Agency (the government agency that deals with consumer problems to protect consumer benefits) offers online printable booklets free of charge to the public on its website regarding how to reduce food waste. However, this would be meaningless if it only attracts the attention of people already interested in food waste. It would be more effective for general organizations to take action.

The most popular efforts are those of the food bank. Through

this social welfare system, food that was supposed to be disposed of for various reasons gets collected and redistributed to the hungry population. Canned and freeze dried food are acceptable as donations from the public. The activity brings advantages not only to the beneficiaries, but also to the supporters, as it leads to the reduction of garbage and financial burden.

However, there is still a lack of awareness of this system, which could be seen as fatal for an institution like this, and it should be given more attention. There

are organizations sending out information about these activities through social media, which could be a very efficient means of raising people’s awareness through public intervention.

The impact a single person can make may be minimal. However, with everyone’s contribution, the impact would be enough to make a difference. There is no need for extreme actions. The important thing is the number of people who participate, not the breadth of the action. As the saying goes, “Every little bit counts.” In other words, simple actions such as spreading information and opinions about food waste on SNS, or not buying more food than needed, can turn into a big action.

What is lacking the most in solving this issue right now is a sense of crisis, the awareness that this problem involves not only the poor and the government, but also the public. Every little bit will help.

By Sena Matsuzaki, Momoko Oyama, Shoko Kamimura, Mai Shiino, Yukana Nakajima, Kino Fujii and Kanako Minagawa

NOTICE TO READERS

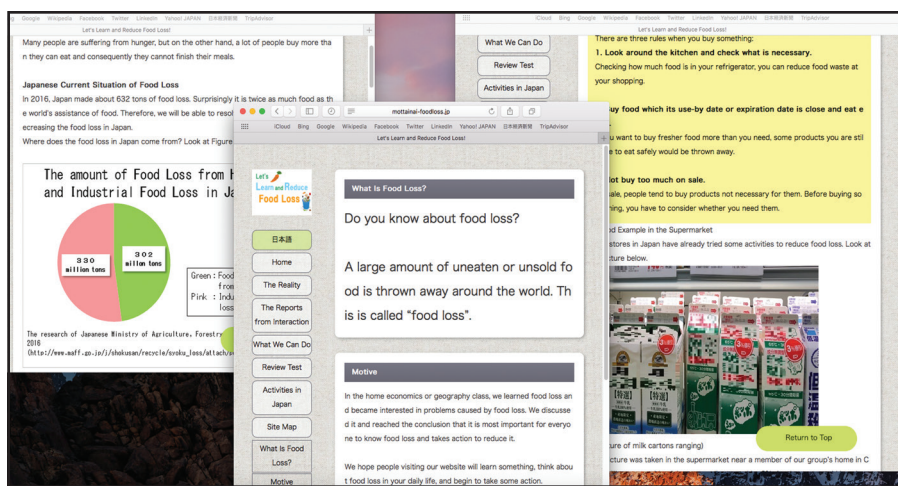
Ochanomizu University Senior High school is in Bunkyo Ward, or “center of education” in Japanese. As the name suggests, there are many educational institutions in the area, including the University of Tokyo, Japan’s most distinguished university.

Our school has been registered by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) as a Super Global High School (SGH) since 2014. We, the students of SGH, are expected to lead the globalized society. In the SGH program, we

learned about social problems, such as those regarding the environment and human rights. Also, some of us performed fieldwork in Taiwan to discuss global issues in English. As our school is for girls, the aim of our school is for women to play a more active part in international society.

This newspaper is published by senior students in U class as part of the SGH program.

By Eriko Sakiyama, Minami Sawai, Akane Koizumi, Kano Shibata, Erika Noda, Yoshika Hara and Mirei Morita.



