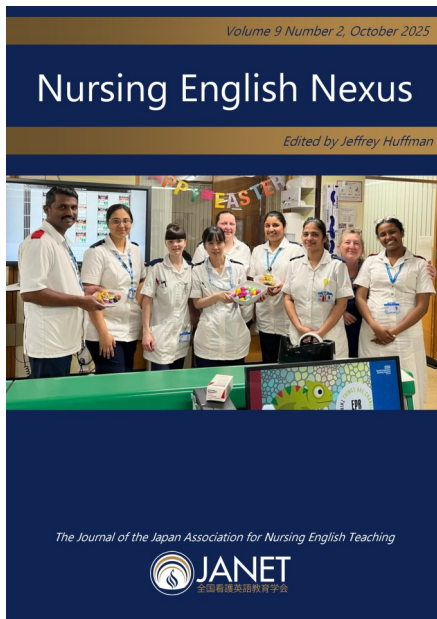


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Exploring Japanese Nursing Students' Awareness of Discriminatory Practices Targeting Foreign Residents

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Abstract: *This study explored Japanese nursing students' awareness of discriminatory practices targeting foreign residents in Japan. Using the American film Gattaca as an allegorical tool, a survey was administered to 58 first-year nursing students to assess their perceptions of discrimination in Japanese society. Rasch analysis confirmed the survey's unidimensionality and the proper functioning of its rating scale. The research revealed that students primarily connected the film's dystopian themes to overt forms of discrimination faced by foreign residents in Japan, such as professional barriers and identity-based exclusion, which can significantly impact life trajectories. However, the students were not as adept at identifying subtle forms of cultural and bureaucratic exclusion faced by foreign residents, viewing them as less severe than the film's harsh portrayal of prejudice. These findings underscore a need for educational strategies that help students recognize the connection between significant social injustices and the more normalized, everyday discrimination experienced by foreign residents in Japan.*

Keywords: discrimination, cultural understanding, Rasch analysis, ethnic nationalism, *Gattaca*

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Shifting demographics in Japan continue to pose new challenges for Japanese nurses as they navigate the complexities of patient care and communication. Japan has recently experienced a notable increase in its foreign resident population, which has helped to counteract its declining overall population (Statistics Bureau, 2025). Therefore, the likelihood of Japanese nurses treating foreign patients is increasing, and with this, the need for cultural understanding and empathy towards those from different backgrounds is increasing.

Research conducted by Tanaka et al. (2018) revealed that while Japanese nursing students recognize the likelihood of providing care to foreigners in the future, their knowledge and interest in medical health care for foreign residents is generally low. The authors also found that conventional university lectures were insufficient to enhance students' understanding or engagement in this subject. Other research suggests that exposure to diverse cultures through international online courses was successful in enhancing intercultural sensitivity

among Japanese nursing students (Hua et al., 2023). However, a shortage of specialized lecturers in the field of nursing for foreign residents, combined with limited e-learning resources at most nursing schools in Japan, poses a significant challenge and hinders progress in this area (Nagamine et al., 2025).

Japan's renowned ethnic homogeneity and distinctive social culture can lead to a nationalistic perspective, fostering exclusionary attitudes toward foreigners (Morita, 2015). Moreover, the persistent myth of Japan as a mono-ethnic society can compound the challenges that Japanese nationals face in understanding the cultures and perspectives of foreign residents (Nagayoshi, 2011). This is felt throughout all parts of Japanese society and can create blind spots in understanding people from different backgrounds. Teaching English to Japanese nursing students involves imparting cultural knowledge alongside the English language taught in class. To prevent misunderstandings when sharing culturally or socially complex information with Japanese students, it is crucial first to understand their

existing perspectives on foreign nationals. This study uses the American film *Gattaca*, shown in class with Japanese subtitles, to frame instances of societal discrimination. A survey with items depicting various scenarios of discriminatory practices in Japan was then administered to the students in class, allowing them to relate instances of discrimination in Japanese society to those depicted in the film. Rasch analysis was used to interpret the psychometric aspects of the survey data. Data derived from this survey offers an insight into first-year nursing students' awareness of discrimination towards foreign residents in Japan.

