

The Psycholinguistics of Belonging: Experimental Insights into Language, Identity, and Social Anxiety

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Abstract

Urban life is challenging, with competing identities, feelings, and social ties in multilingual urban communities. The study aims to investigate the effects of inclusive versus exclusive language on feelings of belonging and social anxiety, and the role of linguistic identity in mediating these associations. 120 young urban Indonesian participants were recruited and randomly assigned to one of three conditions manipulating narratives and audiovisual stimuli with linguistic forms (inclusive, exclusive, neutral). Measures included the Sense of Belonging Instrument, the Language Identity Scale, and the Liebowitz Social Anxiety Scale. Analysis revealed a significant increase in sense of belonging ($F(2,117) = 718.735, p < 0.001$) and a strong decrease in social anxiety (Welch ANOVA = 4088.34, $p < 0.001$) with exposure to inclusive language. A strong negative correlation was found between linguistic identity and social anxiety ($r = -0.966, p < 0.001$). These findings support the idea that language is more than just a communication tool, but rather a powerful mechanism for shaping social attachment. These findings provide avenues for the practical application of affirmative linguistic interventions in settings such as education, mental health, and diversity management, as well as broadening theoretical insights into the fields of affective psycholinguistics and social identity.

Keywords

Identity, language, psycholinguistics of belonging, social anxiety, urban communities

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La Psicolingüística de la Pertenencia: Reflexiones Experimentales sobre el Lenguaje, la Identidad y la Ansiedad Social

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Resumen

La vida urbana presenta desafíos en comunidades multilingües con identidades y sentimientos contrapuestos. Este estudio investiga los efectos del lenguaje inclusivo frente al exclusivo en el sentido de pertenencia y la ansiedad social, así como el papel mediador de la identidad lingüística. Se reclutaron 120 jóvenes urbanos indonesios, asignados aleatoriamente a condiciones de exposición lingüística (inclusiva, exclusiva, neutra) a través de narraciones y estímulos audiovisuales. Se utilizaron el Instrumento de Sentido de Pertenencia, la Escala de Identidad Lingüística y la Escala de Ansiedad Social de Liebowitz. El análisis mostró que el lenguaje inclusivo incrementó significativamente el sentimiento de pertenencia ($F(2,117) = 718,735, p < 0,001$) y redujo la ansiedad social (Welch ANOVA = 4088,34, $p < 0,001$). Además, se encontró una fuerte correlación negativa entre identidad lingüística y ansiedad social ($r = -0,966, p < 0,001$). Estos resultados confirman que el lenguaje no solo comunica, sino que también modela el apego social, sugiriendo aplicaciones prácticas en educación, salud mental y gestión de la diversidad, y contribuyendo al avance teórico en psicolingüística afectiva e identidad social.

Palabras clave

Identidad, lengua, psicolingüística de la pertenencia, ansiedad social, comunidades urbanas.

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Introduction

In the context of multilingual urban communities, there are complex dynamics between language, identity, and mental health (Fisher et al., 2024; Guarín, 2024; Liu, 2025; Siebenhütter, 2023; Straw & Callison-Burch, 2020; Uban et al., 2021; Xu et al., 2024). The ability to communicate competently in the dominant language of the local population is essential for positive social interaction; lack of this ability has long been associated with multiple psychosocial problems and is a major contributor to social marginalization (Adeyeye, 2024; Brandt et al., 2022; Burholt et al., 2020; Nyqvist et al., 2021). Language itself touches on issues of identity: it is the mortar that binds speakers together around the world (Alsaahafi, 2022; Dos Santos, 2021; Nasrullah, 2025). This means that language is more than a means of communication, it is part of the construction of an individual's and a group/culture's identity. Depending on where a person belongs, this linguistic attachment can make them different from one city to another. A sense of belonging is a basic human need that has a direct impact on psychological well-being (Allen et al., 2021). Individuals who are able to communicate competently in the dominant language and experience social inclusion are more likely to develop positive social relationships and better mental health (Allen et al., 2021).

In this light, inclusive versus exclusive language is a key component that can create or undermine belonging in pluralistic communities (Nasrullah et al., 2019; 2024; Subandiyah et al., 2024). Inclusive language - e.g., addressing individuals or groups in greetings, talking about our narratives - is thought to increase feelings of acceptance and belonging to the group (Kubota et al., 2022; Legault & Sago, 2022; Neel et al., 2023; Ortega-Sánchez et al., 2021). On the other hand, exclusive or ostracizing language can quietly exert the alienating effect. A classic study by Stout and Dasgupta (2011) found that generic, masculine, gender-exclusive language used in professional settings made female participants feel excluded and lowered their sense of belonging and motivation compared to the use of inclusive language.

