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Is the Kkondae as a common psychological construct? Testing the Kkondae scale with the U.S. sample, and the preliminary study of predictors and consequences of Kkondae

Jiyeon Lee¹, Dongwoo Ko^{2*} and Hyoungh-yong Choi²

Abstract

Background The research aims to explore the common nature of 'kkondae'—a Korean term denoting stubbornness—and its relevance across cultures, particularly examining the relationship between anxiety, kkondae tendencies, and resulting loneliness through difficulties in listening and acceptance in social interactions.

Methods A sample of 454 individuals from the U.S. was surveyed online to assess the Korean-developed Kkondae scale's reliability and validity. Structural Equation Modeling revealed that higher levels of anxiety might lead to increased loneliness, with kkondae traits acting as an intermediary.

Results Anxiety was found to affect the tendency towards kkondae behavior, interfering with listening and effective communication, thus exacerbating loneliness.

Conclusions Interpersonal communication issues are critical in increasing loneliness. This study adds a new dimension to loneliness research by linking the concept of kkondae with anxiety.

Keywords Kkondae, Anxiety, Loneliness, Listening, Accepting others

Introduction

As introduced by the BBC, the term 'kkondae' was initially used as slang to denote generational conflict, describing a self-entitled, self-righteous, and stubborn older person. 'Kkondae' loosely translates to 'a condescending older person' [1]. The term 'kkondae', written in the Korean alphabet when introduced by the BBC, captures characteristics unique to Korean culture, such as Korean authoritarianism. However, after its introduction

on the BBC, people worldwide, including those in Western cultures, responded strongly to the term, as it reminded them of someone in their lives, usually their parents or boss.

To determine whether the term 'kkondae' is common phenomenon, the 'kkondae' scale developed in Korea in a prior study [2] was translated into English and tested for its validity. Originally conceived to denote an elderly individual, 'kkondae' has evolved into a characteristic that transcends age and geographical boundaries.

The study was conducted using the United States as the research sample. The primary aim of this research is to determine whether the characteristics associated with being an authoritarian or overbearing figure, often referred to as "kkondae" in Korean culture, are exclusive

*Correspondence:

Dongwoo Ko
dko@hufs.ac.kr

¹Counseling UX Psychology, Hankuk University of Foreign Studies, Seoul, Korea

²College of Business, Hankuk University of Foreign Studies, Seoul, Korea



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to Korea or are traits shared universally across cultures. The United States was selected because it is a representative multi-ethnic nation where diverse racial and cultural groups coexist, making it a suitable context for testing this hypothesis.

Notably, swift environmental changes contribute to a rising number of individuals experiencing heightened levels of anxiety and loneliness. Understanding this trend requires recognizing the influence of 'kkondae' characteristics. Thus, this study was conducted to understand what drives the 'kkondae' tendency and its emotional consequences.

Anxiety often involves hypervigilance, a state of heightened awareness and sensitivity to potential threats. When someone is anxious, they may become hyper-focused on perceived social threats, such as judgment or rejection, even in situations where such threats may not exist. This can make social interactions more stressful and anxiety-inducing, leading to difficulty in listening to and accepting others [3], which eventually could cause loneliness. This research will investigate how 'kkondae' characteristics mediate the relationship between anxiety and loneliness, while the association between anxiety and 'kkondae' tendencies may be mediated by the ability to listen to and accept others.

This study aims to explore the mechanism through which Kkondae traits influence the relationship between anxiety and loneliness, using the Structural Equation Modeling (SEM) approach.

This study has two primary significances. The first is to verify the validity of the 'kkondae' scale, initially conducted among Koreans, with Americans and to expand its applicability. Secondly, it aims to understand the impact of the 'kkondae' attitude, characterized by not listening to others' opinions, on loneliness within the context of the social phenomenon of increasing loneliness. Until now, the cause of loneliness has been focused on the fundamental human need to belong to social groups, but this research shows that the anxiety felt in society and the attitude of not accepting others' opinions serve as significant causes of loneliness.