Background

Gattaca

The core of this study leverages the 1997 science fiction film *Gattaca* as a powerful allegorical tool. Its relevance as a lens for discussing bioethics and social stratification is well-established in academic discourse (Ogbunugafor & Edge, 2022). *Gattaca* is set in the "not-too-distant future" where genetic engineering is commonplace and used to create people who are "genetically superior" to those of natural birth. This, in effect, creates a two-tiered society where the genetically enhanced individuals exist as elites, while those naturally born are relegated to a new subclass of people known as "in-valids". The film presents various forms of discrimination, many of which mirror those in contemporary society. However, its futuristic setting provides viewers with a degree of detachment, as this specific type of discrimination is not (yet) prevalent today. By drawing parallels between the film's dystopian themes and present-day issues of discrimination against foreign residents in Japan, a more nuanced understanding of discrimination can be introduced without the emotional charge of directly referencing real-life examples.

A review of *Gattaca* by Ogbunugafor & Edge (2022), published as a featured article in the

journal *Genetics*, highlights the value and staying power of this cult classic. The authors utilize the film to explore modern genetics, bioethics, and the issue of discrimination. *Gattaca's* central messages revolve around "...discrimination writ large" (Ogbunugafor & Edge, 2022, p. 2), wherein discrimination in the world of *Gattaca* can occur along various dimensions, including race, religion, and gender identity, but most pervasively along the lines of genetic manipulation. The parallels between the discrimination found in the world of *Gattaca* and that found in modern Japanese society become uncomfortably clear when one replaces the term "in-valids" with foreign residents. For instance, the society in *Gattaca* is structured around life predictions based on the bias of genotypes, a point punctuated by the movie quote, "We now have discrimination down to a science." Individuals born naturally in *Gattaca* are barred from most employment opportunities, mainly due to their perceived "riskiness". Foreign residents in Japan, such as those interviewed in Hiratsuka et al.'s (2023) article, commented on how their non-Japanese birth status affects their professional lives.

Furthermore, the people living in the society of *Gattaca* emphasize the importance of genetic fitness as a social marker that transcends national or ethnic origins. While this concept may appear progressive at first glance, it is still based on traits that are immutable from birth, resulting in the same outcome: a new underclass of people. The main character of the movie, an "in-valid," is barred from certain educational and social institutions as a result. In Japan, foreigners are sometimes denied service at culturally significant establishments such as hot springs or izakaya, a phenomenon highlighted by Morita (2015).

The protagonist in the film yearns for admission to the elite *Gattaca* space program despite his natural-born status. Throughout his life, the character's hard work and aspirations are minimized, even by his own parents. This

character is steered away from his desired role through both explicit and implicit messages to the point that he must commit fraud and identity theft to finally have his abilities recognized. Echoes of this reality are found in Hiratsuka et al.'s 2023 report, where a foreign national living in Japan was told to pass the highest level of the Japanese Language Proficiency Test (JLPT N1) before starting doctoral studies in a TESOL graduate program. This onerous requirement was viewed as an apparent attempt to dissuade potential international students, especially considering that the dissertation for the degree is written in English. While difficult to verify outright, practices like this are exclusionary and likely designed to favor Japanese students.

Discrimination of Foreign Residents in Japan

One of the key drivers of discrimination towards foreign residents in Japan is the ideology of a unique ethnic nationalism that is inherited through ancestry (Morita, 2015). Commentary surrounding interactions between Japanese nationals and foreign residents rarely acknowledges this, and conflicts are usually resolved by demanding adherence to the "Japanese way." While disputes between Japanese and foreign residents are often dismissed as a cultural misunderstanding, the lack of recognition of this underlying belief is pernicious, as it erodes the legal rights of foreign nationals living in Japan. Discrimination is prohibited according to the Japanese Constitution, which aims to protect individuals from the government; however, the scope of protection against private individuals remains unclear (Morita, 2016). This ambivalence makes it challenging to address discrimination effectively, and foreign residents are seen as perpetually foreign, facing subtle but persistent barriers.