In this study, inclusive language is operationalized as verbal expressions that explicitly recognize, acknowledge, and positively portray diverse social identities, group memberships, or personal attributes to convey social acceptance and psychological inclusion (e.g., inclusive greetings, neutral or affirming pronouns and collective framing “we”/“our”). In contrast, exclusive language is speaking style that implicitly or explicitly marginalizes, ignores or hierarchizes certain identities or groups perpetuating social distance and exclusion (e.g., generic masculine forms, discriminatory labels like handicapped individuals versus people with disabilities, minority omission). Social anxiety refers to a persistent fear of negative evaluation, social scrutiny, or embarrassment in social or performance situations, often accompanied by behavioral avoidance and heightened physiological arousal. These operational definitions informed the construction of the experimental materials and language manipulation tasks.

Exposure to terms that do not accommodate the identity of the listener (e.g. using only the pronominal “he” for all genders) was shown to trigger biased perceptions of the environment and decreased self-identification with the community (Stout & Dasgupta, 2011). These findings confirm the phenomenon that word choice can have a psychological impact: non-inclusive language sends a “you don't belong” signal, whereas inclusive language reinforces a

signal of acceptance. However, the literature so far has focused mostly on specific contexts (such as gender bias in the workplace) and has not explored how exposure to inclusive/exclusive language affects the sense of belonging and mental health in urban environments more broadly. While previous research into inclusive and exclusive language has largely focused on inclusion/exclusion in specific contexts (e.g., as a function of professional gender bias), there is only minimal quantitative experimental work examining systematically how exposure to inclusive -versus- exclusive language affects sense of belonging and social anxiety concurrently, particularly in urban settings with high levels of diversity.

Another crucial aspect is an individual's linguistic identity and its relationship with social anxiety. Linguistic identity refers to a person's attachment or pride in the language they speak (e.g. mother tongue, dialect, or accent) that is part of who they are. In multicultural urban communities, language is often a marker of ingroup/outgroup, so differences in language or accent can lead to stigma. Recent research on accent stigma shows that speakers with non-dominant accents often face prejudice and discriminatory treatment that undermine their feelings of acceptance (Yan, 2024). Accent stigma has serious implications: individuals who experience language/accent-based discrimination report psychological distress in the form of fear, shame, anxiety, social isolation, and loss of belonging (Yan, 2024). In fact, victims of language stigma often experience identity threats, decreased self-efficacy, and social withdrawal. These are key characteristics of social anxiety, where individuals feel watched, negatively judged or unwelcome in social interactions. Ironically, although anecdotal evidence and some qualitative studies suggest a strong link between linguistic marginalization and social anxiety, the scientific literature is still limited in quantifying this relationship. A recent review highlighted how language stigma affects individuals' psychosocial adjustment, which has not been adequately researched in the existing literature (Yan, 2024).

Given these adverse outcomes, understanding the direct psychological consequences of linguistic marginalization is crucial. However, existing studies are mostly qualitative and lack experimental validation. This opens a research gap: there is a need for a systematic investigation of the link between linguistic identity (e.g. differences in accent or language background) and levels of social anxiety, especially in culturally and linguistically heterogeneous urban contexts.

Based on the urgency and gaps above, this study proposes an experimental approach that is methodologically and conceptually integrated. An experimental approach was selected to establish causal links between language use and psychological outcomes, given that most previous studies are correlational. Through psycholinguistics experimental design, language variables can be manipulated in a controlled manner to observe their impact on participants' affective and cognitive responses. An experimental approach was selected to establish causal relationships between language exposure and psychological outcomes, allowing controlled manipulation of linguistic stimuli and systematic observation of affective and cognitive responses (Anderson & Lightfoot, 2021; Bolourian et al., 2022; DeMatthews et al., 2020; Dobusch, 2021; Zubiri-Esnaola et al., 2020).

Conceptually, experimental psychology allows for the testing of psycholinguistic theories of belonging by isolating language mechanisms (such as affirmative vs exclusive word choice) and looking at their direct effects on the sense of belonging or anxiety. This approach also allows room for testing interactions between linguistic identity and language treatment: for

example, whether individuals with a minority language identity react more strongly to exclusive language exposure than the majority. Another justification is the potential for intervention: if experiments show that certain conditioning (e.g. positive language priming) decreases anxiety, these findings could be developed into practical strategies for improving mental health in multilingual communities.

This study addresses the following research questions:

(RQ1) To what extent does exposure to inclusive versus exclusive language influence individuals' sense of belonging in urban social contexts?

(RQ2) How is linguistic identity associated with levels of social anxiety?

(RQ3) Does affirmative language priming reduce self-reported social anxiety?

Accordingly, the objectives of this study are:

- (1) to experimentally examine the causal impact of inclusive and exclusive language on perceived belonging;
- (2) to quantify the relationship between linguistic identity and social anxiety; and
- (3) to evaluate the effectiveness of affirmative language priming as a brief psychological intervention.

