

**Title:** Understanding residents' attitudes towards tourists through implicit stereotypes

**Abstract:**

Residents' attitudes have been an important area in tourism research. Recent studies have employed the concept of stereotypes from social psychology to understand its content and influences on residents' emotions, and behaviours towards tourists. However, existing studies tend to emphasize measurements that capture explicit stereotypes, despite the importance of individuals' unconscious evaluations of others. This study addresses this gap by assessing residents' implicit stereotypes, emotions and behaviours against tourists via a novel implicit association test (IAT). The results suggest direct relationships amongst positive implicit stereotypes, emotions, and behaviours; however, negative implicit stereotypes did not arouse negative emotions or harmful behaviours, which suggests a possible boundary condition for these connections. This study contributes to the literature by highlighting an alternative perspective to the formation of residents' attitude and by providing insights to destination management organizations (DMOs) on the value of measuring implicit stereotypes for understanding host-guest relations.

**Keywords:** Host-guest relations, intergroup interactions, destination management, bias, implicit association test

## Introduction

The investigation of residents' attitudes is an important topic in tourism research. Understanding residents' attitudes is crucial for facilitating positive tourist experiences, fostering local support, and enhancing destination image (Woosnam, Styliadis, & Ivkov, 2020). It is also crucial within the broader area of host-guest relations research that is relevant for tourism management (Chen, Hsu, & Li, 2018).

Although previous research in host-guest relations have adopted concepts from social psychology, this study argues that directly applying measurement scales from psychology is inappropriate given the unique context of tourism for understanding individuals' attitudes and stereotypes between social groups. Stereotype research in mainstream psychology research often focuses on differences between major demographic cohorts; for instance, studies have examined biases against females and males in the context of organizational studies in the United States (Amis et al., 2018; Clarke, 2020; Eagly et al., 2020; Gupta et al., 2013; Parsons, 1942), as well as stereotypes against older or younger workers within an organization (Kulik, Perera, & Cregan 2016; Manzi et al., 2019; Petery et al., 2020; von Hippel et al., 2019). In these examples, studies focused on stereotypes against different citizens embedded within the same society. However, the context of tourism is unique in that tourism is an enjoyment-focused context whereby resident' perception towards tourists is form mainly through short-term encounters (Chen et al., 2021; Demeter et al., 2023; Li & Chen, 2019). These encounters or interactions make tourism different from the traditional organizational context in the examination of stereotypes.

Given the distinct characteristics of residents and tourists from different societies, previous research have identified unique stereotypes against tourists, such as views of rudeness and boastfulness due to tourists' heavy materialistic spending. This has been noted across many destinations worldwide including Hong Kong (Chen & Hsu, 2021), Singapore (Tse & Tung, 2022b), Tokyo (Hung et al., 2018), and Paris (Hung, Ren, & Qiu, 2021). As a result, negative stereotypes against tourists are prevalent, and residents have become highly unfriendly, with many even mocking and threatening tourists, thereby damaging host-guest relations and destination image (Fong, Zhang, & Wang, 2022). This context is certainly unique to tourism research as compared to other fields such as mainstream psychology and organizational studies.

Additionally, previous studies in tourism tend to focus only on one stream of cognitive information processing: explicit measures of stereotypes. Stereotypes, however, exist in two distinct forms: explicit and implicit. The two forms differ conceptually and require different measurement approaches. For instance, implicit stereotypes reflect individuals' unconscious evaluations about others that are less influenced by self-interests and social desirability which could be captured by implicit association tests (IATs) rather than survey questionnaires or face-to-face interviews (Fazio & Olson, 2003; Herz & Diamantopoulos, 2013). Over-reliance on explicit measures could result in an incomplete understanding of stereotypes in tourism research.

There is an increasing attention on the application of IAT in tourism, such as research on destination image (Chen et al., 2016; Choi, Liu, & Kim, 2015), food and beverage choice (Lee & Kim, 2013), and host-guest relation (Tse & Tung, 2023). Their findings indicate the presence of implicit stereotypes in tourism that warrant more attention in future studies.