Literature review

Kkondae

'Kkondae' is a term that has been used in the lives of Koreans for a long time, and its precise etymology is not clearly known [2]. The National Institute of Korean Language defines 'kkondae' as older generations directing and coercing younger people based on their life experience [4]. Although its meaning has changed over time, 'kkondae' is defined as someone who stubbornly demands others adhere to the standards and values they believe in [4]. Although traditionally 'kkondae' was associated with the older generation, recently, with the term

"young kkondae," it is associated with conflicts among members of society across generations and classes.

An examination of existing literature on the 'kkondae' phenomenon reveals a predominant reliance on conceptual analyses [5], attributed to challenges associated with empirical validation. For more active utilization of research, there has been an increased need to establish the concept of 'kkondae' and to develop measurement tools for its assessment. Lee and colleagues formulated an assessment tool for quantifying 'kkondae,' delineating its multifaceted characteristics through the incorporation of three subscales: attribution error, self-righteousness, and one-way communication [2].

Attribution error 'Attribution' is a concept used in social psychology, referring to 'the phenomenon of inferring the cause of one's own or another's behavior' [6]. The tendency to underestimate the influence of external factors such as circumstances and overestimate the influence of internal factors such as personality when judging the behavior of others is called the 'fundamental attribution error'; it can be seen as a kind of self-serving bias [7]. This fundamental attribution error is stronger in 'kkondae.' People with a high tendency for attribution error focus on individual tendencies rather than considering situations or circumstances when judging others' behavior. For example, attributing a young person's inability to get a job solely to a lack of effort, without considering the economic recession, and having confidence in that idea. This attribution error well represents the important characteristic of 'kkondae,' who cannot empathize with the situation of others and continues to communicate with confidence in their own opinions and judge others' character.

Self-righteousness Another characteristic of 'kkondae' is self-righteousness. It is also known to be associated with a desire to control situations and authoritarian personality traits [8]. High cognitive rigidity makes it difficult to adapt to new perspectives by sticking to old belief systems, and especially not understanding the perspectives of the new generation [9]. These individuals are not adaptive to changes in their environment, producing inaccessible and egocentric ideas, and do not consider alternative viewpoints.

One-way communication People with 'kkondae' tendencies don't listen to other people's opinions [10]. They are not actively accepting and listening to others, which acts as a major factor in causing conflict with others. They tend to insist that other people's feelings or stories are wrong. Without empathy, it is difficult to form relationships with others. One-way communication, characterized by only making claims, is a significant aspect of 'kkondae' behavior.

The characteristics of such self-centered thinking, often associated with 'kkondae' behavior, are poised to play a significant role in understanding the challenges of interpersonal relationships that contemporary society faces [2]. With the era becoming increasingly digitalized, a growing number of people are experiencing difficulties in forming relationships, leading to a rise in feelings of loneliness [11]. This study aims to shift the focus from the conventional understanding of loneliness within the context of interpersonal relationships, as seen in much existing research, to understanding the impact of personal anxiety on loneliness from a different perspective.

Cognitive discrepancy model

Numerous studies on loneliness to date have been elucidated within the framework of the cognitive discrepancy model of loneliness, aiming to delineate its underlying cause [12, 13, 14, 15]. These inquiries posit that loneliness ensues when the quality of interpersonal relationships fails to align with expectations, notwithstanding the presence of superficial engagements with others [15]. Notably, this model has gained traction in recent discourse for explicating the sense of isolation experienced in digital contexts [15]. The crux of loneliness, as argued, lies in the divergence between the idealized states individuals envisage and the actual emotional experiences they encounter. However, a comprehensive understanding of loneliness necessitates a prior examination of personal traits influencing relationship quality. Anxiety, defined as a psychological state distanced from one's ideal, prompts a defensive mechanism that prioritizes self-centered attitudes over efforts to empathize with others' viewpoints [16]. Consequently, a pivotal factor contributing to loneliness is the dissonance between the desired psychological state and the actual state, rooted in psychological anxiety. This anxiety fosters self-centered thought processes, enhancing a tendency towards a self-absorbed demeanor rather than fostering social connections, thereby serving as a mechanism that exacerbates feelings of loneliness.