Method

Research Design

This study used a quantitative experimental approach with a between-subject design. The research subjects were randomly assigned to three treatment groups that each received different linguistic conditions, namely: (1) inclusive language exposure (affirmative of identity), (2) exclusive language exposure (reducing identity representation), and (3) a control group that received a neutral stimulus with no identity content. This design was chosen to study, experimentally, language-correction causal effects on carefully controlled experimental psychological outcomes (i.e., belongingness and social anxiety) across treatments without other confounding factors. These causal inferences are held to the experimental design and the characteristics of the sampled population and cannot be considered as a generalization all urban communities. Thus, this fits neatly within the experimental tradition of modern psycholinguistics that encourages quantifying the effects of semantics and pragmatics on cognition and affect (Gibbs & Colston, 2020). While experimental design supports internal causal inference, external generalisation beyond similar urban multilingual populations should be interpreted cautiously.

Participants

In this study, 120 subjects ($N = 120$)—aged 18-30 years old, lived in urban Indonesia, and multilingual (at least two of Indonesian, Javanese, and English)—were recruited via purposive and stratified sampling. These criteria were developed to reflect the demographics of multicultural urban youth within the parameters of its social context. None of them were diagnosed with severe neuropsychiatric disorders based on self-report, and all of them signed an informed consent prior to the experimental procedures. All experimental stimuli were presented in Indonesian to ensure comprehension consistency across participants. English proficiency was not required for stimulus processing, although participants were multilingual.

Inclusion criteria were:

- (a) aged between 18–30 years;
- (b) current residence in an urban Indonesian environment;
- (c) functional multilingualism in at least two of the following languages: Indonesian, Javanese, and English;
- (d) access to stable internet and digital devices to complete the online experiment.

Exclusion criteria included:

- (a) self-reported diagnosis of severe neuropsychiatric disorders;
- (b) incomplete survey responses;
- (c) failure to complete the experimental tasks or attention checks.

Respondents were recruited via online advertisements posted on university mailing lists, student networks and social media targeting urban young adults. Participants visited the study site via a recruitment link that had brief description about the aims, length and participation criteria of the study.

Ethical Considerations

Informed consent was given by all participants electronically prior to their participation. The purpose of the study, procedures, voluntary participation, free-will withdrawal at any time without punitive consequences, and data confidentiality were disclosed to subjects in a consent form. No personally identifiable information was obtained. Participants' data were pseudonymized and kept on a password-protected server that only the research team had access to. Data will be kept for 3 years for verification of the research and then destroyed securely. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and institutional guidelines on research ethics. Participants were informed that the study examined language processing and social perception, without explicit reference to social anxiety hypotheses, to minimize demand characteristics.

Instruments and Stimulus Materials

Several standardized instruments were used to measure dependent and moderate variables, which are the primary focus of this study. The Sense of Belonging Instrument (SOBI), a scale consisting of 12 five-point Likert-formatted items, measured the sense of belonging to a social community. This instrument is intended to encompass both affective and cognitive aspects of a sense of social attachment, and in this study demonstrated excellent internal reliability ($\alpha = 0.89$). Social anxiety among the participants was assessed using the two-dimensional Liebowitz Social Anxiety Scale (LSAS), which identifies anxiety and avoidance in social and performance situations. The LSAS is a 24-item scale with a 0–3 response scale; in this study, it had an α reliability coefficient of 0.91.

The extended version of the Language Identity Scale (LIS) was used to measure the extent to which participants are identified with their linguistic identity. The scale contains eight items in five-point Likert form, reflecting emotional closeness and frequency of use and pride in the community or mother language. Correlation and regression analyses using LS scores as predictors.

The basic stimuli used in the study were drafted as short narrative texts (± 200 words) and as audio-visual clips of around two minutes. The use of such stimuli was driven by theories of social identity and principles of linguistic pragmatics. These are in two broad congregations: inclusive stimuli that underscore egalitarian and accepting ideals with such phrases as “we are all” or “of different backgrounds but a common purpose” and exclusive stimuli that plant the seeds of societal division with words like “them,” or “outsiders,” or other bifurcated forms. Qualitative content validation (ensuring consistency of meaning and context) of the stimulus was performed by three experts in linguistics and sociolinguistics.

As an exploratory addendum, the psycho-semantic Word Association Test, a simple task where participants provide a spontaneous verbal response to stimulus words around corresponding key phrases regarding identity, acceptance, and social connectedness, was utilized. A textual analysis of their verbal responses revealed emotional tendencies and cognitive associations towards social categories.

LSAS was chosen based on its excellent psychometric properties, cross-cultural validation, and sensitivity to short-term change in social anxiety symptoms. Other measures such as the Social Phobia Inventory (SPIN) and Social Interaction Anxiety Scale (SIAS) were also examined; however, we selected LSAS because of its coverage of performance and interaction situations, which was consistent with our experimental condition of socially framed language.

