The impact of self-construal and ethnicity on self-gifting behaviors

Theeranuch Pusaksrikit*
theeranuch_pus@utcc.ac.th

Jikyeong Kanga,b,c
jkang@aim.edu

*University of the Thai Chamber of Commerce, 126/1 Vibhavadee-Rangsit Road, Dindaeng, Bangkok 10400, Thailand
bAsian Institute of Management, 123 Paseo de Roxas, Makati 1229, Philippines
cManchester Business School, Booth Street West, Manchester M15 6PB, UK
⁎Corresponding author at: Asian Institute of Management, 123 Paseo de Roxas, Makati 1229, Philippines. Fax: +63 2 892 4613.

Abstract

This research extends the understanding of how self-construal plays a role in our consumption behavior using self-gifting as its context. By applying a four-dimensional self-construal model, we sought to examine differences in self-gifting behaviors among the four self-construal groups (i.e., Bicultural, Western, Traditional, and Alienated), composed of participants from four ethnic groups in the UK (White, Indian, Pakistani, and Bangladeshi). The dependent variables included self-gift propensity, self-gift selection effort, and self-gift post-emotion. Our findings revealed significant differences in self-gifting patterns among different self-construal groups. Generally, the Bicultural and Western self-construal groups are similar, but differ in self-gifting behaviors from Traditional and Alienated self-construal groups. We demonstrate how the four-dimensional self-construal model allows a more precise conceptualization of self-construal and a more thorough investigation of cross-cultural consumption patterns than does the two-dimensional view.

Keywords: Bicultural; Independent self-construal; Interdependent self-construal; Self-gift

Introduction

With globalization, increasing immigration, technology advancement, the spread of mass media, and the ease of travel abroad, more and more people are interacting with more than one culture (Mok & Morris 2012). Consequently, individuals who hold a bicultural identity (e.g., Chinese American or British Indian) have become much more prominent worldwide (Lau-Gesk 2003). The way in which these bicultural individuals handle their multiple cultural identities influences their cognition and behavior (Mok & Morris 2012). Thus, researchers, marketers, and policymakers are keen to understand how bicultural individuals value different self-views as they shift their cultural values when adjusting to a different environment and being exposed to various new cultural contacts (Lu 2008; Yamada & Singelis 1999).

Within the context of understanding bicultural individuals' self-views, the notion of self-construal is seen by many researchers as highly relevant because it may help to explain multifaceted differences among cultural groups (Lam 2006; Yamada & Singelis 1999; Yum 2004). As a number of cross-cultural studies have shown, each individual may have both an independent and an interdependent self-construal because these two dimensions of self-construal are uncorrelated and can coexist to varying degrees within an individual (Escalas & Bettman 2005; Lau-Gesk 2003; Levinson, Langer, & Rodebaugh 2011; Yamada & Singelis 1999). However, to the best of our knowledge, no consumer psychology research has explored how coexisting self-construal of bicultural individuals affects consumption behaviors. Instead, most previous studies have tended to focus merely on the two-dimensional view of self-construal (i.e., comparisons between independent and interdependent self-construal individuals) (Matsumoto 1999).

Further, our review of the literature on self-construal suggests two main limitations of this approach. The first is that the two-dimensional self-construal view, in which individuals are simply classified as either independent self-construal or interdependent self-construal, does not adequately explain the duality of bicultural individuals, because they may have a multifaceted set of selves. It is likely that exposure to two or more cultures enables bicultural individuals to establish and restore two sets of knowledge structures, and the one that is utilized depends on the self-view that is more easily accessible (Ng & Houston 2006) or preferred at any given moment. Categorization as either independent or interdependent
fail to reflect the cultural diversity in modern societies because these bicultural individuals may hold both independent and interdependent self-construal, and form complex self-construal patterns in different combinations and with different strengths (Kolstad & Horpestad 2009).

The second limitation of the two-dimensional self-construal view is that researchers comparing data across ethnicities have reported differences that were beyond what we expect from two self-construal types. For example, Duclos & Barasch (2014) found that their interdependent self-construal American participants were more self-focused than the independent self-construal Chinese participants. This raises the question of whether different self-construal levels of different ethnicities have distinct influences on consumption behaviors (Duclos & Barasch 2014). Moreover, some cross-cultural studies observed significant between-group differences in either independent or interdependent self-construal levels (Cross 1995; Escalas & Bettman 2005; Kuo & Gingrich 2004). Combined with the absence of differences in one self-construal type or another, this highlights the importance of investigating the multidimensionality of self-construal.