Implicit, everyday biases can manifest as microaggressions, where indirect, subtle, or unintentional actions or statements against

marginalized groups cause harm. In their discussions with foreign nationals living in Japan, Hiratsuka et al. (2023) found that the lived experiences of native English-speaking teachers were often punctuated by damaging assumptions. For instance, one teacher of Southeast Asian descent describes receiving "...puzzled looks from Japanese people when I say I am from the United States" (Hiratsuka et al., 2023, p. 9). This teacher also recounted an incident where he was edited out of school advertisements and replaced by a white male teacher, illustrating how bias can escalate into overt discrimination. Hiratsuka (2025) investigated the consequences of native-speakerism in the English teaching field and how ignorance of these biases has a pervasive influence on hiring practices. He found that non-native English speakers largely did not recognize native-speakerism as a problem, nor did they know of its existence. Ignorance of this issue allows subtle forms of discrimination to persist in Japanese society and academia.

A more conspicuous form of discrimination in Japan is through the refusal of service. Morita (2015, 2016) discusses several examples, such as hot springs and bars with "Japanese only" signs, and people being refused permission to rent apartments due to their foreign status, despite being residents of Japan. One troubling example described in Morita (2015) involved a Caucasian woman of medium build who gave an account of being chased from a Japanese women's clothing store with the Japanese staff insulting her by saying "ラージじゃない?" (raaji ja nai [Aren't you a large?]), presumably trying to communicate that they did not carry clothing of her size. The author noted that this method of communication would never be used with Japanese customers. Double standards like this damage the relationship between Japanese and foreign nationals, and the widespread normalcy of these biases demonstrates that even Japanese people who genuinely have no desire to discriminate against foreign nationals

will likely end up doing so, despite their best efforts.

Rasch Analysis

Rasch analysis is a psychometric technique developed to enhance the precision of instrument construction, monitor instrument quality, and assess respondent performance in educational research (Boone, 2016). The use of Rasch analysis in nursing research has gained momentum over the past few decades due to its ability to provide more detailed information and evidence regarding item- and person-level characteristics, as well as being a powerful tool for evaluating measurement instruments, such as surveys and evaluations (Stolt et al., 2022; Verdú-Soriano & González-de La Torre, 2024). It enables researchers to understand how the instrument captures the construct under measurement. Classical test theory approaches, on the other hand, are largely deductive, attempting to fit items to cover an underlying construct. With Rasch analysis, an item is evaluated based on a test-taker's contribution to capturing a unidimensional construct within the item content, in relation to empirical data gathering. Another advantage of Rasch analysis is its ability to provide valuable information with smaller sample sizes as compared to classical test theory (Cappelleri et al., 2014). Rasch analysis can therefore be used to investigate a specific construct or latent trait and evaluate a survey's ability to measure this trait.

Rasch analysis can also be used to enhance the precision, validity, and interpretability of measurement instruments and data in nursing research. Boone (2016) provides a detailed description of Rasch analysis and its application in life science research. However, past studies have been unsystematic in reporting Rasch properties, which makes it difficult to ascertain the validity and reliability of the reported instrument (Stolt et al., 2022). Stolt et al. (2022) recommend the following minimum reporting standards for Rasch

analysis in nursing research: the Rasch software used, sample size, model and rating scale functioning, internal scale validity, unidimensionality, person-response validity, person-separation reliability, differential item functioning, and the person-item map.

Objective

A better understanding of Japanese nursing students' perceptions or acknowledgement of subtle forms of discrimination is crucial for teaching empathy towards foreign residents of Japan. This includes the subtle forms of discrimination that foreign residents face while living in Japan. However, this topic can be both emotionally charged and conceptually elusive, especially for younger Japanese learners who have likely not experienced this kind of discrimination themselves. Recognizing how students connect broader concepts of discrimination to subtle biases is a challenging task, but one that can help teachers address these issues in meaningful ways.

In this study, a survey was created to evaluate students' ability to relate the discrimination depicted in the film *Gattaca* to the discrimination found in Japanese society. The film was introduced and viewed in class, followed by group discussions designed to help cultivate the students' understanding of discrimination and its manifestations in society, without directly referring to specific examples found in Japanese society. The survey was given in class at the end of the lesson to ensure the details of the film were easily recalled. Data from the survey were collected, anonymized, and then analyzed using Rasch analysis software. This approach was chosen for its ability to evaluate the survey's psychometric properties, ensuring it measures a single, underlying latent trait: the students' willingness to endorse the prevalence of discrimination in Japanese society as it relates to the themes in the film *Gattaca*.