Although recent research conducted by Tse and Tung (2023) examined the role of implicit evaluations on behaviours, it failed to consider the mediating effect of emotion in the formation of residents' attitudes.

The present study aims to address these gaps by examining residents' attitudes through the investigation of implicit stereotypes. More specifically, this study investigates the connections among implicit stereotypes, emotions, and behaviours from residents towards tourists. For capturing implicit stereotypes, this study employed a full version of the implicit association test that was uniquely developed for tourism research (Tse & Tung, 2023). Emotions (i.e., assimilative and contrast) and behaviours (i.e., facilitative and harmful) were measured using items from recent studies (Chen et al., 2018; Gong, Detchkhajornjaroensri, & Knight, 2018; Joo et al., 2018; Tse & Tung, 2021; Zhang et al., 2021).

Overall, this study contributes to the literature by highlighting an alternative perspective to the formation of residents' attitudes. It shows how implicit stereotypes could induce residents' assimilative or contrastive emotions, which further elicits their subsequent facilitative or harmful behaviours against tourists. Finally, this study provides insights to destination management organizations (DMOs) on the value of measuring implicit stereotypes for understanding host-guest relations.

## **Literature Review**

### ***Defining and Connecting Stereotypes, Emotions and Behaviours***

Previous research in social psychology examined connections between stereotypes, emotions and behaviours in the areas of attitudes, intergroup relation, and social development (Agapito, Oom do Valle, & da Costa Mendes, 2013; Cuddy, Fiske, & Glick, 2007; Fiske et al., 2002; Tasci & Gartner, 2007). Stereotypes are individuals' cognitive assessments about other individuals' attributes with respect to their social groups, which foster the grouping of members into in-group versus out-group (Taylor et al., 1996). These assessments are based on information processing that could be collected from personal experiences, media reports, or groundless gossip; regardless of whether they are true or false, they aim to homogenize individuals within the same social group (Pickering, 2001), thereby causing de-individualization. Stereotypes are attached with values of discrimination, which may affect the actual image of individuals and social groups (Pickering, 2001; Tse & Tung, 2022b). Contemporary social psychology studies suggest the existence of two dichotomy systems of stereotypes: explicit and implicit. Their separations are based upon intention (Uleman & Bargh, 1989), locus of control (Devine, 1989), level of consciousness (Kihlstrom, 1990), and awareness (Langer, 1989). Specifically, explicit stereotypes are intended, controlled, conscious, and mindful, while implicit stereotypes are unintended, uncontrolled, unconscious, and mindless.

Emotion is an affective outcome fostered by cognitive evaluations, which could be either reciprocal or in opposition concerning the target, object, phenomena, or person (Wyer Jr, Clore, & Isbell 1999). Emotions could be influenced by stereotypes; for instance, Fiske et al. (2002) examined the relationships between stereotypes and emotions through the extension of the Stereotype Content Model (SCM) onto assimilative and contrastive emotions. Assimilative emotions were regarded as positive emotions while contrastive emotions were considered negative emotions. Previous studies suggested that assimilative emotions consist of admiration, pride, respect, inspiration, pity, and sympathy, while

contrastive emotions contain envy, jealousy, contempt, resentment, disgust, and hate (Fiske et al., 2002, 2008; Smith, 2000).

Behaviours refer to the exchange of actions between social groups and are examined along the valence dimension of facilitation and harm, which could be regarded as positive and negative behaviours, respectively. Existing tourism studies have identified a range of residents' behaviours towards the tourists, for example, residents' hospitality, courtesy, and politeness with tourists to stimulate constructive host-guest relations (Chen et al., 2018, Tung, 2019). On the contrary, residents could insult, harass, or even condemn tourist to display their disagreement against them (Maoz, 2006, Otoo, Badu-Baiden, & Kim, 2019). Integrating the present findings, Tse and Tung (2021) conceptualized residents' behaviours towards tourists along the facilitation-harm spectrum from existing literature. In their results, facilitative behaviours contain initiating and accommodating actions, such as residents' willingness to interact, socialize, converse, accept, endure, and tolerate tourists. In contrast, harmful behaviours consist of distancing and intimidating behaviours, such as being unfriendly, mocking, threatening, resisting, refraining, and reluctance to help tourists in need.