Research Procedures

The research was conducted online by utilizing a digital survey platform that had been specifically designed for the needs of this experiment. All participants first took a pre-test by completing two instruments, namely the Language Identity Scale (LIS) to measure linguistic identity representation and the Liebowitz Social Anxiety Scale (LSAS) to obtain a baseline level of social anxiety before the treatment was given.

After completing the pre-test, the system automatically conducted a randomization process to place participants into one of the three experimental groups, namely groups with inclusive, exclusive, and neutral language stimuli. Each group received linguistic interventions (priming) in the form of written narrative and audiovisual material of short duration, designed according to their respective linguistic conditions. This process was conducted under standardized and controlled conditions so that each participant received treatment of equal duration and form of presentation.

The next stage was the completion of the post-test, where all participants again completed the Sense of Belonging Instrument (SOBI) to measure changes in their sense of belonging after the intervention and again completed the LSAS to detect changes in social anxiety levels quantitatively. The entire experiment was designed to be completed in a single session of approximately 25 to 30 minutes.

As part of the exploration of the short-term effects of the stimulus, follow-up measurements were conducted on a small sample ($n = 30$) within 48 hours of the initial intervention. This stage was optional and aimed to identify whether the effects of the linguistic priming were temporary or transient.

Data Analysis

All data obtained from this study were analyzed using SPSS version 21 software, with an inferential statistical approach tailored to the characteristics of the data and the objectives of each hypothesis. The analysis began with an assumption test to determine the type of primary test that should be used. The normality test of data distribution was conducted with the Shapiro-Wilk test for each group, while the homogeneity of variance test was conducted through Levene's Test. Only when both assumptions were met did the analysis proceed with parametric tests; if either assumption was violated, alternatives such as Welch ANOVA were used, which does not require homogeneity of variance.

To test whether there were significant differences in the sense of belonging (SOBI) and social anxiety (LSAS) scores between treatment groups (inclusive, exclusive, neutral), one-way analysis of variance (One-Way ANOVA) or Welch ANOVA was used according to the results of the previous assumption test. If significant differences were found, post-hoc analysis was conducted using the Tukey HSD method for homogeneous data or Games-Howell if the variance between groups was not homogeneous to identify more specifically which pair of groups showed significant differences.

In addition, to answer the second problem, the relationship between linguistic identity (measured through LIS Score) and social anxiety level (LSAS Score) was analyzed using Pearson correlation. This correlation gives an idea of the direction and strength of the relationship between the two variables, which is important in testing the conjecture that negative linguistic identity representation is positively correlated with social anxiety.

Further analysis was conducted through multiple regression analysis. In this regression model, the SOBI score served as the dependent variable, with LIS and LSAS scores as predictors. This model enables us to ascertain the relative contribution of each predictor to a participant's belonging level. The decision criterion for testing statistical hypotheses in this

study is set at a significance level of ($\alpha = 0.05$), which is the usual point beyond which samples become statistically significant. Additionally, graphs are included in the form of boxplot diagrams and histograms (with error bars $\pm 2SD$) to clarify the distribution pattern for each group.

Results

Effects of Language Exposure on Sense of Belonging

To address the first research question: "How does inclusive or exclusive speech impact the sense of belonging in urban communities?" this study examined the outcomes of the Sense of Belonging (SOBI) survey administered at the conclusion of the linguistic stimulus (inclusive language, exclusive language, or neutral) to three different participant groups. The results indicated that participants exposed to inclusive language reported the highest average SOBI score ($M=4.18$, $SD=0.16$), followed by neutral ($M=3.33$, $SD=0.19$), and exclusive language group ($M=2.78$, $SD=0.15$). Statistical comparison of the 95% confidence intervals for each cluster indicating significant mean differences, as reflected by the non-overlapping confidence intervals (see Table 1).

Table 1

Average Sense of Belonging (SOBI) Scores per Group and ANOVA Results

Priming Group	N	Average of SOBI	SD	95% CI (Lower–Upper)
Inclusive (affirmative)	40	4.18	0.16	4.13 – 4.23
Exclusive (negative)	40	2.78	0.15	2.73 – 2.82
Neutral (control)	40	3.33	0.19	3.27 – 3.39

A One-Way ANOVA analysis was conducted to test the significance of differences in SOBI scores between groups. The test results showed a highly statistically significant difference, $F(2,117) = 718.735$, $p < 0.001$, indicating that there was at least one significant difference between treatment groups.

Post-hoc Tukey HSD followed the analysis to determine specifically which groups were significantly different. The results showed that all pairwise comparisons of groups showed significant differences ($p < 0.001$). Thus, Hypothesis 1 was accepted, namely that the group exposed to inclusive language showed a significantly higher sense of belonging than both the exclusive and control groups.