Anxiety and loneliness

According to the National Institute of Mental Health (NIMH), around 19% of adults in the United States have an anxiety disorder. Also, Goodwin and colleagues found that there was a rise in anxiety among adult Americans, climbing from 5.12 to 6.68% from 2008 to 2018. Especially during and after COVID-19, there was a rise in anxiety due to the uncertainty associated with life circumstances across countries [17], and the trend is ongoing with the uncertainty associated with rapid changes in society post-COVID-19.

According to a study on anxiety, listening attitude changes depending on the environment in which people work. In other words, practical stress such as anxiety has

a significant impact on lowering people's listening attitude [16]. Previous research has indicated that social anxiety impacts individuals' motivation and receptiveness toward others. Jiang & Papi suggest that a positive correlation exists between the level of anxiety and the inclination to self-defend, indicating that heightened anxiety is associated with an increased motivation to safeguard oneself [18]. This defensive response, as suggested by Suinn & Hill, serves as a hindrance to embracing the sentiments and viewpoints of others [3].

H1 Anxiety is negatively associated with listening and accepting others.

Individuals exhibiting elevated anxiety levels demonstrate a proclivity for exerting control [19], a characteristic linked to 'kkondae.' Drawing from the self-concept discrepancy theory, heightened discomfort or agitation arises when disparities emerge between one's actual self and the ideal (ought) self [20], with severe discrepancies leading to anxiety. To alleviate this discomfort or anxiety, individuals are compelled to minimize the dissonance by exerting control over others and/or themselves. Anxious individuals seek stability in the conviction that the external environment remains unchanged, viewing this as a means of asserting control. In essence, actions driven by anxiety will positively influence the inclination toward 'kkondae,' manifesting in attempts to alter others rather than adapting to the surroundings, which is especially associated with attribution error and self-righteousness. Moreover, the communication style that disregards the perspectives of others and resists embracing differing opinions, driven by anxiety, will eventually contribute to the development of a disposition typical of an elderly individual.

H2 Anxiety is positively associated with kkondea.

H3 Listening and accepting others are negatively associated with kkondea.

Kkondae & loneliness

Loneliness is typically characterized by a lack of meaningful connection [21]. School loneliness increased from 2012 to 2018 in 36 out of 37 countries. Worldwide, nearly twice as many adolescents in 2018 (vs. 2012) had elevated levels of school loneliness [21]. Several factors could contribute to loneliness, yet this research investigation concentrates specifically on the impact of 'kkondae.' Examining the traits associated with 'kkondae,' it becomes evident that their communication style is predisposed to bias. They exhibit a tendency to attribute problems to others or engage in unilateral communication driven by self-righteous perspectives. This mode of

communication can ultimately lead to social estrangement and the experience of loneliness.

H4 *kkondea* is positively associated with loneliness.

Therefore, when anxiety is high, a self-protection mechanism is activated [18], which leads to adherence to one's own thoughts rather than listening and accepting others. Instead of accepting others, they would be inclined to judge them to maintain the idea that they are right. Not being able to listen to and accept others would lead to '*kkondae*' tendencies and ultimately to loneliness.

H5 Anxiety is positively associated with *kkondae* tendency which is mediated by both listening and accepting others, which in turn to be associated with loneliness.

Method

Participants

This study received IRB approval from Hankuk University of Foreign Studies. To measure the universality of the '*kkondae*' measurement tool, a survey was conducted targeting adults over the age of 18 through an online panel in the U.S. Participants were recruited through a famous online panel in the U.S., and a nominal monetary reward of 50 cents was provided as compensation for participation. The survey was conducted over a period of four days.

In determining the sample size for statistical analysis, it is crucial to consider the statistical accuracy of the parameter estimates and statistical power. Statistical power, defined as $1 - \beta$ (where β is the probability of a Type II error), is recommended to exceed 0.8 (Chin, 1998). According to Cohen (1988), "a medium effect of .5 is visible to the naked eye of a careful observer." Thus, using a statistical power of 0.8 and an effect size of 0.5 as benchmarks, a power analysis was conducted with 5 latent variables and 18 observed variables (Westland, 2010). The recommended minimum sample size was calculated to be 128, which the sample size in this study substantially exceeds.