A website we created about food waste

Credit: Kino Fujii

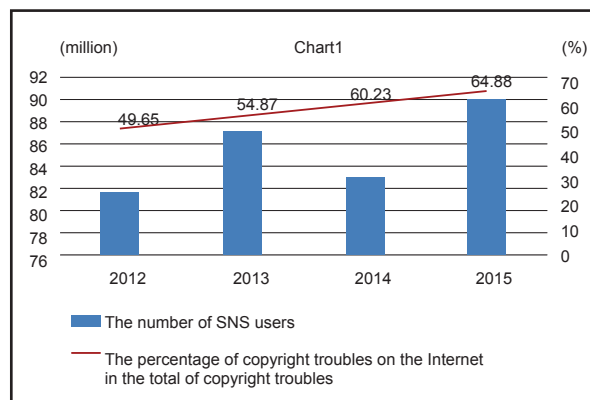
Technology

Spread of SNS brings copyright concerns

These days, almost all people, regardless of age and sex, have smartphones or tablet computers and use the Internet for various purposes. At the same time, the number of people who are getting into trouble regarding copyright on the Internet has been increasing. According to Chart 1, the more social networking services (SNS) expand, the more likely such trouble arises. Considering the situation, these incidents show that many people use SNS without paying attention to copyright.

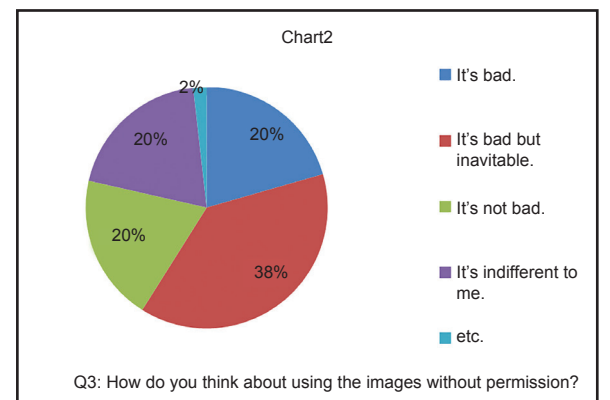
SNS is often used by young people. Therefore, to understand the status quo of copyright on SNS, we asked three questions to 120 third-year students of Ochanomizu University Senior High School. The questions are as follows: “Do you use SNS?”, “Have you ever used an image without permission?” and “What do you think about unauthorized reproduction on SNS?”

For the first question, the rate of users was found to be 99%, showing that most young



Credit: Miyu Takemura
Reference: ICT Research & Consulting

people are using SNS. For the second question, about 70% of students answered, “Yes, I have used images without permission.” Moreover, for the third question, the rate of people who answered, “I think it is bad, but I can’t help unauthorized reproduction.” or “I don’t think it’s bad.” was about 70%. Those who answered “I don’t have any feelings about it.” accounted for about 20%. (Chart 2) These answers seem to indicate that people have little understanding of copyright issues regarding SNS.