Table 2

Inter-group Comparison (Post-hoc Tukey HSD)

Compared Group	Average Difference	Sig. (p)	Conclusion
Inclusive vs Exclusive	1.41	<0.001	Significantly different
Inclusive vs Neutral	0.85	<0.001	Significantly different
Neutral vs Exclusive	0.56	<0.001	Significantly different

The visualization of the distribution of sense of belonging scores between groups is presented in the following boxplots and bar charts. Figure 1 shows the distribution of SOBI scores across the three groups, with striking median and interquartile differences. Figure 2 reinforces these results with a comparison of means and error ranges (± 2 SD), showing that the inclusive group had consistently higher scores.

Figure 1

Boxplot of SOBI Score Distribution Based on Priming Group

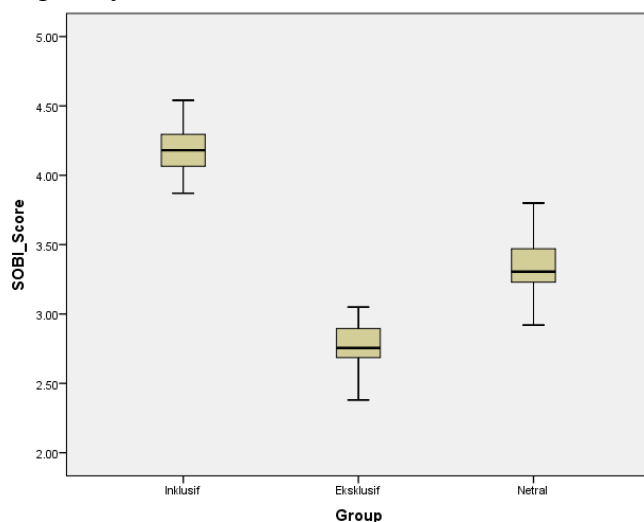
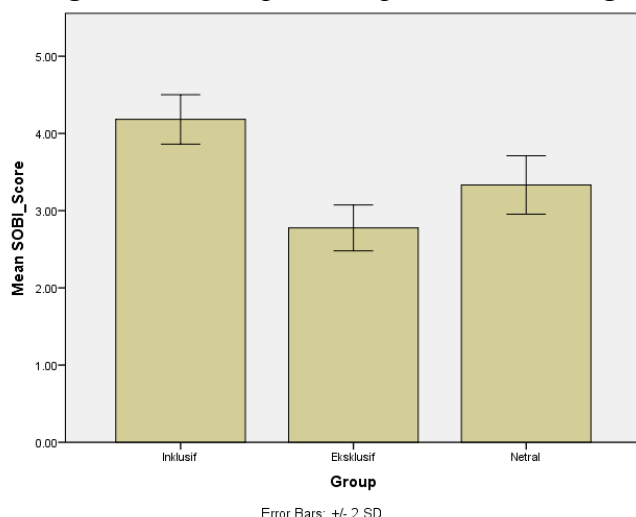


Figure 2

Average SOBI Score per Group with Error Range (± 2 SD)



The Relationship between Linguistic Identity Representation and Social Anxiety

To explore the association between linguistic identity and social anxiety, this study analyzed LIS and LSAS scores from all participants ($N = 120$). Preliminary analysis showed that the data did not fully meet the assumption of normality based on the Shapiro-Wilk test ($p < 0.001$).

for both variables), so correlation analysis was conducted using a dual approach: both parametric (Pearson) and non-parametric (Spearman's rho) to ensure consistency of results.

The results of the correlation analysis revealed a robust and statistically significant negative correlation between linguistic identity representation and social anxiety levels. The Pearson correlation coefficient was recorded at $r = -0.966$ ($p < 0.001$), while the Spearman test yielded a value of $\rho = -0.882$ ($p < 0.001$). In other words, the lower or more negative an individual's linguistic identity representation - i.e., individuals who feel emotionally detached or lack a sense of social affiliation with their primary language - the higher the level of social anxiety they experience.

This finding empirically supports Hypothesis 2 that negatively internalized linguistic identity is positively correlated with social anxiety tendencies. These findings further reinforce the idea that language functions not only as a communicative tool but also as a core determinant of emotional well-being and social inclusion. Details of the coefficients and interpretations are presented in Table 3 below.

Table 3

Correlation between Linguistic Identity Representation (LIS Score) and Social Anxiety (LSAS Score)

Correlation Test	Coefficient (r/ ρ)	Significance (p)	N	Interpretation
Pearson (r)	-0.966	< 0.001	120	Very strong negative correlation
Spearman (ρ)	-0.882	< 0.001	120	Very strong negative correlation

Impact of Identity-Based Linguistic Priming on Social Anxiety

To examine whether identity-affirming linguistic priming reduces social anxiety, the study compared the Liebowitz Social Anxiety Scale (LSAS) scores across three experimental groups who received different linguistic stimuli: inclusive language (affirmative), exclusive language (negative), and neutral (control).