Procedure

The study was conducted using an online panel, and all participants received an explanation of the study before starting the survey. To meet ethical requirements, participants were informed about the consent form at the start of the survey. Participants were learned that the survey was designed to understand the psychological processes of consumers and clearly indicated that they could quit at any time. Contact information was also included so that participants could inquire about the survey at any time. The survey was conducted with individuals who, after being fully aware of the content, voluntarily wished to participate. After sufficient time, those who wanted to

participate proceeded by clicking the 'next' button at the bottom of the screen. Those who did not wish to participate could stop the survey at any time by clicking the 'end survey' button. At the start of the survey, participants were asked questions to measure anxiety, listening attitude, non-acceptance of others, '*kkondae*', and loneliness. All questions were designed to fit within a single screen, regardless of whether they were accessed on mobile or the internet, minimizing the need for scrolling. An exit button was prepared at various points throughout the survey so that participants could stop at any time if they wished to do so. Finally, after answering demographic questions, the survey was concluded.

Sample characteristics

A total of 454 adults completed the online survey. Our sample ($N=454$) consists of 53% male and 47% female. Participants consisted of 331 White, 74 Black, 33 Asian, and 13 Hispanic individuals. For the age range, participants in their 19–29 were 78, 30–39 were 190, 40–49 were 91, 50–59 were 60, 60–69 were 27, and over 70 were 8. For the highest educational level, 99 participants were high school graduates (20.9%), 254 were 4-year college graduates (48%), and 101 held graduate degrees (11.1%). Participants' household monthly income was reported as follows: less than \$3,000–15% ($n=68$), \$3,000–6,000–34% ($n=154$), \$6,000–9,000–30% ($n=136$), \$9,000–12,000–13% ($n=59$), and more than \$12,000–8% ($n=37$).

Measurements

Anxiety

The assessment of anxiety utilized the Beck Anxiety Inventory (BAI) [22], comprising 21 items rated on a 4-point scale ranging from 0 (not at all) to 3 (severely). For example, to measure anxiety, participants were asked to rate how much they have been bothered by 'feeling nervous, anxious, or on edge' over the past week on a scale from 0 to 3. Item scores were summated to derive a total score, and the internal consistency coefficient was calculated at 0.89 in this study. The validity analysis demonstrated that the BAI scale effectively differentiated between clinical and non-clinical patient groups. Furthermore, the reliability analysis revealed consistently satisfactory results, indicating high internal consistency within the scale.

Listening attitude

To assess the attitude toward listening, the Evaluation of Active Listening Attitude introduced by Mishima [23] was employed. The questionnaire comprised 13 items rated on a 4-point scale, ranging from 0 (disagree) to 3 (agree), including questions such as "When someone is speaking to me about a problem, I make an effort to pay attention to their words and ask clarifying questions if I

do not understand something.” The total score was computed as the sum of the measured items, and the internal consistency coefficient was 0.91 in this study. The Cronbach’s alpha coefficient was reported as 0.84, and the factor analysis confirmed that the scale demonstrated satisfactory validity [24].

Other acceptance

To measure other acceptance, the accept without judgment subscale from the Kentucky Inventory of Mindfulness Skills was used [25]. The questions consisted of a total of 9 items and were measured using a 4-point Likert scale. Participants were asked to choose one of four options ranging from Poor to Excellent. For instance, participants were asked to select ‘Excellent’ if they agreed with the statement, ‘I criticize others for having irrational or inappropriate emotions.’ The internal consistency coefficient was 0.89. The measurement showed good test-retest reliability and a clear factor structure [25].

