

The Impact of Doctors' Social Identity on Patient Trust in Obstetrics and Gynecology: A Quasi-Experimental Study among Javanese Muslim Women

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Abstract. Trust is an important factor for determining the quality of a professional doctor-patient relationship, particularly in the field of Obstetrics and Gynecology (Ob-Gyn), where it is essential for enhancing healthcare services for mothers and babies. Among the various factors influencing the level of trust patients have in medical personnel, their socio-demographic identity is considered very important. Therefore, this study aimed to investigate the influence of a doctor's social identity, including gender, religion, and race, on the level of trust reported by patients. A quasi-experimental design with a $2 \times 2 \times 4$ within-subject repeated measure approach was utilized to conduct the research. The sample consisted of 171 Javanese Muslim women, who were selected using accidental sampling. The participants were presented with sequences of vignettes containing manipulated doctors' profiles based on the three observed aspects of social identity (gender, religion, race), alongside a trust scale specifically designed for assessing trust in doctors. The trust scale comprised four dimensions, namely fidelity (loyalty), competence, honesty, and confidentiality. Data collection was then carried out using the trust scale, and subsequent analysis was performed by employing Bayesian repeated measures ANOVA with JAMOVI 1.6.23.0. The results showed that manipulating the social identity of doctors led to variations in the trust level exhibited by the patients, and this was in support of the proposed alternative hypothesis. Specifically, from the main effect analysis, it was found that gender and religion significantly influenced patients' trust, while race did not. This implied that patients considered gender and religion as important factors when selecting an Ob-Gyn doctor.

Keywords: doctor, patients, quasi-experiment, social identity, trust

Peran Identitas Sosial Dokter terhadap Kepercayaan Pasien: Sebuah Eksperimen Kuasi

Abstrak. Kepercayaan merupakan faktor penting penentu keberhasilan hubungan profesional dokter dan pasien. Kepercayaan terhadap dokter Ob-gyn merupakan aspek penting dalam peningkatan layanan kesehatan pada ibu dan bayi. Identitas sosio-demografis dokter ditengarai merupakan salah satu faktor yang cukup penting dari kepercayaan seorang pasien. Artikel ini bertujuan untuk menginvestigasi pengaruh identitas sosial dokter (i.e., gender, agama dan ras) terhadap kepercayaan pasien. Penelitian kuasi eksperimen dengan desain 2 x 2 x 4 within subject repeated measure dijalankan terhadap perempuan Jawa muslim (N = 171) yang dipilih menggunakan accidental sampling. Sekuens berisikan vignette dan stimuli berisi profil dokter yang dimanipulasi berdasar tiga karakteristik identitas sosial tersebut (gender x agama x ras) disajikan bersama skala kepercayaan terhadap dokter. Data dikumpulkan menggunakan skala kepercayaan terhadap dokter yang memiliki empat aspek yaitu fidelity (loyalitas), kompetensi, kejujuran, dan kerahasiaan. Data dianalisis menggunakan Bayesian Repeated Measure ANOVA melalui software JAMOVI 1.6.23.0. Hasil penelitian menunjukkan bahwa data mendukung hipotesis alternatif; manipulasi pada ketiga identitas sosial dokter tersebut menimbulkan yariasi pada kepercayaan pasien. Analisis efek utama (main effect) menunjukkan hanya gender dan agama yang mempengaruhi kepercayaan pasien, sementara ras dokter tidak. Hal ini mengimplikasikan bahwa identitas sosial gender dan agama merupakan faktor penting yang dipertimbangkan pasien untuk memilih dokter Ob-Gyn.

Kata Kunci: dokter, eksperimen kuasi, identitas sosial, kepercayaan, pasien

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The relationship between patients and doctors is a significant issue in public healthcare services, as it involves the conscious willingness of patients to follow and trust the performance of doctors. This connection extends beyond a solely professional level and includes emotional elements. Similar to any other interpersonal relationship, patient-doctor dynamics are influenced by psychological factors. Therefore, establishing a good relationship can bring about positive outcomes, such as improved clinical results, patients' satisfaction, and overall service quality (Shrivastava et al., 2014).

Building a strong patient-doctor relationship begins with the positive perception of patients toward the quality of the service rendered by doctors. Usually, patients who experience illness desire to see a specific doctor or visit a particular clinic for medical checkups. While there are various factors influencing this decision, one of the most significant is the qualifications of doctors (Weber et al., 2011). Doctors with sufficient qualifications will undoubtedly be selected by many patients. It is also important to note that the level of trust patients have in doctors is influenced by other factors, such as their satisfaction and perception of the quality of health services rendered (Chandra et al, 2019). These two factors are strongly impacted by how efficiently doctors communicate with patients (Chandra et al., 2019).