Depending on the polarity of the stereotype contents, the degree of emotions and behaviours varies accordingly. Positive stereotypes could induce assimilative emotions and facilitative behaviours, as well as reduce contrastive emotions and harmful behaviours (Rast III et al., 2018; Tasci & Gartner, 2007; Vaughn et al., 2017). This mechanism applies to negative stereotypes, resulting in opposite outcomes (Ozawa & Yaeda, 2007). The connections among stereotypes, emotions, and behaviours not only indicate the direct influence of stereotypes onto emotions and behaviours, but also reveal that emotion could serve as a mediator between the direct effect of stereotypes and emotions (Becker & Asbrock, 2012; Cuddy et al., 2008; Sadler, Kaye, & Vaughn, 2015).

Previous studies have also shown that emotion as a significant mediator of behaviour; for instance, positive emotions increase approaching behaviours while negative emotions induce avoidance behaviours towards members of another social group (Lin & Mattila, 2010; Nelson, Cook & Ingram, 2014; Oliver, 1997; Pedersen & Nysveen, 2001). Conceptual and empirical results from the study conducted by Cronin Jr, Brandy and Hult (2000) suggested direct influences of emotions on behaviours. Cuddy et al. (2008) conducted a more comprehensive analysis that integrated emotional reactions items from the Stereotype Content Model with facilitative and harmful behaviours items. Examining at both individual and group levels, they concluded that assimilative emotions were associated with facilitative behaviours while contrastive emotions were connected with harmful behaviours. These relationships were supported in various studies of human-animal attitudes (Sevillano & Fiske, 2019), mental illness (Boysen, 2017), intergroup discrimination (Brewster & Heffner, 2023; Bye & Herrebrøden, 2017).

### ***Implicit Stereotypes***

While studies in tourism have sought to adopt the above concepts to investigate residents' attitudes, they only adopted explicit measurements of explicit stereotypes and neglected the importance of implicit stereotypes on residents' emotions, and behaviours. Implicit stereotypes refer to an individuals' unconscious or unaware beliefs towards members of another social group (Devine, 1989; Kihlstrom, 1990). It is based upon two theoretical concepts: associative network in semantic memories and automatic activation (Greenwald & Banaji, 1995). Semantic memories focus on the relationship between items, whereby related items have stronger relations than unrelated items (Collins & Loftus, 1975). These

relations formulate an associative network among clustered items (Payne & Cameron, 2013). They are seen as automatic or happen in unconsciousness that do not require an individual's motivation (Cunningham, Preacher, & Banaji, 2001; Hinton, 2017). Social perceptions, especially on stereotyping, are often unconscious or automatic (Bargh, Chen, & Burrows, 1996). Implicit stereotypes differ from explicit stereotypes that emphasize conscious and controlled intentions that are prone to self-presentation effects and social desirability bias (Tse & Tung, 2023).

Implicit stereotypes are necessary in tourism research as biases against tourists may be activated subconsciously without the presence of intentions and awareness (Greenwald & Banaji, 1995). While existing studies have typically focused on explicit stereotypes through in-depth interviews and survey questionnaires, for example, the sole reliance on an explicit approach could lead to social desirability bias (e.g., Chen & Hsu, 2021; Hsu & Chen, 2019; Maruyama & Woosnam, 2015). The use of implicit stereotypes could reduce such biases and reveal subconscious associative networks of stereotype attributes that influence the formation of residents' attitudes. In other words, investigating implicit biases adds to the tourism literature by offering a more complete understanding of a dual dichotomy system of stereotypes (i.e., explicit and implicit).

In tourism, the frequent interactions between residents and tourists have resulted in stereotypes against tourists by residents (McNaughton, 2006). For instance, Israeli residents' stereotypes against Jordanians (Pizam, Fleischer, & Mansfeld, 2002), Japanese residents against Brazilians (Maruyama & Woosnam, 2015), Hong Kong residents against the mainland Chinese tourists (Chen & Hsu, 2021; Hsu & Chen, 2019; Tung et al., 2020). Although these studies revealed dimensions of negative and positive stereotypical attributes against tourists, they nevertheless employed only explicit measures.