Methods

Research Design and Participants

The study involved 58 first-year Japanese nursing students at a medical university in Japan. The students watched the film over two 90-minute lessons dedicated to viewing *Gattaca* in its entirety, followed by a third class where they engaged in group discussions and debates to reinforce the themes found in the film, such as prejudice, identity, and societal barriers. This third lesson is important for students to process and analyze their emotions and the concepts presented in the film, given its emotionally demanding nature. At the end of the third lesson, a five-category Likert scale survey was administered to gauge the students' opinions on the relationship between scenarios of discrimination in Japan and those depicted in the film. To ensure that variations in language ability did not hinder the students' comprehension of the scenarios, this survey was translated into Japanese. Crucially, the students were only asked to assess the connection between discrimination towards foreign residents in Japanese society and the film during the survey.

Ethical Considerations

Students were informed in advance that participation was voluntary and that nonparticipation would have no impact on their evaluation or grade. The participating students were also informed that their data would be anonymized and their identities kept private.

Survey Design

The survey presented five scenarios of discrimination against foreign residents in Japan and asked students to rate the similarity of these scenarios to the society in the movie *Gattaca*. The scenarios were derived from the literature cited earlier in this article, using theoretical situations that were plausible but fictional.

- Scenario 1 (S1): A child born in Japan to non-Japanese parents, despite speaking

fluent Japanese, attending Japanese schools, and having lived their entire life in Japan, is consistently treated as an "outsider" or perpetually foreign, facing subtle but persistent barriers in accessing certain social circles or opportunities compared to their ethnically Japanese peers.

- Scenario 2 (S2): A highly qualified foreign professional, despite holding equivalent Japanese certifications, finds it nearly impossible to advance to leadership positions in established Japanese companies, with promotions disproportionately going to individuals of Japanese ethnic background, regardless of their comparative skills or experience.
- Scenario 3 (S3): A foreign resident, despite actively adopting Japanese customs and language, is subtly or overtly excluded from certain community events or traditional organizations because they are not perceived as possessing the "pure" cultural background deemed necessary for full acceptance.
- Scenario 4 (S4): A foreign resident experiences significantly more scrutiny, longer processing times, or implicit biases when applying for public services (e.g., housing loans, certain permits) compared to Japanese citizens, even when all other qualifications are identical.
- Scenario 5 (S5): A Japanese university implicitly or explicitly steers international students, regardless of their academic aptitude, into specific, less prestigious programs or limits their access to highly competitive fields, reserving those for Japanese nationals.

The following Likert scale survey was used after each scenario:

To what extent does this scenario reflect *Gattaca*-like themes in Japanese society?

1 (*strongly disagree*): I don't see any significant parallel between this scenario and the themes of *Gattaca*.

2 (*disagree*): I see very little connection to *Gattaca*'s themes in this scenario.

3 (*neutral*): I can see some minor connections, but it's not strongly *Gattaca*-like or Not *Gattaca*-like.

4 (*agree*): I see clear parallels between this scenario and the themes found in *Gattaca*.

5 (*strongly agree*): This scenario strongly exemplifies *Gattaca*-like themes in Japan.

Analysis of Survey Data

To analyze the survey, a polytomous Rasch model was employed using Winsteps software (Linacre, 2025). The survey utilized a five-category Likert scale.

Item Fit and Local Independence

The analysis of item fit statistics (Infit/Outfit Mean Square) revealed that most items fell within the acceptable range of 0.6 to 1.4, indicating that they functioned well within the model. A minor anomaly was noted for S4 (scrutiny for public services), which exhibited slight overfit (Infit Zstd = -2.33). Overfit suggests the responses to this item were highly predictable and may align too closely with the overall construct, potentially indicating some redundancy.

Furthermore, an examination of residual correlations revealed a degree of local dependence, with the largest correlation being -.40 between S2 (professional ceiling) and S3 (community exclusion). This suggests that a student's answer to one of these questions may have slightly influenced their answer to another.