Trust, in this context, is referred to as the voluntary reliance of an individual on the actions of others. This reliance is based on the

expectation that the other party will act in the best interest of the one placing their trust, even though the ability to monitor and control those actions is not guaranteed (Mayer et al., 1995). Furthermore, trust is an unwavering belief exhibited by patients toward the ability of doctors to act responsibly, competently, and in a trustworthy manner (Hall et al., 2002; Pearson & Raeke, 2000). Skirbekk et al. (2011) defined patients' trust as the willingness of patients to accept the assessment of doctors or health service providers. It is important to note that during consultations, patients tend to place their trust in medical practitioners both professionally and personally. This is usually a result of the fact that they perceive these professionals as health service providers that are capable of addressing their health issues and as individuals who can be trusted with personal information. According to Krot and Rudawska (2016), the level of trust placed by patients in doctors is measured based on three factors, including benevolence, competence, and integrity.

Benevolence refers to trust in the ability of health service providers to show respect and empathy as well as provide detailed explanations of treatments. Competence relates to trust in the expertise of the doctors, which is assessed through their manifested education level, professional knowledge, and diagnostic accuracy. Integrity, on the other hand, reflects the trust level of patients in the dedication and thoroughness of doctors, and this is influenced

by a careful examination of their medical history for accurate diagnosis and treatment (Krot & Rudawska, 2016). Meanwhile, Hall et al. (2002) outlined four aspects of patients' trust in medical personnel, which includes fidelity/ competence, loyalty, honesty, confidentiality. Fidelity/loyalty refers to the trust in the ability of doctors to prioritize the needs of patients and avoid conflicts of interest. Competence encompasses trust in their performance, interpersonal skills, decisionmaking abilities, and error avoidance skills. Honesty, in this context, relates to trust in the ability of these professionals to disclose true conditions and avoid intentional deception. Lastly, confidentiality. This aspect refers to trust in the ability of doctors to appropriately handle confidential information.

Unfortunately, not all patients have a high level of trust in doctors or healthcare institutions in general. This was indicated by the prevalence of shamanic practices commonly known as "alternative medicine" in the community (Ardani, 2016). Furthermore, a significant portion of the community tends to resort to self-medication rather than consulting doctors or health service providers. This trend of has significantly increased from 72.19% in 2019 to 84.23% in 2021 (BPS, 2021b).

Despite Indonesia still having high maternal and infant mortality rates (Nurrizka & Saputra, 2013), around 11% of mothers select not to give birth in official healthcare facilities even in 2021 (BPS, 2021a). This indicated a lack

of trust in healthcare institutions within the community, even for high-risk health cases like childbirth. Wijayanti (2015) supported this observation, stating that the level of trust pregnant women place in traditional birth attendants affected their decision to seek assistance from professional healthcare providers during childbirth.

In the USA, trust in doctors has been on a decline over the past decade, which is primarily influenced by racism and ethnic differences (Armstrong et al., 2007). Considering the high prevalence of racism in America, discrimination by doctors based on skin color is unfortunately very common (Clayborne, 2022). This long-standing discrimination is now starting to have a significant impact, as some patients are beginning to trust doctors based on shared skin color due to unpleasant experiences (Armstrong et al., 2007).

The level of trust patients have for doctors is influenced by various factors, including comfort, identity similarity, personal relationship, communication, approach, economy, and patient's health awareness (Gopichandran, 2019; Gopichandran & Chetlapalli, 2013). Additionally, Brase and Richmond (2004) stated that this trust could also be affected by the type of attire and the gender of doctors.

Cultural differences, language barriers, and varying perceptions also affect the level of trust given to doctors (Kewas & Darmastuti, 2020). Other factors that have

been observed to significantly influence trust involve the healthcare system, health status, education, and financial status, particularly in the context of Obstetrics and Gynecology (Ob-Gyn) (Krajewska-Ku³ak et al., 2011). Following this, pregnant women tend to trust female doctors more, except in cases where they already have knowledge of the competence level of male doctors prior to their visit to the health center for the first time (Tejena et al., 2017). The dynamics of patients' trust in doctors can also be seen from the perspective of in-group versus out-group trust. In this study, it was assumed that patients who are unfamiliar with, and unaware of the competence level of a doctor are still more likely to trust the medical personnel if they both belong to the same group. This assumption is supported by previous studies such as (Alecu, 2020; Kretschmer & Leszczensky, 2022).

This study aims to explore the impact of the social identity of doctors, specifically gender, race, and religion, on the level of trust exhibited by patients. Previous studies primarily focused on satisfaction with service quality, overlooking the influence of social identity on trust in doctors (Rusandy, 2016; Sediawan, 2022). Therefore, understanding the effect of these factors on the level of trust exhibited by patients in Obstetrics and Gynecology (Ob-Gyn) doctors is crucial for addressing the high maternal and infant mortality rate in Indonesia. This is very important because the level of trust

given to medical practitioners (and other health workers) by mothers significantly influences their decisions regarding delivery assistance (Wijayanti, 2015).