### ***Implicit Association Test (IAT)***

IAT is built on the foundation of cognitive priming tasks to capture an individual's reaction time of associating items, such as the association between the target (e.g., tourist) and attributes (e.g., stereotypes). This computerized program requires individuals to pair targets and attributes simultaneously and rapidly, and the reaction time represents the individual's implicit evaluation. The classic version of IAT consists of two targets and two attributes, whereby the targets are presented in a picture while the attributes are presented in words and seven blocks of pairing trials. In each trial, either a picture or word is shown on the computer screen. It requires individuals to sort it into either target or attributes by pressing the corresponding computer keys. The targets and attributes are alternating between the computer keys across the seven blocks during the pairing trials. The reaction time for the individual to press the computer keys is recorded and calculated into a score that grouped individuals into one of the seven stereotype associations (Greenwald et al., 2003; Haider et al., 2011). Previous studies argued that strong association could be faked by prolonging the reaction time on disassociated pair of trials, thus affecting the score and stereotype association (McFarland & Crouch, 2002). To address this, Greenwald and his team (2003) proposed a new scoring algorithm by employing a *D* measure to account for inaccurate reaction time. In addition, a long reaction time (> 10 seconds) was removed in the data cleaning process.

Existing studies have been employing IAT in various fields, for instance, consumer preferences (Maison, Greenwald, & Bruin, 2004), gender preferences (Koranyi et al., 2017), intergroup conflicts and relations (Greenwald et al., 2009), medicinal treatment (Colledani &

Ciani, 2021), and political attitudes (Ryan, 2017). Similarly, IAT has also been employed in tourism studies to explore implicit evaluations towards tourists, tourism products or phenomena. For example, Yang and his team (2012) revealed that mainland Chinese tourists have a more positive implicit perceived destination image towards Hong Kong than Japan. A similar operation was employed by Choi, Liu, and Kim (2015) to capture American's implicit image of China and England. IAT was employed to assess Americans' and Koreans' implicit attitudes towards two known fast food restaurant brands (Lee & Kim, 2013). In host-guest relations, Tse and Tung (2023) investigate residents' implicit stereotypes of mainland Chinese tourists.

### ***Summary and hypotheses: Integrating implicit stereotypes with residents' emotions and behaviours***

Previous research outside of the tourism literature suggested that implicit stereotypes could affect individuals' emotions and behaviours (Paladino et al., 2002). Wang et al. (2014) demonstrated the influence of implicit stereotypes through IAT onto explicit ratings of emotional expressions between different races. McConnell and Leibold (2001) revealed that implicit measures were related to an individual's social behaviours whereby positive implicit perceptions induced positive social interactions. Other studies also supported the connection between implicit measures of cognition and behaviours (Dovidio et al., 1997; Rudman & Ashmore, 2007).

Although implicit stereotypes serve as another system of cognition, limited research in tourism has examined the direct effect of implicit stereotypes on residents' emotions and behaviours. As such, the present study integrates these constructs in a tourism context as per Figure 1 and proposes the following hypotheses.

----- Insert Figure 1 here -----

- H1a: High values of IAT scores have a positive direct effect on assimilative emotions.
- H1b: High values of IAT scores have a negative direct effect on contrastive emotions.
- H1c: High values of IAT scores have a positive direct effect on facilitative behaviours.
- H1d: High values of IAT scores have a negative direct effect on harmful behaviours.

- H2a: High values of assimilative emotions have a positive direct effect on facilitative behaviours.
- H2b: High values of assimilative emotions have a negative direct effect on harmful behaviours.
- H2c: High values of contrastive emotions have a negative direct effect on facilitative behaviours.
- H2d: High values of contrastive emotions have a positive direct effect on harmful behaviours.

- H3a: Assimilative emotions mediate the direct effect between IAT scores and facilitative behaviours.
- H3b: Assimilative emotions mediate the direct effect between IAT scores and harmful behaviours.
- H3c: Contrastive emotions mediate the direct effect between IAT scores and facilitative behaviours.