The results of the descriptive analysis showed that the inclusive language-primed group obtained the lowest social anxiety score ($M = 2.11$; $SD = 0.095$), while the exclusive group recorded the highest score ($M = 3.90$; $SD = 0.081$). The neutral group fell in between, with a mean score of 3.12 ($SD = 0.130$). With non-overlapping 95% confidence intervals indicating statistically significant differences among the groups (see Table 4).

Table 4

Mean LSAS Score per Treatment Group

Priming Group	N	LSAS Average	SD	95% CI (Lower – Upper)
Inclusive (affirmative)	40	2.11	0.095	2.08 – 2.14
Neutral (control)	40	3.12	0.130	3.08 – 3.16
Exclusive (negative)	40	3.90	0.081	3.88 – 3.93

To test the significance of differences between groups, the Welch ANOVA test was used because the results of the homogeneity of variance test (Levene's Test) showed data

inhomogeneity ($p = 0.036$). Welch ANOVA results showed a highly significant difference between treatment groups, with $F(2, 75.58) = 640.50$ and $p < 0.001$.

The analysis continued with the Games-Howell post-hoc test, which confirmed that all pairs of groups showed significant differences. The inclusive group showed significantly lower social anxiety scores than both the exclusive ($\Delta M = -1.79$, $p < .001$) and neutral groups ($\Delta M = -1.01$, $p < .001$). Moreover, the difference between the exclusive and neutral groups was also significant ($\Delta M = -0.79$, $p < 0.001$), strengthening the argument that linguistic priming has a substantial impact on social emotion regulation.

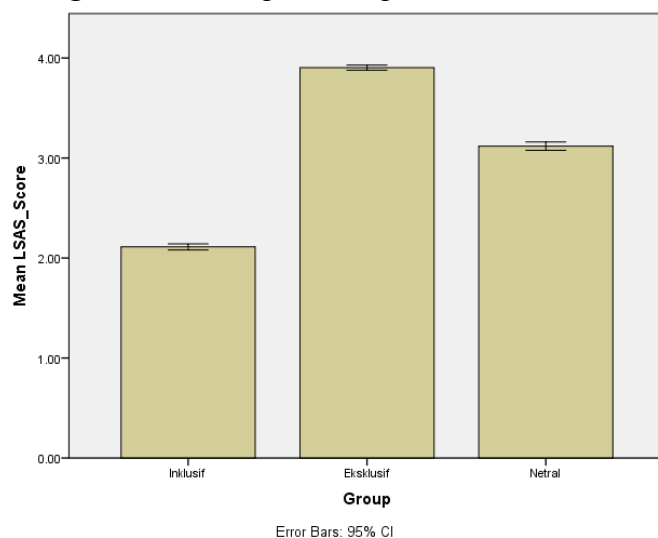
Table 5

Welch ANOVA and Games-Howell Post-Hoc Test Results

Test	F value / ΔM	df	Sig. (p)	Conclusion
Welch ANOVA	$F = 640.50$	$df = 2,75$	< 0.001	Significant difference
Inclusive vs Exclusive	$\Delta M = -1.79$	—	< 0.001	Significantly different
Inclusive vs Neutral	$\Delta M = -1.01$	—	< 0.001	Significantly different
Neutral vs Exclusive	$\Delta M = -0.79$	—	< 0.001	Significantly different

Figure 3

Average LSAS Score per Group



This figure shows clear visual differences between the three groups, supporting the quantitative data previously described. Thus, these findings consistently support Hypothesis 3, namely that an affirmative linguistic intervention in the form of identity-affirming language can significantly reduce individuals' social anxiety levels in an experimental context. These results make an empirical contribution to the psycholinguistics and social psychology works of literature and open the possibility of identity-based linguistic intervention design in the treatment of psychological distress in multilingual urban settings.

Discussion

The findings of this study contribute to understanding how language identification perceptions and feelings of emotions within an experimental environment among urban multilingual young adults in this sample. A critical limitation is the experimental design of this study; its participant characteristics therefore limit us to making generalisations for all urban populations. First, exposure to inclusive language significantly increased the sense of belonging compared to exposure to exclusive or neutral language. Second, there was a very strong negative correlation between linguistic identity representations and social anxiety levels, with participants who had negative linguistic identities tending to experience higher social anxiety. Third, as a tool for affect regulation in social contexts, intervention via positive linguistic priming was shown to be significantly successful in reducing participants' social anxiety scores significantly.