Existing study have established that the gender (Brase & Richmond, 2004) and religion (Benjamins, 2006; Magyar-Russell, 2008) of doctors are major influencial factors of patients' trust. Another relevant influential factor of trust in Indonesia is race. This is due to the fact that the Indonesian community tends to idolize white-skinned and discriminate against blackskinned individuals, as observed in various contexts such as television advertisements (Umarela et al., 2020), fashion product advertisements (Tirahmawan et al., 2021), racist language expressed by university leaders in Indonesia (Gultom, 2022), socio-cultural conditions depicted in a novel about the Indonesian community (Solihah & Dienaputra, 2018), and beauty product advertisements (Arwanda et al., 2021; Satria & Junaedi, 2022). The purpose of this study was to examine the possibility of similar tendencies existing within the healthcare field. To achieve this, a quasiexperiment study design was employed, allowing for the manipulation of the social identity of doctors and examining whether such manipulations lead to differences in trust levels. The proposed hypotheses are as follows:

Ha1 = Gender, race, and religion of
doctors have an effect on patients' trust

Ha2 = Each variable has an effect on patients' trust.

Method

Participants

A total of 171 Muslim Javanese women (N = 171) voluntarily participated in this study. The sample was selected using purposive sampling, with the target audience being Muslim women between the ages of 20 and 40 years who identified themselves as Javanese. The characteristics of gender, race, and religion

were specified in order to effectively examine the effects of social identity on the participants. Additionally, the selected age range was based on the consideration that pregnancies outside this range were associated with higher risks, as suggested by Cavazos-Rehg et al. (2015). The final inclusion criterion was a minimum education level of Senior High School or Diploma 3.

Table 1Participants' Demographic Information

Baseline Characteristic	n	%
Educational Background		
Undergraduate/Graduate Program	45	26.3
Senior High School	126	73.7
Marital status		
Married	48	28.1
Single	123	71.9
Insurance used		
BPJS	115	67.3
Non-BPJS	56	32.7

Note. N = 171

The required sample size for this study was calculated using G*Power, a widely used statistical analysis tool that aids in determining the necessary sample size for inferential statistical analysis. This tool is particularly helpful when the population size is unknown. G*power was used not only to estimate the sample size but also to calculate statistical power and effect size across various statistical analysis techniques (Faul et al., 2009). To determine the optimal sample size, several parameters were considered, including the effect size (f = .10), power (1- \hat{a} = .95), and the correlation among measurements = .30. By taking these factors into account, the estimated

required sample size for the study was determined to be n = 123.

Study design

This study employed an online quasiexperiment with a 2 x 2 x 4 within-subject repeated measure design, which fell under the category of time series design (McCleary et al., 2017). Three independent variables were examined, including the gender (male and female), religion (Muslim and non-Muslim), and race (Javanese, Chinese, White Skin, and Black Skin) of doctors. Meanwhile, the dependent variable analyzed was patients' trust in doctors. The following is an illustration detailing the experimental design used in this study.

$$\begin{array}{c} X_{1} \ O_{1} \ X_{2} O_{2} X_{3} \ O_{3} \ X_{4} \ O_{4} \ X_{5} \ O_{5} \ X_{6} \ O_{6} \ X_{7} \ O_{7} \ X_{8} \\ O_{9} \ X_{10} \ O_{10} \ X_{11} \ O_{11} \ X_{12} \ O_{12} \ X_{13} \ O_{13} \ X_{14} \ O_{14} \ X_{15} \ O_{15} \\ X_{16} \ O_{16} \end{array}$$

Stimuli

The participants in this study were presented with stimuli consisting of a profile of an Ob-Gyn doctor. The profile included a smiling headshot photo measuring 16 R with a blue background, accompanied by various informative details relevant to prospective patients. The manipulation in this experiment involved variations in the social identity of doctors, specifically related to gender, race, and

religion. To indicate gender, profile photos of both male and female doctors were used. Meanwhile, information about the religion of each doctor was specified in their respective profile, along with specific cues, such as a hijab for female doctors. Distinctive names and profile photos of males and females associated with and representing particular races were used to signify the race of the doctors. Other information, such as educational and training background, work experience, and ratings or assessments from previous patients, was made the same, thereby serving as the confounding variables. An example of the stimuli provided in this study is as follows.

Figure 1
Stimuli of a doctor's profile with the identity of a Javanese Muslim woman



Data collection technique

Patients' trust in doctors refers to the sense of assurance exhibited by patients towards the fact that doctors will act in their best interest, as highlighted by (Hall et al., 2002). To measure this construct, a trust scale

consisting of 4 distinct aspects, which include fidelity, competence, honesty, and confidentiality, was used. Fidelity was measured by statements such as "I completely trust this doctors' decisions regarding my pregnancy care," while competence was gauged

by assessing the perception of the capability of the doctor in handling pregnancy-related issues. The aspect of honesty focused on trust in doctors' transparency, even in the event of unintentional mistakes during pregnancy management. Lastly, confidentiality addressed the level of comfort exhibited by patients in disclosing all pertinent information regarding their pregnancy condition to the medical personnel. The scale comprised a total number of four items, considering the substantial number of treatments involved (16), and in order to avoid subject fatigue, it was deemed necessary to keep the number of items manageable. This trust scale was presented using a Likert scale format, offering the following response options, Strongly Inappropriate (1), Inappropriate (2), Neutral (3), Appropriate (4), and Strongly Appropriate (5). Regarding the reliability of the trust scale, Cronbach's alpha coefficient (á) exceeded .800 for each of the 16 stimuli employed. Furthermore, the face validity of the trust scale was established in consultation with experts, resulting in relevant outcomes that did not necessitate any revisions.