H3d: Contrastive emotions mediate the direct effect between IAT scores and harmful behaviours.

## **Methodology**

This section presents the methods employed to analyze the connections amongst implicit stereotypes, and residents' emotions and behaviours. Data was collected from a sample of Singaporeans towards mainland Chinese tourists. There are relevant reasons for examining the context of Singaporeans and mainland Chinese tourists in this study. Singapore is a very unique context. Singaporean Chinese largely recognize their Chinese roots and origins with less conflicts towards mainland China (Teo, 2019), especially amongst the older generations who are born in China and remain connecting with their Chinese counterparts (Kuah, 2019), as compared to residents in Hong Kong. Singapore is a developed country with high cultural similarity with China, and its uniqueness lies between mainland China and Hong Kong in terms of cultural similarity and social dissimilarity.

Prior to the pandemic, international tourism accounted for about 4.0% of Singapore's Gross Domestic Product (GDP), with 3.6 million mainland Chinese tourists accounting for 13% of the total inbound visitors (Singapore Tourism Board, 2020). As mainland China returns to a path of normalcy in 2023, Singapore is expected to be a popular destination as pre-departure tests were not imposed on Chinese travelers (Lim, 2023). Singapore hotels recorded an increasing number of enquires and website traffic from China, suggesting an influx of Chinese travelers to Singapore in the near future (Ng et al., 2023).

The findings from this study on Singaporeans and mainland Chinese tourists could offer insights on understanding host-guest relation as similar conflicts between residents and mainland Chinese tourists may occur more frequently as tourism develops across Southeast Asia. Additionally, Singapore is one of the most developed countries in Southeast Asia based on a per capita level of GDP. As other Southeast Asian countries develop, the experiences from Singaporeans could offer insights into how their residents may perceive mainland Chinese they develop economically and socially. In other words, the tourism policymakers in other Southeast Asian nations may benefit from understanding and learning from the challenges between Singaporeans and mainland Chinese tourists as they continue to manage their own host-guest relations going forward.

## ***Research Instrument and Procedures***

The research instrument consisted of three parts: Implicit Association Test (IAT), emotions and behaviours, and was distributed to Singaporeans (Appendix 1). A computerized IAT measurement was used to capture residents' implicit stereotypes via the reaction-times that they held towards a target (i.e., mainland Chinese tourists) (Fazio & Olson, 2003). In this research, a full version IAT of seven blocks with two targets and two attributes were employed. The two targets were pictures of mainland Chinese tourists versus non-mainland Chinese tourists. At the same time, the two attributes were words referring to the positive versus negative tourist stereotype contents identified by Tung et al. (2020). The reaction time for individuals to pair the target/attribute to the computer key(s) was recorded to calculate the IAT score, which categorized individuals' implicit stereotypes into groups of stereotype associations (Tse & Tung, 2023). The association rate depended on the frequency of exposures and the degree of biased relation between items (Devine 1989, Lepore & Brown, 1997). While previous studies have employed priming tasks (Fazio et al., 1986), Go/No-Go task (Nosek & Banaji, 2011) and sorting paired featured task to measure implicit views (Bar-

Anan, Nosek, & Vianello, 2009), recent methodology advancement in IATs have shown higher reliabilities and fewer human error interferences (Carpenter et al., 2018).

Residents' emotions were measured against 12 assimilative and contrastive emotional reactions identified by Fiske et al. (2002). Assimilative emotions consisted of admiration, inspiration, pride, respect, pity, and sympathy, while contrastive emotions comprised of envy, jealousy, contempt, disgust, hate, and resentment. These items were evaluated on a 7-point scale (i.e., 1 = strongly disagree to 7 = strongly agree). Residents' behaviours were evaluated using the resident behaviour model (Tse & Tung, 2022a), which captured six facilitative and six harmful behaviours. The six facilitative behaviours were residents' willingness to interact, socialize, communicate, accept, endure, and tolerate tourists. The six harmful behaviours reflected residents' unfriendliness and willingness to mock and threaten tourists, as well as residents' reluctance, resistance, and extent to refrain from helping tourists. These items were evaluated along a 7-pointed frequency scale (i.e., 1 = never to 7 = often).