Kkondae

The ‘Kkondae Scale’ was originally developed in South Korea in a prior study [2]. Therefore, we tested if the scale is valid in the U.S. before testing our hypothesis. In the original scale, three constructive concepts (attribution error, cognitive rigidity, and one-way communication) were derived through expert interviews, prior research, and literature analysis, and 15 preliminary questions were selected. A preliminary scale was developed by modifying or adding items to conform to each constructive concept through expert content validity evaluation. Next, as a result of the exploratory factor analysis of about 250 adults, a three-factor structure model was derived. As a result of the confirmatory factor analysis on the preliminary scale for about 401 adults, it was confirmed that the fit of the three-factor structure was good. As a result of convergence and discriminatory validity analysis, it was confirmed that the developed original scale was a valid tool to measure ‘kkondae’ [2]. The ‘kkondae’ scale originally developed in Korea was translated and back-translated by a professor in English literature with knowledge in psychology and another professor in counseling psychology. The translated and back-translated versions of the scale were tested with a correlation coefficient across the original and the back-translated version. After confirming the accuracy of the translation, the English version of the ‘kkondae’ scale (Appendix 1) was distributed to adults in the U.S. through Amazon. With a sample of 300 adults in the U.S., the confirmatory factor analysis was conducted to see the construct validity of the scale and internal consistency was tested. The results indicated that model fit met the recommended standard, $\chi^2 = 184.93$; $df = 87$, CFI = 0.96; TLI = 0.94; RMSEA = 0.04, SRMR = 0.05, and all factor loadings of three subscales

were statistically significant. For the entire scale, Cronbach’s alpha was 0.91. For the subscales of attribution error, self-righteousness, and one-way communication, Cronbach’s alphas were 0.91, 0.80, and 0.87, respectively.

Loneliness

The Revised UCLA Loneliness Scale (RULS) [26] was used. It consists of 20 items on a 4-point scale from 1 (not at all) to 4 (often), among which 10 items are reverse keyed. For example, participants were asked to choose 4 if they agreed with the statement ‘How often do you feel that you lack companionship,’ and to choose 1 if they disagreed. In this study, the item scores were summed into a total score, and their internal consistency was 0.89. The Cronbach’s alpha coefficient was reported as 0.94, and the scale has satisfactory validity [26].

Data analytic plan

We tested the mediation model with structural equation modeling (SEM) using AMOS 23. Several recommended goodness-of-fit measures (e.g., χ^2 , CFI, NFI, RMSEA) to evaluate how well the hypothesized model fit the observed data. The chi-square (χ^2), which assesses the magnitude of the discrepancy between the fitted model and the sample covariance matrix, indicates a better fit if it is nonsignificant. The CFI indicates the relative fit between the hypothesized model and a baseline model that assumes no relationships among the variables; the CFI range is 0–1.0, and values closer to 1.0 indicate a better fit. The NFI is derived by comparing the hypothesized model with the independence model, and 0.90 or above indicates a well-fitting model. The standardized RMSEA needs to be 0.05 or less in a well-fitting model. The SRMR is the difference between the observed correlation and the model-implied correlation matrix, and less than 0.08 is considered a good fit (see Fig. 1).

Results

Descriptive statistics and intercorrelations

The sample ($N = 454$) data were univariate and multivariate normal, thereby meeting SEM assumptions. Pearson correlations revealed positive significant associations from 0.49 to 0.72 for anxiety, listening, other acceptance, kkondae, and loneliness (see Table 1). Significant correlations are below 0.85, so multicollinearity is likely not a problem [27].

Measurement model

The proposed mediation model followed the two-step procedure of conducting structural equation modeling [28]. In the first step, confirmatory factor analysis was conducted to test whether the measurement model had an acceptable fit. The confirmatory model consisted of five latent variables and 18 observed variables. For