Study procedure

An online experimental study was conducted using Google Forms to collect data. This study included carefully crafted scenarios known as vignettes (Aguinis & Bradley, 2014), 16 sets of stimuli, and a trust scale towards doctors. A total of 2 Google Forms links were

created, containing different sequences of stimuli to prevent any potential sequential effects (Zeelenberg & Pecher, 2015). These links were then combined using allocate.monster, ensuring that participants clicking on the link would be randomly directed to one of the prepared Google Forms. Before encountering the stimuli and trust scale, participants were presented with study instructions and an informed consent form. They were also asked to indicate their willingness to participate in the study. Furthermore, the participants were requested to provide demographic information such as gender, race, religion, age, educational background, insurance used, and telephone number (specifically for participants willing to participate in the prize draw).

In addition to the collection of this information, participants were then presented with the following scenario:

"You are a newlywed who got married 3 months ago. This morning, you found out that you were pregnant. In your quest for the best possible care for your child, you decided to visit an obstetrics and gynecology (Ob-Gyn) doctor. While browsing the website of a private hospital, you came across the following doctor's profile."

Each participants were presented with the profile of doctors containing essential information such as name, age, educational background, religion, years of experience, expertise, and ratings given by previous patients. All conditions were identical except for variations in the name, gender, photo, and religion of doctors for all 16 profiles available. Furthermore, to ensure control over potentially confounding variables, the size, color, and layout of all stimuli were standardized. After reviewing the presented profiles, the participants were then asked to answer four questions pertaining to their perception of trust toward the doctor shown in the profile each of them assessed.

Data analysis technique

The data obtained from this study were processed using Jamovi software version 1.6.23.0, and given that the residual data distribution did not meet the normality criteria, a Bayesian Repeated Measure ANOVA was employed as the data analysis technique. The use of this technique was advantageous as it

e of this technique was advantageous as it **Table 2**

General description of patients' trust in a doctor

did not require the assumption of normal data distribution but offered several benefits. These advantages include the avoidance of p-values reliant on null hypothesis falsification, the provision of stronger evidence for rejecting the null hypothesis, reduced susceptibility to sample size contamination, and the ability to generate relative validity of two hypotheses based on field-acquired data (Nathoo & Masson, 2016).

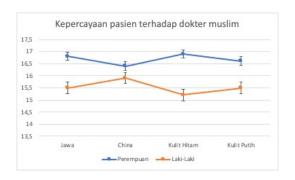
Results

This study aimed to investigate the impact of the social identity of doctors on the level of trust exhibited by patients. The results of the conducted descriptive statistical analysis were presented in Table 2 and Figure 2 below.

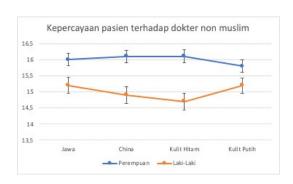
	I	Male	Female		
Race	Muslim	Non-Muslim	Muslim	Non-Muslim	
	М	SD	М	SD	
Javanese	15.5	3.04	16.8	2.24	
	15.2	3.24	16.0	2.48	
Chinese	15.9	3.03	16.4	2.28	
	14.9	3.36	16.1	2.51	
Black Skin	15.2	3.09	16.9	2.39	
	14.7	3.36	16.1	2.59	
White Skin	15.5	3.15	16.6	2.39	
	15.2	3.19	15.8	2.67	

Note. M = Mean of Trust, N = 171

Figur 2The patients' trust level based on the characteristics of doctors' social identity



From Table 2 and Figure 2 above, interesting patterns in the trust level of participants towards different doctors' identities can be observed. The highest levels of trust were found for a Black Muslim female doctor (M =16.9, SD = 2.39) and a Javanese Muslim female doctor (M = 16.8, SD = 2.24). Conversely, the lowest trust level was reported for a non-Muslim Black male doctor (M = 14.7, SD = 3.36) and a non-Muslim Chinese male doctor (M =14.9, SD = 3.36). The scatterplot diagram above also showed that participants generally exhibited higher levels of trust in female doctors compared to males, regardless of their religion and race. Additionally, this trend of higher trust levels in Muslim doctors compared to non-Muslim doctors was also evident.



To determine the level of support for the alternative hypothesis compared to the null hypothesis, a Bayesian Repeated Measure ANOVA with a 2 x 2 x 4 design was conducted. The analysis employed the Bayes Factor, which allowed for the calculation of the relative predictive performance of the two competing hypotheses and indicated the degree of fit between the data and the supported hypothesis (van Doorn et al., 2021). Specifically, BF₁₀ was used to determine whether the data supported the alternative over the null hypotheses (Wagenmakers et al., 2018). It is important to note that the range of BF₁₀ spans from 0 to ", where a larger BF₁₀ indicates stronger support for the alternative hypothesis in describing the data. A value of $BF_{10} = 1$ signifies equal support for both hypotheses based on the data (van Doorn et al., 2021; Wagenmakers et al., 2018).