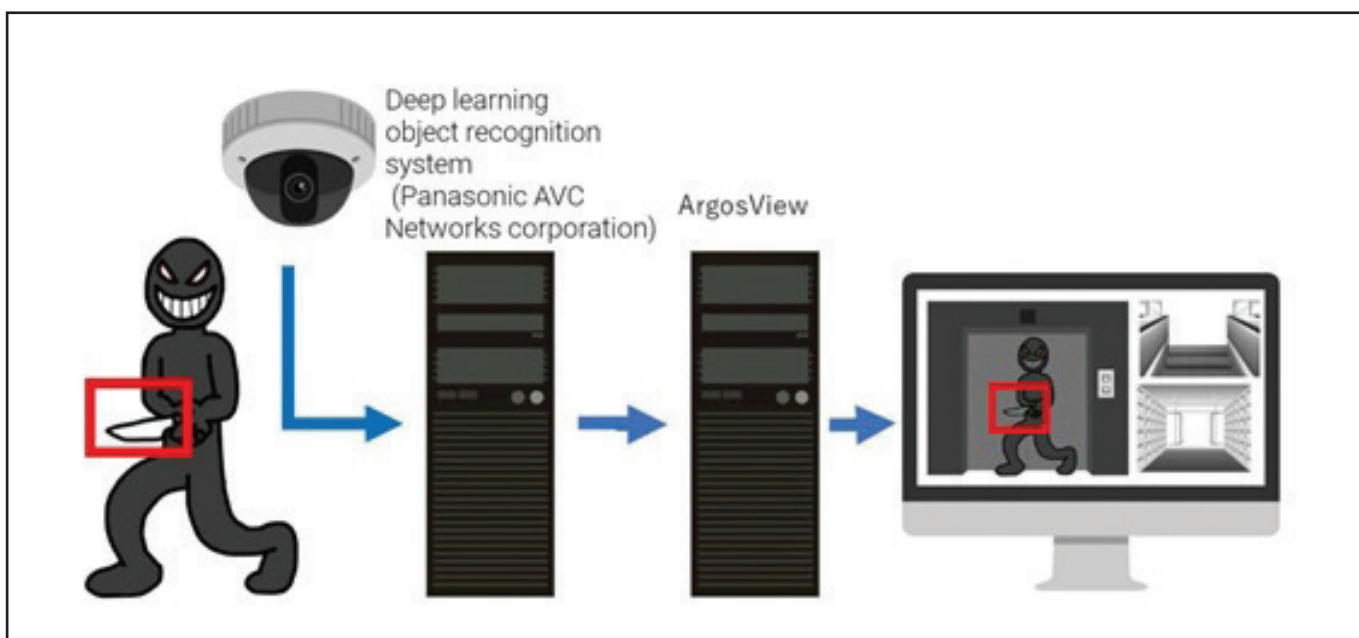


Credit: Miyu Takemura

Seven out of ten respondents use images without permission. Some of them may think it is not important. However, it is a serious problem because the law prohibits it. They should consider stopping such actions, not only for copyright holders, but also for themselves. It is time to rethink SNS use and change the perception of copyright.

By Yumi Sato, Miyu Takemura and Natsuki Watanabe

Will humans serve AI in the future?



Credit: Noriko Saegusa

Many people expect the success of AI in the Tokyo Olympics and Paralympics in 2020. AI stands for “Artificial Intelligence” and it indicates the efforts and abilities to make computers realize the intelligence that human beings possess.

Today, large-scale security is required for hosting the Olympics. Therefore, several companies have advanced in the development of various new security systems. For

example, Panasonic Company developed and started selling a new security camera that employs AI technology named ArgosView.

This AI technology is helpful for analyzing the character and patterns of people or objects in the camera. This technology is referred to as an “object recognition system,” which detects targets based on methods of distinguishing learned beforehand.

It is possible to sound an alarm as soon as this system detects a possible criminal person or a suspicious-looking object.

The number of settings on security cameras is increasing. While the effect of security increases with a larger number of cameras, visual confirmation and monitoring of images by personnel is ineffective. Meanwhile, a monitored image can be confirmed effectively by using a camera enhanced with AI.

However, there are problems. The main problem of security cameras is invasion of privacy.

Security cameras with AI make it easy to identify an individual. People will be able to abuse it. In addition, some people are concerned about a decrease in employment. According to an Oxford University study in 2013, AI will do half of 702 different jobs in the United States within a few decades. It is often said that AI will take jobs that involve decisions such as those made by a manager. In other words, humans will serve under AI.

It is said that not only security cameras, but also all AI use have advantages and disadvantages. It is also possible that the rise of AI will lead to serious problems. Although AI may save us a lot of work, if we continue seeking only convenience, we will not operate AI, but rather AI will operate us. To prevent such a shift, we must consider how to coexist with AI.

By Mio Kaita, Mizuki Saito, Noriko Saegusa and Nanako Nishihira

Japanese Culture

Global dietary culture: Focus on ‘washoku’

Comparing the salt content between Chinese and Western dishes, and considering why washoku contains a lot of salt and the harm caused by excessive intake of it, we look at the future of washoku.

The traditional Japanese cuisine of “washoku” is becoming popular all over the world. Thanks to the upcoming Tokyo Olympics in 2020, the food culture, which was registered by UNESCO as a World Heritage, has been receiving greater attention from overseas. It is also becoming known for being healthy. Is it true that washoku is healthy and nutritious?