### ***Sampling***

The questionnaire was posted on Qualtrics, an online platform that recruits respondents internationally and has been adopted as a data collection approach in recent tourism studies (e.g., Campbell & Kubickova 2020; Suess, Woosnam, & Erul 2020; Tse & Tung, 2022b). Qualtrics was selected as the data collection platform as it allowed for the modification of HTML and JavaScript to create reaction-time processing and interactivity. These are two important functions in IAT. The online survey was equipped with interactive functions as well as a time recorder, which were activated once respondents pressed the assigned computer key (i.e., space bar). Reaction times were captured in milliseconds through the recording of the timestamp differences between the start and end of each association. The times of each association, regardless of words or pictures, were recorded and stored. The recorded reaction times were subsequently used to calculate the D score and corresponding association category.

Gender quota sampling was adopted to ensure both male and female were represented within the collected sample. To ensure the respondents are Singaporeans, they were screened based on the two requirements stated by the immigration department of Singapore to be qualified as a Singaporean: (1) be a permanent resident of Singapore for at least 1 years, and (2) have been residing in Singapore for consecutive 2 years. Consequently, internationally residing Singaporeans that did not meet the above criteria were excluded from the collected sample. During the data collection, individuals must fulfill two requirements to be eligible for the invitation: (1) they must be residing in Singapore at the point of answering the survey, and (2) they must hold Singaporean citizenship, which requires fulfilment of the above stipulations. Those who answered 'no' were terminated from the survey immediately. Additionally, to ensure the credibility of the data, Internet Protocol (IP) addresses were recorded and checked to ensure the survey was completed in Singapore.

## **Results**

### ***Respondent Profile***

A total of 221 completed surveys were collected, which met the requirement for a two-tailed correlational model with a Cohen's effect size of  $d=0.20$  (medium), significance level ( $\alpha$ ) of 0.05, and an expected power of 0.80 based on G-Power 3.1.9.7 (Cohen, 1988; Faul et al., 2007; Ferguson, 2009; Hoogman et al., 2017; Schreger & Kimble, 2017). This



sample size is also support by previous intergroup attitude studies that used a full version of the IAT, which required significantly more involvement from respondents than single-target IATs and traditional survey questionnaires (Carpenter et al., 2019; McConnell & Leibold, 2001; Gawronski et al., 2017; Kurdi et al., 2019; Lai & Wilson, 2021; Wang et al., 2020). The sample contained 48.87% of female and 51.13% of male respondents. The distribution of age and education were similar to the first set of data whereby the majority of the respondents were aged between 25 to 44 years old (25 to 34 years old: 41.18%; 35 to 44 years old 32.58%), and 59.73% of them received up to university education.

----- Insert Table 1 here -----

### ***Descriptive Analysis***

Table 1 presents the composite reliabilities, means, and standard deviations of implicit stereotypes, assimilative and contrastive emotions, and facilitative and harmful behaviours. The results indicated the values of composite reliabilities across the five examined variables exceeded the threshold values of 0.70 (Nunnally, 1978), ranged from 0.749 to 0.912, showing good internal consistencies of each variable. Also, the means and standard deviations are calculated. The results show that, on average, the implicit stereotypes of Singaporeans towards mainland Chinese tourists is -0.003 (SD = 0.500). Although it is a negative value, according to Haider et al. (2011), Singaporeans have neither negative nor positive implicit stereotype association (-0.15 to 0.15). The means value of residents' emotions indicated that Singaporeans associated more contrastive emotions, such as envy and contempt, towards the mainland Chinese tourists than assimilative emotions of positivity.

----- Insert Table 2 here -----

More specifically, according to the reaction times, an IAT score was calculated and the respondents were classified into one of the seven implicit association groups, namely: Neither Negative nor Positive (49, 22.17%), Slightly Positive (28, 12.67%), Medium Positive (27, 12.22%), Strong Positive (26, 11.76%), Slightly Negative (43, 19.46%), Medium Negative (25, 11.31%), and Strong Negative (23, 10.41%). In sum, there are slightly more negative implicit tourist stereotype among the Singaporeans towards the mainland Chinese tourists (see Figure 3).