 Table 3

 Analysis results using Bayesian Repeated Measure ANOVA

Models	P(M)	P(M data)	BF_{M}	BF ₁₀	error %
Null model (incl. subject)	.0526	1.06e-80	1.90e-79	1.00000	
Gender	.0526	4.08e-21	7.35e-20	3.87e+59	0.924
Race	.0526	2.04e-83	3.67e-82	0.00193	0.604
Gender + Race	.0526	9.03e-24	1.62e-22	8.55e+56	1.292
Gender + Race + Gender ≯ Race	.0526	6.82e-23	1.23e-21	6.45e+57	24.323
Religion	.0526	1.15e-62	2.06e-61	1.09e+18	1.257
Gender + Religion	.0526	0.88052	132.64982	8.34e+79	3.935
Race + Religion	.0526	2.24e-65	4.03e-64	2.12e+15	1.433
Gender + Race + Religion	.0526	0.00208	0.03743	1.96e+77	2.988
Gender + Race + Gender * Race + Religion	.0526	0.01712	0.31351	1.62e+78	8.940
Gender + Religion + Gender * Religion	.0526	0.09797	1.95502	9.28e+78	2.718
Gender + Race + Religion + Gender * Religion	.0526	2.29e0-4	0.00412	2.17e+76	3.349
Gender + Race + Gender * Race + Religion + Gender * Religion	.0526	0.00185	0.03330	1.75e+77	5.396
Race + Religion + Race * Religion	.0526	5.44e-68	9.79e-67	5.15e+12	1.281
Gender + Race + Religion + Race * Religion	.0526	4.79e0-6	8.62e0-5	4.53e+74	2.031
Gender + Race + Gender * Race + Religion + Race * Religion	.0526	4.36e0-5	7.86e0-4	4.13e+75	8.570
Gender + Race + Religion + Gender * Religion + Race * Religion	.0526	5.58e0-7	1.00e0-5	5.28e+73	3.036
Gender + Race + Gender * Race + Religion + Gender * Religion + Race * Religion	.0526	6.33e0-6	1.14e0-4	6.00e+74	28.824
Gender + Race + Gender * Race + Religion + Gender * Religion + Race * Religion + Gender * Race * Religion	.0526	1.86e0-4	0.00335	1.76e+76	3.175

Note. All models include a subject.

Based on the analysis, the Bayesian Factor (BF₁₀) for the interaction between the gender, race, and religion of doctors generally indicated stronger support for the alternative hypothesis (BF₁₀ = 1.96×10^{77}). This shows that all three factors had a significant

influence on patients' trust level in a doctor. Specifically, gender (BF $_{10}$ = 3.87 x 10 59) and religion (BF $_{10}$ = 1.09 x 10 18) showed strong support for the alternative hypothesis, while race (BF $_{10}$ < 1) did not have a significant effect on trust level.

From the analysis, it is evident that participants exhibited a higher trust level toward female Ob-Gyn doctors compared to the males. In terms of religion, they showed a preference for Muslim doctors over non-Muslim. However, gender showed a larger effect size, indicating that even when comparing doctors of the same religion (Muslim), participants had lower trust in male doctors compared to females (see Figure 2). This pattern was consistent across all manipulated races in this study.

Discussion

The aim of this study was to examine the impact of three social identity characteristics (gender, race, and religion) on patients' trust in an Ob-Gyn doctor. The Ob-Gyn setting was selected due to its homogeneous patients' population (i.e., female), which allowed for better control of potential confounders. To ensure consistency, the characteristics of the observed doctor profiles were standardized. The manipulation was conducted visually by presenting the profile stimuli of the medical personnel with modified information regarding the aforementioned identity characteristics to the participants.

In this study, the perceptions of the participants towards the competence of the Ob-Gyn doctors were controlled by matching information regarding expertise and years of experience across the profiles. This ensures that the displayed profiles represent unfamiliar individuals with variations only in their social

identity characteristics. Participants were asked to identify the identity of doctors, including their membership in the same or different groups based on gender, religion, and race. Interestingly female participants with a Javanese and Muslim background tended to base their trust on the group affiliation of gender and religion alone, while race was found to be a less influential factor.

These findings are in line with previous studies, where it was indicated that shared identity, including gender, influences the perception and trust level of patients in doctors (Brase & Richmond, 2004; Gopichandran, 2019; Gopichandran & Chetlapalli, 2013). Specifically, the results support the findings of Tejena et al. (2017), who observed that female patients tend to prefer a female Ob-Gyn doctors during their initial visits. It is, however, important to note that this preference may change once patients acquire knowledge about the competence of a male doctor.

The effect of gender and religion on the level of trust exhibited by the participants also aligns with previous studies regarding in-group trust among Muslim women. In a study conducted by (Kretschmer & Leszczensky, 2022), it was found that Muslim female students tend to have a stronger in-group bias, leading to lower trust in individuals outside their group. Following this, men are usually perceived as out-group members regardless of their religion, and this is because of the limited relationship pattern between men and women in Islam, such

as the rules regarding mahram. Hassan et al. (2019) further stated that Muslim women consistently associated their childbirth experiences with religion. Therefore, it is understandable that these women prefer to be accompanied by doctors whose religious identity does not impose interaction boundaries.