The World Health Organization (WHO) sets a standard of salt intake at 5g a day. According to this, salt intake of less than 1.7 g per meal is desirable. The salinity of washoku, Chinese dishes and Western dishes as seen in a home economics textbook (Katei Sogo, Tokyo Syoseki, February 10, 2015) are 4.6g, 3.6g and 1.7g per meal, respectively (Figure 1). Washoku thus contains the most salt of the three and twice as much as the standard or more.

There are some reasons why washoku

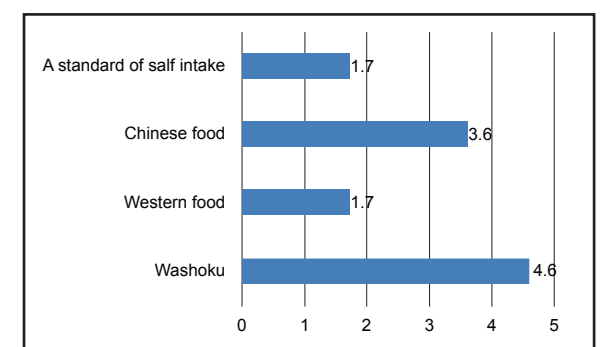
contains a lot of salt. For example, Japanese use salt to make soup stock, to make a dish tastier and to keep washoku preserved longer. In addition, Japanese tend to season food with salt, while people from other countries use spices.

Although salt plays an important role in washoku, too much of it is bad for our health. The most serious effect is high blood pressure. This can cause brain-related diseases, and heart disease. If symptoms appear such as high blood pressure, thirstiness and swelling, there is a possibility that you eat too much salt.

To address this problem, Japanese should reconsider how they season dishes. For example, low-salt soy sauce and spices such as herbs can be used. In addition, Japanese can reduce eating out, and intake of processed food, including pickles and soup with noodles and salt. In other words, it is important for each person to become aware of the issue and cut down on salt.

Ahead of the 2020 Games, the number of foreign people who eat washoku is increasing. Therefore, for foreign people that take in less salt than Japanese, Japanese should try to lower the amount of salt in washoku and live healthy lives with moderate salt intake.

By Manami Ohashi, Matsuri Okamoto, Mifuyu Kuwano, Megumi Kanda, Sakura Furukawa and Miki Yoshioka



Credit: Manami Ohashi

Figure 1 Salt intake per meal (g)

A revolution in musical instruments

Vocaloid is software that synthesizes voices. Simply by inputting melodies and lyrics into the software, it can create singing voices automatically. Users can add some features such as intonation and vibratos as they wish. While a lot of researchers conducted experiments to make computers able to sing, their voices have been monotonous. However, the invention of “Vocaloid” expanded the possibilities of advanced technology.

Now, many kinds of “Vocaloid” are released in Japan. The most popular one is “Hatsune Miku.” This type can synthesize mellow voices in the way that a young girl sings. Its voice matches various genres of music, such as J-pop, rock, ballads and more.

YAMAHA has advanced the development of a large-scale “singing synthesizer” since the 20th century. The company’s target is to make it possible for everyone who wants to

create music to synchronize real singing voices easily at a low cost. Of course, it was possible to reproduce the sounds of other musical instruments through the development of synthesizing technology and sampling technology. However, it was difficult to do it with the human voice. YAMAHA thus aims at providing high-quality business software.

There are some benefits of composing with Vocaloid instead of real human vocalists. Since ancient times, human beings have been interested in and excited by music. Until the synthesizer appeared, people needed to prepare as many instruments as they needed to use for playing a song, and thus it could cost a lot of money. One problem remained even after electronic synthesizers arrived. There was a shortage of vocalists and time restrictions, such that composers and vocalists needed to adjust their schedules. To solve these issues, YAMAHA has been studying and inventing new electronic synthesis products

that will become as famous as Vocaloid.