Unidimensionality

A fundamental requirement for a valid survey is

that it measures a single underlying construct, known as unidimensionality in Rasch analysis. In this study, that construct is the students' perception of *Gattaca*-like themes in Japanese society. The Principal Component Analysis of Residuals (PCAR) revealed eigenvalues of 1.64 and 1.41 for the first two contrasts. As both values are below the threshold of 2.0, this strongly indicates that no significant secondary dimension is present in the data. Therefore, the survey functions successfully as a unidimensional instrument, meaning that the five different scenarios indeed tap into a single, coherent latent trait, as intended by the research design.

Reliability and Separation

Person Reliability was .55 and Person Separation was 1.10, while Item Reliability was .59 and Item Separation was 1.20. These figures are well below the conventional thresholds of $\geq .80$ for reliability and ≥ 2.0 for separation. Low reliability suggests an unstable measurement.

Low person reliability and separation indicate that the survey struggled to differentiate between different groups of students. This does not necessarily mean the survey is flawed; instead, it strongly suggests that the student sample is highly homogeneous in their perceptions. The students, as a group, broadly shared the same opinions on the topic. This outcome can support the hypothesis that the shared socio-cultural environment of Japan may encourage a relatively uniform perspective on the issues tested in the survey, making it difficult to find wide variance in opinions. However, this can also be due to the survey not being precise enough to discriminate between the nuances in student opinions; thus, the survey should not be used broadly without further modifications and subsequent testing.

Item Thresholds

The analysis of the five-category Likert scale's Andrich thresholds confirmed that each category

of response was ordered. Andrich thresholds evaluate if the threshold logits, -0.85, -0.55, -0.24, 1.64, are ordered, meaning they increase along the latent trait continuum. This confirms that the rating scale functioned as intended, with higher scores consistently representing a higher degree of the measured trait. Students who selected a higher category (e.g., *agree*) consistently demonstrated a higher level of the latent trait than those who selected a lower category (e.g., *neutral*). The significant jump in the threshold required to select *strongly agree* (1.88 logits) indicates a clear psychological distinction for the students between agreeing and strongly agreeing.

Person-Item Map

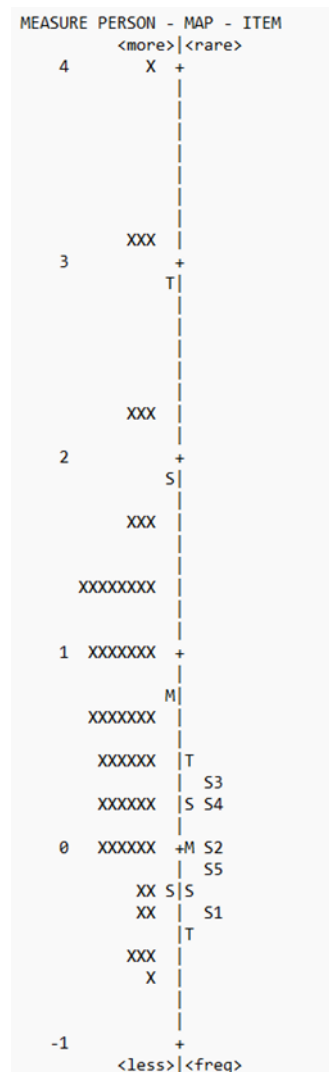
A central value of using Rasch analysis is that the raw, ordinal scores collected from the survey can be converted into linear person measures called "logits". These are best interpreted along a logarithmic scale, represented by the vertical line in Figure 1. The person-item map shown in Figure 1, also known as a Wright map, displays the respondents (persons) and the items (scenarios 1-5) along the same linear scale. The scale stretches from zero to infinity in both directions. For the purposes of this study, this vertical scale represents the construct of the students' perceptions of *Gattaca*-like themes in Japanese society.

On the left side of the vertical line, the Xs represent one or more individual respondents (persons). Xs at the top of the scale represent respondents who strongly perceive *Gattaca*-like themes in the scenarios, and Xs at the bottom represent respondents who generally disagree that the scenarios are *Gattaca*-like. The respondent spread of almost -1 to +4 indicates a diverse range of opinions, with the respondents in the +3 and +4 range showing a very strong agreement with the idea that *Gattaca*-like themes are found in Japanese society.