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### ***Path Analysis of Implicit Stereotypes, Emotions, and Behaviours***

The path modelling of implicit stereotypes, emotions, and behaviours were examined using SPSS PROCESS v3.5, model number 4, 10,000 bootstrap samples, and 95% confident interval (Hayes, 2013). The results indicated that assimilative emotions mediated the relationship between implicit stereotype, represented by the IAT score, and facilitative behaviours ( $ab = 0.6463$ , 95%CI[0.4286, 0.8972]). More specifically, higher values of IAT score elicits assimilative emotions of positivity ( $a = 0.8585$ ,  $p < 0.0001$ ) which further induce facilitative behaviours towards tourists ( $b = 0.7528$ ,  $p < 0.0001$ ). Furthermore, the total non-mediated effect of implicit stereotype on facilitative behaviours ( $c = 0.7151$ ,  $p < 0.0001$ ) became insignificant after controlling assimilative emotions ( $c' = 0.1041$ ,  $p = 0.4779$ ), suggesting a full mediation model. However, there is no significant mediation resulted from assimilative emotions on the relationship between implicit stereotype and harmful behaviours

( $ab = -0.0472$ , 95%CI[-0.2128, 0.0948]) as the direct effect between assimilative emotions and harmful behaviours are not significant ( $b = -0.0549$ ,  $p = 0.4513$ ).

No mediations have resulted in the relationships between implicit stereotypes, facilitative behaviours, and harmful behaviours for contrastive emotions. More importantly, the results indicated that IAT scores have no influences on residents' contrastive emotions ( $a = 0.1675$ ,  $p = 0.2377$ ), suggesting no mediation (Baron & Kenny, 1986). Despite that, significant effects were identified between contrastive emotions and residents' behaviours, both facilitation and harmful. Specially, Singaporeans' contrastive emotions reduced their facilitative behaviours ( $b = -0.2104$ ,  $p = 0.0027$ ) while induced their harmful behaviours ( $b = 0.7892$ ,  $p < 0.0001$ ) towards the mainland Chinese tourists. In addition, implicit stereotype has no significant relations towards harmful behaviours of either distancing or intimidating.

----- Insert Figure 3 here -----

----- Insert Table 3 here -----

## Discussion

This study examined residents' attitudes towards tourists by integrating implicit stereotypes, emotions, and behaviours. Specifically, the findings revealed significant relationships amongst implicit stereotypes via IAT scores, emotions and behaviours. Higher values in the IAT (i.e., positive implicit stereotypes) induced assimilative emotions and subsequent facilitative behaviours. This finding extends research in explicit stereotypes by showing that residents' positive attitudes displayed through their facilitative behaviours are driven, to a certain extent, by residents' positive implicit stereotypes. In other words, positive implicit stereotypes could contribute to positive resident-tourist interactions, thereby lead to healthy host-guest relations (Neuberg & Cottrell, 2002).

Additionally, this study highlighted an interesting boundary condition for implicit stereotypes as residents' negativity through contrastive emotions and harmful behaviours were not associated with IAT scores. In other words, IAT scores insignificantly influence negative emotions and behaviours. A possible explanation is that the identities of residents (i.e., insiders) and tourists (i.e., outsiders) may serve as an opportunity for residents to display their out-group negativities more explicitly to show their differences. The perceived differentiation may prompt residents to display their negative attitudes explicitly – rather than implicitly – through discrimination, intimidation, and condemnation against tourist openly; that is, the expression of negative stereotypes could be done explicitly rather than implicitly.

## *Theoretical Implication*

Existing studies have mostly employed explicit measurements, such as self-reported survey questionnaires and face-to-face interviews, thereby neglecting implicit biases in tourism research (Chang et al., 2020). In addressing this gap, this study contributes to the literature by presenting an additional perspective that integrates implicit stereotypes, residents' emotions and behaviours that are relevant in the formation of residents' attitudes. By highlighting the influence of residents' unconscious perceptions onto emotions and behaviours, the study offers new knowledge on resident-tourist interactions and host-guest relations.