This study also provides evidence that the hypothesis suggesting an effect of race on trust in doctors (Ob-Gyn) is not supported by the data. These results were in alignment with Alecu (2020), who examined the impacts of race and gender on the level of trust attracted by doctors in Norway. Despite the significant geographical and cultural differences between Norway and Indonesia, both studies yielded similar results. Gender was found to significantly affect patients' trust in a doctor, while race did not. However, these findings were specific to the majority group. This is because when the study was conducted among minority groups (immigrants), contrasting results were obtained.

The participants in this study belong to the majority race group in Indonesia (Javanese). Therefore, the limited effect of doctors' race on the trust level of the participants may be attributed to their position as the majority group. In Indonesia, this group rarely experiences discrimination or unfair treatment. According to Foddy et al. (2009), unfair treatment has a stronger impact on trust in strangers than positive prejudice. Therefore, it can be inferred that the lack of experience with unfair treatment exhibited by the

participants was based on their race background, and this may explain why the patients' trust in doctors was not affected by race.

The findings of this study are expected to provide initial insights into how the level of trust exhibited by patients in doctors is shaped by socio-demographic factors. Considering the fact that experimental studies investigating patients' perceptions of health service providers in Indonesia are still limited, these results are anticipated to stimulate the emergence of similar studies in the future. Meanwhile, this study is limited to several factors, firstly, the analysis was conducted on a single group of subjects, which might introduce certain biases. Although counterbalancing techniques were employed to address this limitation, future studies could benefit from incorporating randomization and control groups to enhance the robustness of the findings.

Secondly, the experiment was conducted online, meaning that some confounding variables might not be fully controlled. The use of online data collection diminished the role of investigators in observing the behaviors of the participants during response. To mitigate these limitations, future studies should implement strict inclusion criteria and minimized scale size. Alternatively, this impact can be better controlled if the experiment is conducted offline, preferably in a psychology laboratory, to enhance internal validity.

Conclusion

In conclusion, this study was conducted to examine the impact of the social identity, specifically gender, religion, and race of doctors on the level of trust exhibited by patients. To achieve this objective, a quasi-experimental within-subject repeated measure design was employed, and the obtained results showed that social identity affected patients' trust. However, the main effect analyses for each variable showed that the race of doctors did not have a significant impact on patients' trust level, unlike gender and religion.

Suggestion

Several suggestions were proposed for future studies in this area. Firstly, the theme of trust in doctors can be further explored and linked to broader variables. While this study only focused on gender, race, and religion as social identity factors, other characteristics, such as the education level and economic status of the patients, may also affect trust in doctors. Therefore, future studies should consider incorporating these additional variables to gain a more comprehensible understanding of the perspective of patients on social identity and its impact on trust.

Secondly, it is advisable to conduct the experiment in a laboratory setting or utilize tools that allow for randomization. This was suggested because a laboratory experiment setting has been found to enhance content validity, while randomization strengthens the

argument of the causal relationship between the independent and dependent variables rather than mere associational relationships.

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References

- Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational Research Methods*, 17(4), 351–371. https://doi.org/10.1177/1094428114547952
- Alecu, A. I. (2020). Which doctors do we trust? A vignette experiment of how gender and ethnicity influence trust. *Ethnicities*, 20(5), 939–958. https://doi.org/10.1177/1468796819877737
- Ardani, I. (2016). Eksistensi dukun dalam era dokter spesialis. *Lakon/: Jurnal Kajian Sastra Dan Budaya*, *2*(1), 21-26. https://doi.org/10.20473/lakon.v2i1.1913
- Armstrong, K., Ravenell, K. L., McMurphy, S., & Putt, M. (2007). Racial/ethnic differences in physician distrust in the United States. *American Journal of Public Health*, *97*(7), 1283–1289. https://doi.org/10.2105/AJPH.2005.080762
- Arwanda, D., Wulandari, E. A., & Padma Saputra, M. R. (2021). Putih yang ideal: Representasi warna kulit perempuan dalam iklan kosmetik Vaseline Insta Fair tahun 2013. *Jurnal Audiens*, *3*(1), 48–60. https://doi.org/10.18196/jas.v3i1.11769
- Benjamins, M. R. (2006). Religious influences on trust in physicians and the health care system. *The International Journal of Psychiatry in Medicine*, *36*(1), 69–83.