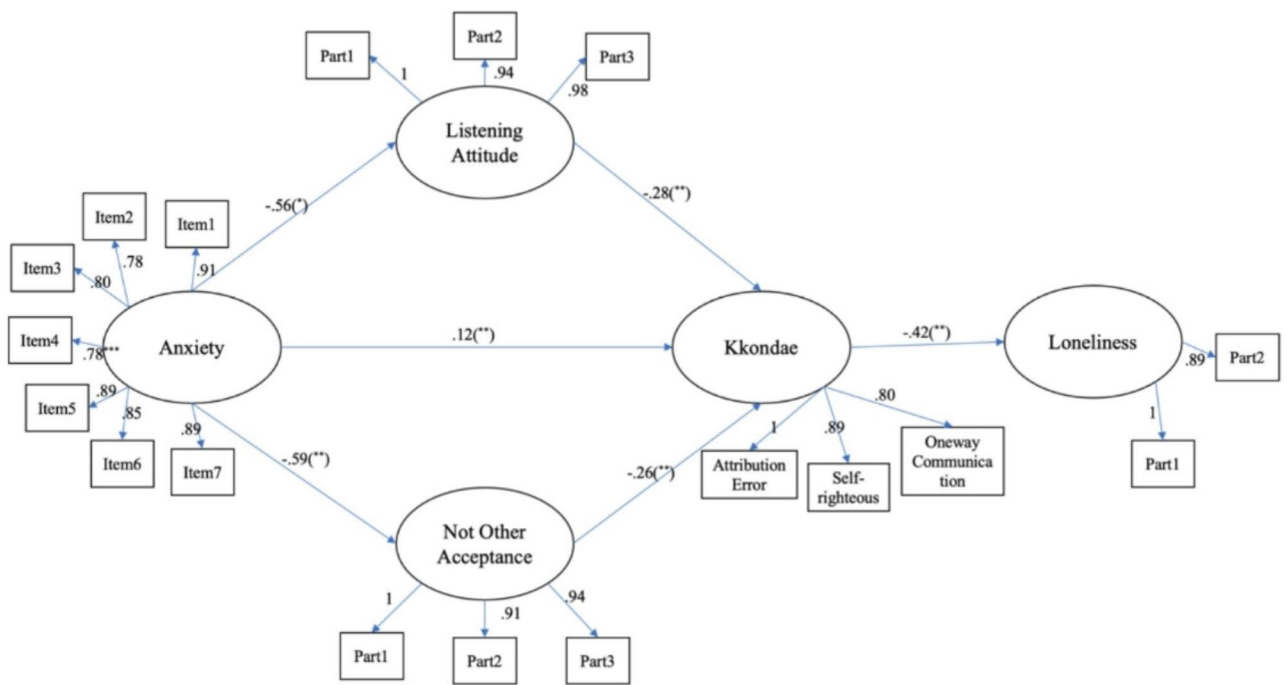


Fig. 1 Mediation model with structural equation modeling

Table 1 Zero-order pearson correlation among variables (*N* = 264)

	1	2	3	4	5
1. anxiety	1				
2. listening	−0.61**	1			
3. other acceptance	−0.62**	0.72**	1		
4. kkondae	0.58**	−0.71**	−0.68**	1	
5. Loneliness	0.67**	−0.49**	−0.50**	0.53**	1
<i>M</i>	1.03	1.55	2.79	2.90	2.48
<i>SD</i>	0.93	0.69	0.75	0.89	0.68

***p* < .01, **p* < .05

listening, other acceptance, and loneliness, item balanced parcelling was used to create observed variables. For kkondae, three subscales were used as observed variables, and for anxiety, we used each item as observed indicators. The test of the measurement model resulted in a good fit to the data, $\chi^2(125) = 374.02$ ($p < .001$), CFI = 0.96, TLI = 0.95, RMSEA = 0.05. As suggested by Schumacker and Lomax (2004), observed variables were examined to determine whether their path coefficients from the latent variables were below 0.5 and if latent variables were well measured by their observed variables, and all the factor loadings were above 0.5.

Structural model

After confirming the measurement model, the structural model was tested. In the structural model, path coefficients were examined to determine the direction, strength, and significance of the relationships between latent variables, with significant coefficients indicating

meaningful direct effects and the size of each coefficient reflecting the strength of influence.

The results indicated that the hypothesized structural model had a good fit to the data, $\chi^2(130) = 632.65$ ($p < .001$), CFI = 0.92, TLI = 0.90, RMSEA = 0.06.