The right side of the vertical line shows the

Figure 1

Person-Item Map for the survey responses



Note. M is the mean of person distribution or item distribution, S is one standard deviation from the mean, and T is two standard deviations from the mean.

item difficulty hierarchy, with scenario 3 being the most difficult to agree with and scenario 1 being the easiest to agree with. The person mean is almost one logit higher than the mean of the scenarios, which is set at zero on the scale. This suggests that, on average, the items are relatively easy for this group of students to agree with. The distances between the items on this map indicate some possible redundancy between items S3 and S4, and S2 and S5, since they are located close together.

Discussion

Based on the analysis of Figure 1 in the previous section, the scenarios that students found the

easiest to agree with were those that directly mirrored the film's central conflict. These were scenarios involving birth-based status (S₁) and limitations on professional and academic pathways (S₂, S₅). These scenarios directly reflect *Gattaca*'s core plot, where an individual's predetermined status dictates their educational and professional opportunities. This suggests students successfully connected the film's primary narrative of genetic determinism blocking an individual's life chances to the institutional and systemic barriers found in Japanese society that limit an individual's potential based on their background.

Conversely, students perceived scenarios of bureaucratic scrutiny (S₄) and cultural exclusion (S₃) as less analogous to the film's themes. This divergence may suggest that these more subtle or normalized forms of discrimination are not viewed with the same level of severity. Such attitudes could be influenced by societal factors, such as perceiving foreign residents as a potential threat to cultural norms or social order, which can shape discriminatory views. These forms of exclusion may be more normalized or perceived as less fundamentally discriminatory than being denied a career or being labeled an outsider from birth. They may be rationalized as procedural matters or as the protection of cultural tradition rather than as acts of prejudice.

This analysis has limitations. First, a baseline of knowledge of or feelings towards discrimination in the cohort of students was not assessed, thus weakening the results of this study. In future studies, a different survey should be used to establish a baseline for comparison, allowing the effect of the film to be accurately ascertained. Also, while the film aimed to facilitate an implicit exploration of discrimination, the current survey measured students' explicit recognition of parallels between film themes and real-world scenarios. Future research should incorporate measures of implicit bias to gain a more

comprehensive understanding of the students' biases.

The low reliability and separation scores, while interpretable as evidence of homogeneity within the student group, possibly due to a shared socio-cultural environment, also mean the survey has limited power to differentiate between individuals with slightly different viewpoints. This could be amended by adding more scenarios or by creating greater nuance within the existing scenarios. The findings are thus specific to this cohort of nursing students and cannot be generalized without further research. Therefore, the measurement instrument described in this study has significant limitations and should be refined before its use with nursing students in general.

Conclusion

This study attempted to explore Japanese nursing students' understanding of discrimination, including both overt and subtle forms, towards foreign residents in Japan. The survey used in this study was designed to measure Japanese nursing students' perceptions of discrimination against foreign residents of Japan through the metaphorical lens of the film *Gattaca*. The analysis confirmed the survey's unidimensionality and the proper functioning of its rating scale, establishing a foundation for further research.

The initial findings reveal that students most strongly relate the film's themes to overt forms of discrimination that dictate life trajectories, such as professional barriers and identity-based exclusion. In contrast, they perceive more subtle forms of cultural and bureaucratic exclusion in Japanese society as less analogous to the film's dystopian prejudice; thus, the students may be less attuned to more subtle, everyday forms of exclusion. This dissociation between different types of discrimination suggests that, while a powerful narrative vehicle like *Gattaca* can effectively highlight grand injustices, specific pedagogical approaches are needed to help

students connect these themes to the more normalized, everyday types of discrimination that foreign residents of Japan experience. Even simply being aware of the biases described in this study can go a long way toward closing the gap in cultural competency between Japanese nursing students and foreign nationals.