- https://doi.org/10.2190/EKJ2-BCCT-8LT4-K01W
- BPS. (2021a). Persentase penduduk yang mengobati sendiri selama sebulan terakhir (persen) 2019-2021. https://www.bps.go.id/indicator/30/1974/1/persentase-penduduk-yang-mengobati-sendiri-selama-sebulan-terakhir.html
- BPS. (2021b). Persentase perempuan pernah kawin berusia15-49 tahun yang proses melahirkan terakhirnya di fasilitas kesehatan menurut provinsi (persen) 2019-2021. https://www.bps.go.id/indicator/30/1345/1/persentase-perempuan-pernah-kawin-berusia-15-49-tahun-yang-proses-kelahiran-terakhirnya-ditolong-oleh-tenaga-kesehatan-terlatih-menurut-provinsi.html
- Brase, G. L., & Richmond, J. (2004). The white-coat effect: Physician attire and perceived authority, friendliness, and attractiveness. *Journal of Applied Social Psychology*, 34(12), 2469–2481. https://doi.org/10.1111/j.1559-1816.2004.tb01987.x
- Cavazos-Rehg, P. A., Krauss, M. J., Spitznagel, E. L., Bommarito, K., Madden, T., Olsen, M. A., Subramaniam, H., Peipert, J. F., & Bierut, L. J. (2015). Maternal age and risk of labor and delivery complications. *Maternal and Child Health Journal*, 19(6), 1202–1211. https://doi.org/10.1007/s10995-014-1624-7
- Chandra, S., Ward, P., & Mohammadnezhad, M. (2019). Factors associated with patient satisfaction in outpatient department of suva sub-divisional health center, Fiji, 2018: A mixed method study. Frontiers in Public Health, 7. https://doi.org/10.3389/fpubh.2019.00183
- Clayborne, E. P. (2022). Racism, not race: A physician perspective on anti black racism in America. *Hastings Center Report*, *52*(S1). https://doi.org/10.1002/hast1365
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using

- G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149
- Foddy, M., Platow, M. J., & Yamagishi, T. (2009). Group-based trust in strangers. Psychological Science, 20(4), 419–422. https://doi.org/10.1111/j.1467-9280.2009.02312.x
- Gopichandran, V. (2019). Trust, trustworthiness and the physician–patient relationship in developing healthcare settings. In V. Gopichandran, Dynamics of Trust in Doctor-Patient Relationship in India (pp. 83–87). https://doi.org/10.1007/978-981-15-0346-7_7
- Gopichandran, V., & Chetlapalli, S. K. (2013). Factors influencing trust in doctors: A community segmentation strategy for quality improvement in healthcare. *BMJ Open, 3*(12), e004115. https://doi.org/10.1136/bmjopen-2013-004115
- Gultom, A. F. (2022). Bahasa rasis pemimpin perguruan tinggi dalam paradigma historis Eddie Cole. *Metahumaniora*, 12(2), 181-187. https://doi.org/10.24198/metahumaniora.v12i2.38682
- Hall, M. A., Zheng, B., Dugan, E., Camacho, F., Kidd, K. E., Mishra, A., & Balkrishnan, R. (2002). Measuring patients' trust in their primary care providers. *Medical Care Research and Review*, 59(3), 293–318. https://doi.org/1077558702059003004
- Hassan, S. M., Leavey, C., & Rooney, J. S. (2019). Exploring English speaking Muslim women's first-time maternity experiences: A qualitative longitudinal interview study. *BMC Pregnancy and Childbirth*, 19, 156. https://doi.org/10.1186/s12884-019-2302-y
- Kewas, G. S., & Darmastuti, R. (2020). Strategi komunikasi antar budaya dokter kepada pasien dalam proses pelayanan kesehatan RSU Raffa Majenang. *Scriptura*, *10*(2), 60–76. https://doi.org/10.9744/scriptura.10.2.60-76

- Krajewska-Ku³ak, E., Chilicka, M., Ku³ak, W., Adraniotis, J., Chadzopulu, A., & Rozwadowska, E. (2011). Assessment of physician-patient trust in the obstetrics and gynecology departments in Poland and Greece. *Ginekologia Polska*, 82, 905–910.
- Kretschmer, D., & Leszczensky, L. (2022). Ingroup bias or out-group reluctance? The interplay of gender and religion in creating religious friendship segregation among Muslim youth. *Social Forces*, 100(3), 1307–1332. https://doi.org/10.1093/sf/soab029
- Krot, K., & Rudawska, I. (2016). The role of trust in doctor-patient relationship: Qualitative evaluation of online feedback from polish patients. *Economics and Sociology*, *9*(3), 76–88. https://doi.org/10.14254/2071-789X.2016/9-3/7
- Magyar-Russell, G. (2008). Ophthalmology patients' religious and spiritual beliefs. *Archives of Ophthalmology*, 126(9), 1262-1265. https://doi.org/10.1001/archopht.126.9.1262
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), 709-734. https://doi.org/10.2307/258792
- McCleary, R., McDowall, D., & Bartos, B. (2017). Design and analysis of time series experiments (Vol. 1). Oxford University Press. https://doi.org/10.1093/oso/ 9780190661557.001.0001
- Nathoo, F.S., & Masson, M. E. J. (2016). Bayesian alternatives to null-hypothesis significance testing for repeated-measures designs. *Journal of Mathematical Psychology*, 72, 144–157. https://doi.org/10.1016/j.jmp.2015.03.003
- Nurrizka, R. H., & Saputra, W. (2013). Arah dan strategi kebijakan penurunan Angka Kematian Ibu (AKI), Angka Kematian Bayi (AKB) dan Angka Kematian Balita (AKABA) di Indonesia. Perkumpulan