Bootstrapping

Bootstrapping was used to examine the significance of the mediated effect in multiple mediator models [29]. The utilization of bootstrapping in our study stemmed from its suitability in analyzing multiple mediation relationships concurrently within the proposed model. By employing bootstrapping, we aimed to elucidate the contrasts essential for comparing the relative contributions of each mediator in multiple mediator models. This methodological approach offers an empirical avenue for establishing statistical significance, as evidenced by the asymmetric confidence limits provided by bootstrapping results. To execute the bootstrap procedure, we

Table 2 Standardized indirect effects

	Estimates	Bootstrap standard errors	Lower / Upper Bounds (BC)	Two tailed significance (BC)	Lower / Upper Bounds (PC)	Two tailed significance (PC)
Anxiety → Not other acceptance, Listening attitude → Kkondae	0.553	0.042	0.476 / 0.644	0.001	0.473 / 0.640	0.001
Anxiety → Kkondae → Loneliness	0.517	0.039	0.435 / 0.590	0.001	0.437 / 0.592	0.001
Not other acceptance → Kkondae → Loneliness	−0.241	0.038	−0.318 / −0.170	0.001	−0.316 / −0.167	0.001
Listening attitude → Kkondae → Loneliness	−0.296	0.035	−0.368 / −0.230	0.001	−0.365 / −0.227	0.001

* BC: Bias-corrected percentile method, PC: Percentile method

generated 10,000 bootstrap data samples through random sampling with replacement from the original dataset. The bootstrapping results indicated that all indirect effects in the hypothesized model were significant. More specifically, the findings indicated significant indirect effects of anxiety, not other acceptance, and listening attitude on loneliness through the mediation of 'kkondae'. Specifically, anxiety was found to positively predict 'kkondae', which subsequently increased feelings of loneliness. Similarly, lower levels of other acceptance and listening attitude were associated with higher levels of 'kkondae', leading to increased loneliness (see Table 2).

Discussion

The research presents a novel angle on loneliness, diverging from the traditional emphasis on social isolation or separation. It explores how rapid emotional changes and the resultant anxiety can impact feelings of loneliness. The study suggests that reduced empathy in listening and a resistance to different opinions in dialogues can lead to a stronger tendency toward rigid, old-fashioned attitudes, known as 'kkondae' in Korean culture. The results indicate that communication problems fueled by anxiety can lead to loneliness.

This investigation delves deeper than common causes of loneliness to explore fundamental reasons, highlighting that the core of loneliness is a failure to establish significant connections, stressing the importance of authentic interactions in addressing it, even today. Effective communication, like empathetic listening and openness to others, is key to overcoming 'kkondae' tendencies and loneliness. Stubborn characteristics can intensify loneliness, showing the need for flexibility and personal development. The study emphasizes that to effectively tackle loneliness, we must focus on communication and adaptability, rather than just social inclusion or relationship status.

The study gains importance with its discovery that increased anxiety can worsen communication barriers. It reveals how anxiety and difficulties in communication are intertwined, impacting mental health and social proficiency. Addressing anxiety is crucial in comprehensive strategies to alleviate loneliness and build meaningful connections.

The research contributes to both scholarly knowledge and practical applications. It builds upon previous studies on loneliness, particularly focusing on the individual's levels of anxiety and communication styles [30]. It also sheds light on the relationship between 'kkondae'—a Korean term for a certain type of inflexibility—and loneliness, offering significant insights into limited research in this area.

It underscores "kkondae's" characteristic tendency for interpersonal disharmony and its pivotal mediating role in the relationship between anxiety and loneliness, making a significant contribution to extending previous research that has primarily focused on the direct link between anxiety and loneliness [30, 31, 32].

The practical outcomes of this research suggest that loneliness is often linked with depression, but it is important to consider the role of anxiety as well. The findings advocate for training in active listening and openness to others as ways to disrupt the transition from anxiety to loneliness. The study reminds us that while individuals may have interpersonal skills, anxiety can still impair these capabilities, and recognizing this can prevent a descent into the loneliness cycle.