The first finding is consistent with the hypothesis that language carries psychosocial leverage that can contribute to the development of a sense of attachment. In these instances, specific affirmative language like “we are all” and “come from different backgrounds but one goal” communicated acceptance and inclusion that indirectly increased social identification with the group. This result aligns with theories of inclusive messaging and the phatic function of language in facilitating and enriching affiliation (Ephratt, 2011; Ndukauba et al., 2021; Pennebaker et al., 2003; Ward & Horn, 1999).

Still, the strong negative correlation between linguistic identity and social anxiety indicates that affective disconnection with one's mother tongue or community language carries deep psychological costs. In the present sample, lower linguistic identity alignment was associated with higher levels of reported social anxiety. Similar patterns have been reported in previous studies on linguistic identity threat. This can be explained through the concept of linguistic identity threat (Derwing & Munro, 2009), which states that pressure on linguistic identity can decrease social security and increase sensitivity to negative social judgment.

The third finding shows that exposure to affirmative language functions not only as identity reinforcement but also as a form of psychological micro-intervention that can significantly reduce social anxiety. The observed reduction in social anxiety following affirmative language priming in this study is consistent with prior experimental findings suggesting that positive linguistic framing may influence affective-cognitive regulation processes (Chen, 2020; Hopp & Jackson, 2023; Son, 2020).

In general, the results of this study reinforce previous findings regarding the impact of language on a sense of social connectedness and psychological well-being. The classic study by Stout and Dasgupta (2011) showed that the use of generic masculine language in professional settings negatively impacts women, decreasing their sense of belonging and perceptions of inclusiveness. This research extends that context by proving that the effects of language exclusivity are not limited to gender issues but also include dimensions of linguistic identity and social affiliation in multilingual communities. In the realm of social psycholinguistics, this finding confirms that inclusive linguistic representations strengthen perceptions of “ingroup membership” (Borinca et al., 2024; Carmona et al., 2020; Reimer et al., 2020), which significantly contributes to identity construction and social integration (Branković et al., 2020; Jiang et al., 2022).

The observed similarities in linguistic identity and social anxiety are consistent with literature on the social impact of accent intolerance. Rios (2024) showed that non-dominant accents come with a larger burden of social and interpersonal burden in educational contexts in terms of anxiety for the speaker, but Lev-Ari and Keysar (2010) told us why. Their expunged confidence and discomfort in a social interaction is often viewed with suspicion because foreign-accented interlocutors are often considered less credible. These findings are consistent with earlier work by Fuertes et al. (2012), who observed that negative accent perceptions shape social identity and exacerbate psychological consequences associated with linguistic marginalization. They also showed that accent biases increase interpersonal disputes by making it difficult to achieve authentic intercultural encounters.

The experimental design allows for inference of causal effects within the controlled experimental context, rather than broad real-world causality. External generalisation should therefore be approached cautiously. As opposed to the correlational approaches utilized by previous work, this experiment employed a priming paradigm, systematically manipulating linguistic circumstances to observe direct effects on psychological constructs. This strategy aligns with the approach described by Giles et al. (2023) and Koopmans & Veit (2014) which call for more studies that are experiment focused on how linguistic impression relates to social diversity.

Additionally, this work responds to calls from recent studies, such as Lindholm-Leary (2012), emphasising the urgent need to unravel the connection between layers of linguistic identity, social stigma and mental health in multicultural. This work integrates quantitative analysis with standardized, well-tested psychological scale measures of belonging with experimental manipulation of language adding to the evidence how language purposes in a sense of belonging not just as a sign but as an affective pathway.

The finding of a particularly robust negative correlation between the dimensions representing linguistic identities, and social anxiety levels, highlights the need to consider language as a protective or risk factor for the externalization of social emotion regulation. Specifically, these results can be aligned with findings in contemporary literature on bilingualism and emotion (Alqarni & Dewaele, 2018; Moate & Ruohotie-Lyhty, 2020; Namaziandost et al., 2022; Shuo et al., 2022; Zhou et al., 2025; 2023), which suggests that emotional attachment to the first language plays an important role in shaping one's sense of self-identity and psychological resilience in complex social environments.

Theoretical and Practical Implications

Theoretically, the results of the present study deepen the understanding of psycholinguistics of belonging, which can be conceptualized as a field of psycholinguistics that studies the role of language in the construal of social ties and group identity. This study contributes to the interdisciplinary nexus between social identity theory, affective psycholinguistics, and social emotion psychology. The ability of language manipulation to influence significantly the sense of belonging and social anxiety provides support for a constructivist view in psycholinguistics, which sees language not only as the medium of cognitive representation and inference but as an affective agent potentially mediating psychosocial processes.