- PRAKARSA. https://repository.theprakarsa.org/media/publications/671-arah-dan-strategi-kebijakan-penurunan-an-e728aeb3.pdf
- Pearson, S. D., & Raeke, L. H. (2000). Patients' trust in physicians: Many theories, few measures, and little data. *Journal of General Internal Medicine*, 15(7), 509–513. https://doi.org/10.1046/j.1525-1497.2000.11002.x
- Shrivastava, S. R., Shrivastava, P. S., & Ramasamy, J. (2014). Exploring the doctor-patient relationship in clinical practice in hospital settings. *International Journal of Health Policy and Management*, *2*(4), 159–160. https://doi.org/10.15171/ijhpm.2014.40
- Rusandy, D. S. (2016). Pengaruh kualitas pelayanan dan kepercayaan terhadap kepuasan pasien rawat inap. *Jurnal Manajemen dan Kewirausahaan, 3*(1), 1–15. https://ejournal.uniskakediri.ac.id/index.php/ManajemenKewirausahaan/article/view/244
- Satria, G. D., & Junaedi, F. (2022). Representasi kecantikan perempuan dalam iklan Garnier Sakura White dan Wardah White Secret Komuniti/: Jurnal Komunikasi dan Teknologi Informasi, 14(1), 93–119. https://doi.org/10.23917/komuniti.v14i1.17753
- Sediawan, M. L. (2022). Kepercayaan pasien terhadap layanan kesehatan suatu studi tinjauan sistematis. *Jurnal Ilmiah Kesehatan Media Husada*, 11(1), 71–83. https://doi.org/10.33475/jikmh.v11i1.283
- Skirbekk, H., Middelthon, A.-L., Hjortdahl, P., & Finset, A. (2011). Mandates of trust in the doctor-patient relationship. *Qualitative Health Research*, *21*(9), 1182–1190. https://doi.org/10.1177/1049732311405685
- Solihah, N., & Dienaputra, R. D. (2018). Diskriminasi ras dalam novel Sunda Sripanggung karya Tjaraka: Analisis

- dekonstruksi Derrida. *Patanjala: Jurnal Penelitian Sejarah dan Budaya*, *10*(3), 507-522. https://doi.org/10.30959/patanjala.v10i3.397
- Tejena, N., Aprodita, N. P., Nuranti, K., & Iskandarsyah, A. (2017). Perbedaan sikap ibu hamil terhadap dokter kandungan pria dan wanita. *Journal of Psychological Science and Profession*, 1(3). 21-25. https://doi.org/10.24198/jpsp.v1i3.15231
- Tirahmawan, J., Melody, B. A. L., & Ahly, M. N. N. (2021). Rasisme terhadap kulit hitam dalam iklan H&M. *Jurnal Audiens*, *2*(1), 18-25. https://doi.org/10.18196/jas.v2i1.8708
- Umarela, F. H., Dwityas, N. A., & Zahra, D. R. (2020). Representasi ideologi supremasi kulit putih dalam iklan televisi. *ProTVF*, 4(1), 64-84. https://doi.org/10.24198/ptvf.v4i1.25172
- van Doorn, J., van den Bergh, D., Böhm, U., Dablander, F., Derks, K., Draws, T., Etz, A., Evans, N. J., Gronau, Q. F., Haaf, J. M., Hinne, M., Kucharský, Š., Ly, A., Marsman, M., Matzke, D., Gupta, A. R. K. N., Sarafoglou, A., Stefan, A., Voelkel, J. G., & Wagenmakers, E.-J. (2021). The JASP guidelines for conducting and reporting a Bayesian analysis. *Psychonomic Bulletin and Review*, *28*(3), 813–826. https://doi.org/10.3758/s13423-020-01798-5
- Wagenmakers, E.-J., Love, J., Marsman, M., Jamil, T., Ly, A., Verhagen, J., Selker, R., Gronau,

- Q. F., Dropmann, D., Boutin, B., Meerhoff, F., Knight, P., Raj, A., van Kesteren, E.-J., van Doorn, J., Šmíra, M., Epskamp, S., Etz, A., Matzke, D., ... Morey, R. D. (2018). Bayesian inference for psychology. Part II: Example applications with JASP. *Psychonomic Bulletin and Review*, *25*(1), 58–76. https://doi.org/10.3758/s13423-017-1323-7
- Weber, A. S., Verjee, M. A., Musson, D., Iqbal, N. A., Mosleh, T. M., Zainel, A. A., & Al-Salamy, Y. (2011). Patient opinion of the doctorpatient relationship in a public hospital in Qatar. *Saudi Medical Journal*, *32*(3), 293–299. https://doi.org/10.5339/qfarf.2010.BMP14
- Wijayanti, H. N. (2015). Hubungan tingkat kepercayaan ibu hamil terhadap kemampuan dukun bayi dengan pemilihan jenis tenaga penolong persalinan di Puskesmas Bancak Kecamatan Bancak Kabupaten Semarang. Medika Respati: Jurnal Ilmiah Kesehatan, 10(3), 1-10.
- Zeelenberg, R., & Pecher, D. (2015). A method for simultaneously counterbalancing condition order and assignment of stimulus materials to conditions. *Behavior Research Methods*, 47(1), 127–133. https://doi.org/10.3758/s13428-014-0476-9

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