This study further contributes to the tourism literature by presenting the boundary condition for implicit stereotypes. Unlike explicit stereotypes, negative implicit stereotypes (i.e., lower IAT scores) elicited neither residents' contrastive emotions nor harmful behaviours. While previous studies in social psychology suggested that negative explicit stereotypes could elicit feelings of contempt and foster intimidating behaviours against others (Bye & Herrebrøden, 2018; Constantin & Cuadrado, 2020; Cuddy et al., 2007; Fiske, 2015), this study did not find these relationships via implicit stereotypes in the distinct tourism context. In other words, the presence of negative implicit stereotypes did not lead to negative attitudes that could damage host-guest interactions. It is important to clarify, however, that the absence of such relationship does not infer the absence of negative implicit stereotypes among residents. Instead, it suggests that negative stereotypes against tourists may be expressed explicitly rather than implicitly, leading to direct and open contrastive emotions and harmful behaviours.

Additionally, this study contributes to the literature in host-guest relations by highlighting the influence of positive implicit stereotypes (i.e., higher IAT scores) on assimilative emotions and facilitative behaviours. The study provides support to the role of positive stereotypes on facilitating favorable residents' attitudes that are important in host-guest relations. This suggests that it is relevant to evaluate implicit stereotype for understanding how residents evaluate, feel, and interact with tourists, rather than relying solely on existing explicit measures.

### ***Practical Implication***

The findings suggest that residents with positive implicit stereotypes held assimilative emotions and performed facilitative behaviors. Assimilative emotions reflect a sense of emotional solidarity, through friendliness, welcoming, and closeness, in the resident-tourist relationship (Stylidis et al., 2020). In this regard, DMOs can enhance emotional solidarity by organizing festivals and events to encourage residents' participation in tourism activities, and offer opportunities for displaying resident-tourist interactions. The goal is for residents to identify positive aspects of tourists to foster their emotional connections and affections. Additionally, DMOs can improve resident-tourist touchpoints and encourage positive exchanges between them at local shops, for instance, in an effort to enhance positive emotions and subsequent facilitative behaviors.

The focus of this study is on how stereotypes, based on different IAT scores, affects emotions and behaviours. Specifically, positive implicit stereotypes induce upwards, assimilative emotions and eventually cue facilitative behaviors. In this regard, DMOs should facilitate suitable communication by introducing promotional material that display the close connections between residents and tourists and their positive interactions, as an appreciation of differences may enhance social harmony and foster deeper understandings (Tasci et al., 2022). This approach could 'set the stage' for tourists who are interested in quality resident-tourist interactions (Stylidis et al., 2022).

### ***Limitation and future research***

There are limitations in this study that could serve as opportunities for future research. While Singapore was chosen as the study context, there are other Southeast Asian countries that have become popular amongst mainland Chinese tourists. However, negative interactions

have been reported between residents in other Southeast Asian countries and mainland Chinese tourists. Future research could replicate this study into different Southeast Asian nations to understand their residents' attitudes that are important to fostering destination image and competitiveness. This is particularly relevant as residents rejoin tourism and hospitality while balancing personal wellbeing, community involvement, and career mobility after the pandemic (Ali et al., 2022; Hu et al., 2022; Tolkach & Tung, 2019)

Future research could employ the concept of implicit emotions and investigate its relationships with the dual systems of stereotypes and residents' behaviours. Research in emotions suggest a dual system of formations similar to cognition: explicit and implicit emotions (Braunstein, Fross, & Ochsner, 2017; Gyurak, Gross, & Etkin, 2011; Torre & Lieberman, 2018). Scholars could modify the IAT to capture implicit emotions, which would be a worthwhile direction for scholars interested in emerging research topics (McKercher & Tung, 2016). Finally, this study investigated the connections of implicit stereotypes, emotions, and behaviours. Future studies could integrate these theoretical concepts and provide empirical findings to explore the differences between explicit and implicit stereotypes in constructing the residents' attitudes towards tourists, thereby enhancing knowledge of host-guest interactions and relations.

(8949 words)

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