References

- Boone, W. J. (2016). Rasch analysis for instrument development: Why, when, and how? *CBE—Life Sciences Education*, 15(4), 1–7.
<https://doi.org/10.1187/cbe.16-04-0148>
- Cappelleri, J. C., Jason Lundy, J., & Hays, R. D. (2014). Overview of classical test theory and item response theory for quantitative assessment of items in developing patient-reported outcome measures. *Clinical Therapeutics*, 36(5), 648–662.
<https://doi.org/10.1016/j.clinthera.2014.04.006>
- Hiratsuka, T. (2025). Native-speakerism and trans-speakerism in ELT: Interpretations, manifestations, and ramifications. *System*, 128, 103543.
<https://doi.org/10.1016/j.system.2024.103543>
- Hiratsuka, T., Nall, M., & Castellano, J. (2023). Shifting from native-speakerism to trans-speakerism: A trioethnography of language teachers in Japan. *TESL-EJ*, 27(1), 1–20.
<https://doi.org/10.55593/ej.27105a9>
- Hua, J., Kondo, A., & Moross, J. (2023). Enhancing intercultural sensitivity in Japanese nursing students through international online nursing courses: A quasi-experimental study. *Nurse Education Today*, 128, 105870.
<https://doi.org/10.1016/j.nedt.2023.105870>
- Linacre, J. M. (2025). *Winsteps* (Version 5.10.1) [Computer software]. winsteps.com.
- Morita, L. (2015). Some manifestations of Japanese exclusionism. *Sage Open*, 5(3), 1–6.
<https://doi.org/10.1177/2158244015600036>
- Morita, L. (2016). Language difficulties in kyosei ('living together') of Japanese and foreigners. *Studies in Asian Social Science*, 3(1), 1–9.
<https://doi.org/10.5430/sass.v3n1p1>
- Nagamine M., Tsujimura H., Ohue T., Mori Y., & Yamada C. (2025). 看護基礎教育における国際看護学講義及びIT環境の実態：遠隔教育支援システムの開発に向けて *Kango kiso kyouiku ni okeru kokuksaikangogaku kougi oyobi IT kankyou no jittai: Enkaku kyouiku shien shisutemu no kaihatsu ni mukete* [Status of international nursing lectures and IT environment in basic nursing education: Focusing on the development of a remote education support system]. *Journal of Japanese Society for International Nursing*, 8 (2), 1–11.
<https://doi.org/10.57321/jsin.20240518>
- Nagayoshi, K. (2011). Cross-national analysis of the relationship between national identity and social trust: Liberal nationalism reconsidered. 大阪大学大学院人間科学研究科紀要 *Oosaka Daigaku Daigakuin Ningen Kagaku Kenkyuuka Kiyo* [Bulletin of Osaka University Graduate School of Human Sciences], 37, 19–41.
<https://doi.org/10.18910/12374>
- Ogbunugafor, C. B., & Edge, M. D. (2022). *Gattaca* as a lens on contemporary genetics: Marking 25 years into the film's "not-too-distant" future. *Genetics*, 222(4), 1–11.
<https://doi.org/10.1093/genetics/iyac142>
- Statistics Bureau. (2025). 人口推計：2025年（令和7年）8月報 *Jinkou suikei: 2025-Nen (ryowa 7-nen) 8 tsuki-hou* [Population estimates: August 2025 report] [Dataset]. Ministry of Internal Affairs and Communications.
<https://www.stat.go.jp/data/jinsui/index.html>
- Stolt, M., Kottorp, A., & Suhonen, R. (2022). The use and quality of reporting of Rasch analysis in nursing research: A methodological scoping review. *International Journal of Nursing Studies*, 132(104244), 1–15.
<https://doi.org/10.1016/>

j.ijnurstu.2022.104244

Tanaka, J., Nishihara, M., Kanetake, M., Tanaka, M., & Ohnishi, M. (2018). Interest in medical health care for foreign residents among Japanese nursing students in areas of varying ethnic diversity. *Nurse Education Today*, 65, 41–45.

<https://doi.org/10.1016/j.nedt.2018.02.034>

Verdú-Soriano, J., & González-de La Torre, H. (2024). Rasch analysis implementation in nursing research: A methodological approach. *Enfermería Clínica (English Edition)*, 34(6), 493–506.

<https://doi.org/10.1016/j.enfcle.2024.11.009>