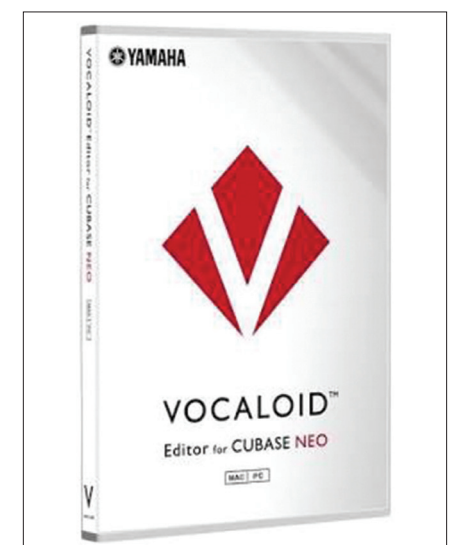
When YAMAHA decided to take on such a project, they had two aims: to develop innovative software that was different from former imitations, with the products not costing much money, as amateurs can buy them; and data processing needed to take less time than the former technology.

The following is how to compose a song using Vocaloid. First, a melody and lyrics are inputted and a virtual singer sings. Next specific settings are adjusted to change the singing style. There is also a variety of voice banks. At last, a voice and character to match the music are chosen.

Vocaloid has inspired various products beyond musical instruments. For example, it collaborated with FamilyMart, a chain of Japanese convenience stores, to make products using the Vocaloid character. Vocaloid is a popular part of “Cool Japan” culture, including games and live concerts. Meanwhile, there is an

opinion that such activities might lower the image of Vocaloid among users. However, it is clear that the number of Vocaloid users and products is increasing, so further development of it can be expected.

By Nanaho Akasaka, Tomona Ikushima, Ruri Kojima and Saki Sekiguchi



Credit: YAMAHA

An example of Vocaloid software’s package

Education

The situation of Japanese studying abroad

According to a study by the Organization for Economic Co-operation and Development (OECD) in 2014, the number of Japanese students who study abroad peaked in 2004 and has been decreasing ever since. On the other hand, the number of Chinese students who studied abroad in 2011 was about 723,000, four times the number in 2002. The number of students studying abroad has also tended to increase in other Asian countries. Why is it decreasing in Japan?

According to a survey by the Ministry of Education, Culture, Sports, Science and Technology in 2009 of obstacles to studying abroad covering Japan's 87 national universities, there are two main principal obstructions. The first is job hunting after returning to Japan and the second is that the universities' study abroad programs are relatively young.

Still, the internationalization of universities in Japan is gradually advancing. Some institutions

offer classes in English and accept students from other countries.

While the situation in Japan is such, studying abroad has the following advantages.

First, we can have experiences that we cannot receive in other ways. Needless to say, we have opportunities to speak English or talk to foreigners in Japan these days. However, experiences in English-speaking countries differ very much from those in Japan.

Also, experiencing various cultures and values by studying abroad broadens our horizons and makes us confident.

Besides, some companies take the fact that students study abroad into consideration and delay recruitment time.

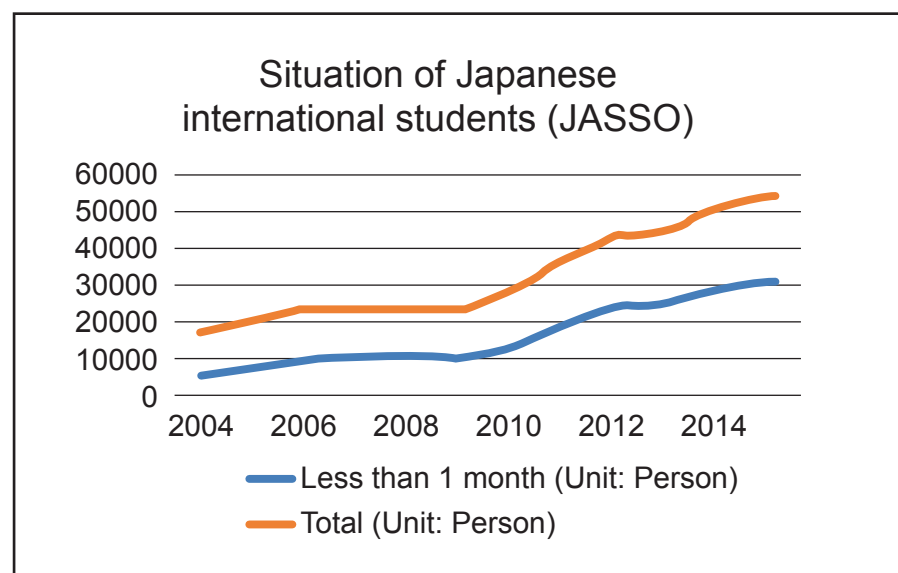
The graph above is a compilation of data gathered by the Japan Student Services Organization (JASSO) in 2015. It shows that the number of Japanese students who study abroad is increasing. This is opposite to the graph made by the OECD. What does this mean? Actually, the