This study supports and strengthens the paradigm of language as a tool of social reality construction and not just a tool for communication. Our experimental data indicated that linguistic constructions could indeed cause robust changes in perceptions of social inclusion. That is, this has implications for our understanding of how language further regulates social emotions through the activation of identity schemas embedded in language, as well evidenced by recent neuropsychological studies of the link between language processing to the activation of the dorsolateral prefrontal cortex and limbic system.

Practically, the research demonstrate how interventions can be based on language in educational, mental health and public policy domains. In education field, the consistent use of inclusive language can contribute to students' sense of belonging and motivation to learn in multilingual classrooms. In mental health contexts, affirmative linguistic framing and self-affirmation interventions may help reduce anxiety and enhance psychological resilience, with implications for the development of psychosocial interventions including online counselling, professional training and digital technologies. At a policy level, such inclusive public communication may serve to support social cohesion and minimize language stigma as part of equitable communication strategies in multilingual societies.

Limitations and Suggestions for Further Research

Although this study showed strong results, some limitations should be noted. First, the use of an online experimental design limits environmental control and potential participant attentional bias. Second, moderator variables such as level of linguistic confidence or experience of discrimination were not measured, even though they may mediate the relationship between language and social affection. Third, the generalizability of the results needs to be further tested through replication across different cultures and language contexts.

Although short-term research suggests that using affirming language can increase confidence and decrease stress, the long-term effect needs further study. Also, field experiments that test the practical power of interventions could complement lab results. Neuroscience, including eye monitoring, may help shed additional light on how inclusion and exclusion are cognitively parsed. Classrooms, offices and services provide real-world contexts to validate and complement controlled laboratory findings. Deeper probes, either through, for example, fMRI technologies, could disentangle processing nuances undetectable by self-report alone. However, early, still initial, results suggest that the deliberate use of affirming language may help to alleviate social tensions in consequential ways that sustain scholarly attention.

Conclusion

This study provides empirical evidence of how experimentally manipulated language exposure influenced identity-related perceptions and social connectedness within the present sample of multilingual urban young adults. Specifically, exposure to a language of inclusion significantly augments perceptions of belonging, while exposure to a language of exclusion often reduces

a sense of social connectedness. It emphasizes that language is not merely a vehicle for transmitting ideas but also a psychological and social tool that shapes and influences how a person interprets and experiences their environment.

This study empirically demonstrated that inclusive linguistic exposure was associated with increased sense of belonging and reduced social anxiety under the controlled experimental conditions of this study. This finding aligns with the experimental evidence in this study, where inclusive linguistic priming led to increased perceptions of social belonging and reduced social anxiety, indicating the pivotal role of language in shaping inclusive communicative environments.

Furthermore, this study found that negative linguistic identity representations were significantly associated with increased social anxiety. The very strong negative correlation between linguistic identity scores and social anxiety scores suggests that individuals who feel disconnected or unproud of the language they speak tend to experience higher levels of anxiety in social situations. These findings confirm the importance of strengthening linguistic affiliation as one of the protective mechanisms in maintaining emotional well-being amidst linguistic and cultural diversity.

Furthermore, linguistic intervention through affirmative priming was shown to significantly reduce social anxiety, suggesting that linguistic approaches may represent a promising and resource-efficient complementary strategy as a relevant, resource-efficient, and potential form of psychological intervention that can be implemented in various social contexts. The effectiveness of affirmative language priming opens room for the development of language-based programs that not only increase social engagement but also reduce the emotional burden of linguistic stigma or marginalization.

Overall, this study extends the theoretical framework in the field of psycholinguistics of belonging, as well as contributes a strong empirical foundation for the design of language-based interventions in the fields of education, mental health, and social policy. The potential for affirmative language sensitive to affective and identity dimensions to be an effective tool in fostering social cohesion is highlighted, along with the possible implications for designing language-sensitive interventions that aim to facilitate inclusion and psychological well-being in similar settings. The novelty of the current study is to provide quantitative empirical evidence concerning inclusive and exclusive exposure with speech, along with linguistic identity and social anxiety aspects in one single framework.

Future research should replicate this experimental approach across diverse cultural and linguistic contexts. In addition, incorporating mediating variables—such as linguistic self-efficacy and experiences of discrimination—may enrich understanding. Neurocognitive methods and longitudinal designs are also needed to assess the sustained emotional effects of linguistic interventions in real-world settings.

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Author Contributions

Conceptualization, R.N., K., and H.I.; methodology, R.N., F.I., and A.A.K.; validation, K. and H.I.; formal analysis, R.N. and F.I.; investigation, R.N., F.I., and A.A.K.; resources, K. and H.I.; data curation, R.N. and F.I.; writing—original draft preparation, R.N.; writing—review and editing, K., F.I., A.A.K., and H.I.; visualization, R.N.; supervision, K. and H.I.; project administration, R.N.; funding acquisition, R.N. All authors have read and agreed to the published version of the manuscript.

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