The findings of this study can be applied in practice by offering human resource managers insights on how to enhance interpersonal communication and prevent feelings of isolation and loneliness within organizations. Based on the results of this study, human resource managers should focus on alleviating the anxiety of organizational members to help them form relationships with others and avoid loneliness.

Testing cultural equivalence

Conducting a scale validity study originally developed in South Korea in the United States involves assessing whether the scale remains valid and applicable when used in a different cultural context, which is an important implication of the study. Conducting a validity study in a new cultural context helps determine whether the scale measures what it is intended to measure (construct validity) and whether it produces consistent and reliable results (reliability) in the new cultural setting. This process is crucial for ensuring that the scale's findings are applicable and accurate in the U.S. context. Obtaining

reliable results from a diverse group of consumers in the United States holds significant meaning. Despite not accounting for specific cultural factors unique to the U.S., this study demonstrates that the “kkondae” trait, as a human characteristic, may be applicable across cultures without requiring special cultural considerations.

While this study offers significant scholarly insights, it also presents certain constraints that should be noted. Its primary limitation lies in the fact that the data collection was confined to participants within the United States. This geographical limitation raises questions about the generalizability of the study’s findings across different cultural contexts. To ensure the robustness and applicability of the study’s scale, it’s crucial that future research efforts validate these findings through similar studies conducted across a variety of global markets. Such international research efforts should not only replicate the methodology but also adapt it to account for unique cultural variables. This approach would allow for a more nuanced understanding of how cultural nuances might impact the phenomena being studied. By examining the role of culture-specific dynamics, subsequent studies can contribute to a more global perspective, potentially leading to the development of more commonly applicable models. It is this kind of cross-cultural validation that can ultimately enhance the utility and relevance of the research findings for a wider audience, including practitioners and academics in international settings.

Abbreviations

SEM	Structural Equation Modeling
NIMH	National Institute of Mental Health
BAI	Beck Anxiety Inventory
RULS	The Revised UCLA Loneliness Scale

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Author contributions

JL, D.K., and HC wrote the main manuscript text, prepared all figures and table together. All authors reviewed the manuscript.

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Data availability

The datasets used and analyzed during the current study available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

This study was reviewed and approved by the Institutional Review Board (IRB) of Hankuk University of Foreign Studies (HUFS IRB) (Approval No. HIRB-201910-HR-001) in accordance with ethical guidelines, including the Helsinki Declaration, Korean bioethical regulations, and internationally recognized research standards. The United States Department of Health and Human Services (HHS) regulations for the protection of human subjects (45 CFR 46, the Common Rule) primarily apply to research that is federally funded by U.S. agencies or conducted under the auspices of a U.S. institution. Since

this study was conducted independently, without U.S. federal funding or institutional oversight, it does not fall within the mandatory scope of U.S. IRB review under 45 CFR 46. Additionally, under 45 CFR 46.104(d), certain types of research, including anonymous survey studies with minimal risk, may qualify for exemption from full IRB review. This study involved an online survey with no personally identifiable information (PII) collected, no experimental intervention, and no psychological or physiological risk to participants, aligning with the exemption criteria. Furthermore, the Secretary’s Advisory Committee on Human Research Protections (SACHRP) 2013 recommendations emphasize that IRBs should adopt a flexible and context-specific approach to internet-based research. The guidance highlights that additional IRB oversight may not be required for minimal-risk online surveys that do not involve direct intervention or manipulation. Given that this study met these conditions, the HUFS IRB approval sufficiently ensured ethical compliance without requiring additional U.S. IRB approval. All participants provided informed consent before taking part in the study. They were clearly informed of the research objectives, procedures, and potential risks. Participation was entirely voluntary, and participants retained the right to withdraw from the study at any time without penalty. No personally identifiable information (PII) was collected at any stage of the study. All responses were anonymized, and data access was restricted solely to the research team to maintain confidentiality. The study was conducted in accordance with relevant ethical guidelines, including 45 CFR 46 and SACHRP recommendations, and no additional institutional ethics approval was deemed necessary based on these established regulatory frameworks.

Consent for publication

Not applicable.

Consent to participate

Not applicable.

Competing interests

The authors declare no competing interests.

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