OECD study does not take into account the number of students who studied abroad for less than a month, as JASSO's study does. In other words, Japanese students understand the importance of studying abroad but it may be a challenge for them to do so for a long time.

As suggested above, it is not necessarily true to say that the number of Japanese students who study abroad is decreasing.

Promoting reforms of study abroad systems and seeking improvements of support to students are necessary to prevent students from missing such opportunities. If these were realized, more internationally minded human resources would support Japanese companies.

By Saori Kokubu, Yuka Kurihara, Reina Fukushima and Saori Mezaki



Credit: Reina Fukushima

Column: How do you relieve your stress?

Do you feel stress or have any way to relieve your stress? Sanae is a school nurse, and Anne is a high school student who has some worries. Anne is seeking a way to reduce her stress.

Sanae (S): Good morning.

Anne (A): Good morning.

S: You don't look well today. Are you alright?

A: Hm... Actually, I have some problems with my studies for the university entrance exam and I feel a lot of stress.

S: Some of your classmates said the same thing, so I conducted some research. I asked students if they feel stress at school and why.

A: What was the result?

S: A total of 96.6% of students

your age are under stress. Many are worried about their studies, like you.

A: Everyone has his or her own issues. Some of them are stressed about personal relations or club activities. I wonder if there is good way to reduce stress.

S: Well, this data shows how they reduce their stress.

A: Many people reduce stress by sleeping and listening to music, among other activities.

S: There are interesting ideas, such as collecting sweets, cleaning the room, and writing down one's troubles on paper. Each person has their own solution. How about looking for a way to change your mood and forget about the trouble?

A: I'll try that.

By Saya Ichikawa, Takako Ishihara, Yumi Sugino, Kanako Maruyama and Yuki Mizuno

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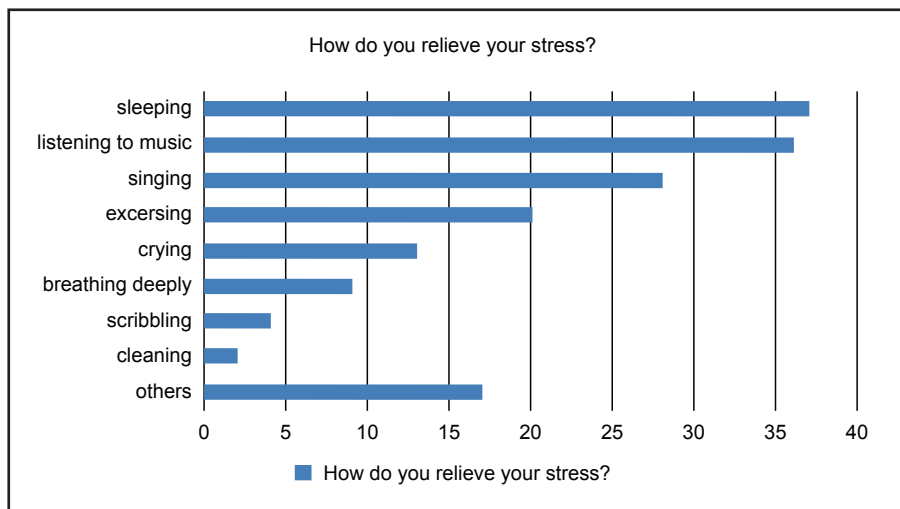
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Credit: Yumi Sugino