In a pluralistic society, such as the USA or the UK, where cultural groups are influenced by different cultural and ethnic values in the development of different types of self-construal (Ting-Toomey, Oetzel, & Yee-Jung 2001), it seems plausible that a traditional two-dimensional view of self-construal may limit our understanding of the relationship between self-construal and consumption patterns across ethnic groups. For instance, host members residing in a Western culture may hold high interdependent self-views that express their uniqueness and individuality (Markus & Kitayama 1991; Tynan, Heath, Ennew, Wang, & Sun 2010). On the other hand, ethnic minority members coming from an Eastern culture may hold high interdependent self-views that place value on harmonious relationships with others (Markus & Kitayama 1991; White, Lehman, & Cohen 2006).

Further, bicultural members, who hold both high independent and high interdependent self-views, may behave in a way that would help them to achieve their desired goals based on their capability of monitoring the self, others, and situations, and adapting themselves (Yum 2004). In contrast, alienated members, holding low independent and low interdependent self-views, may not be able to easily detect relational issues or to cope with them appropriately (Yum 2004) and, thus, often experience greater difficulties in adapting to the host society (Lam 2006). We argue that independent and interdependent self-construal coexist to a degree in all cultures, and that, by taking the four-dimensional approach, not only are we able to extend our knowledge on self-construal but also could potentially explain unique consequences of self-construal on attitudes and behaviors (Kolstad & Horpestad 2009).

We aim to advance our understanding of the concept of self-construal by studying its impact within the context of a widely occurring form of self-directed consumption, namely self-gifting (i.e., giving a gift to oneself), which may be carried out to alleviate or protect self-esteem and maintain purposeful self-definition (Heath, Tynan, & Ennew 2011; Mick & DeMoss 1990a). Indeed, self-gifting has existed in Western countries for a long time, and many self-gift researchers assume that self-gifting is particularly common in individualistic cultures, in which material rewards are employed to shape behavior (Heath, Tynan, & Ennew 2011; Mick & DeMoss 1990a; Olshavsky & Lee 1993). However, some researchers argue that ethnic minority groups from Eastern cultures may also engage in self-gifting because it can be a material means of generating an ideal self or an individual strategy to cope with an empty self (Mick 1996; Sherry, McGrath, & Levy 1995; Tynan, Heath, Ennew, Wang, & Sun 2010).

We believe that if we are to fully comprehend the dynamics of self-construal within the context of a particular culture, it is essential that we obtain data from several ethnic groups. Our research thus examines the effects of different types of self-construal on self-gifting behaviors by comparing British White host members and Indian, Pakistani, and Bangladeshi ethnic minority members residing in the UK. Theoretical background

Self-construal

Although numerous researchers have examined differences between Western and Eastern cultures in a variety of cross-cultural studies (e.g., Hofstede, Hofstede, & Minkov 2010; Markus & Kitayama 1991; Triandis 1995), one clear notion that has been identified as distinguishing the two cultures is the concept of self-construal. Self-construal is defined as “a constellation of thoughts, feelings, and actions concerning the relation of the self to others and the self as distinct from others” (Singelis, Bond, Sharkey, & Lai 1999, p. 316) and is generally categorized into independent self-construal or interdependent self-construal (Markus & Kitayama 1991).

An independent self-construal attaches importance to an individual being unique, expressing themselves, and promoting their own goals (Cheng & Lam 2013; Markus & Kitayama 1991). Individuals with an independent self-construal are motivated to express their self-defining attributes by pushing themselves ahead of others and actively seeking their own success (e.g., being hardworking, unique, or powerful). Their positive view of the self derives from accomplishing tasks that are related to their own goals. Hence, in a circumstance in which they achieve success, independent self-construal individuals may feel proud of their accomplishment and may express this pride by rewarding themselves to enhance the inner self (Markus & Kitayama 1991).

In contrast, an interdependent self-construal puts emphasis on belonging, fitting in, and promoting others’ goals (Markus & Kitayama 1991). Thus, the motivation of interdependent self-construal individuals to accomplish tasks may reflect a desire to fit into the group or to meet its expectations. In fact, interdependent self-construal individuals may not regard it as appropriate to celebrate their own achievements without considering relevant others (Cheng & Lam 2013; Markus & Kitayama 1991; Tynan, Heath, Ennew, Wang, & Sun 2010). Further, they may feel guilty, inhibited, or ambivalent when they face the interpersonal conflict between the desire to celebrate the achievement of their own goals for themselves and the need to maintain the feeling of belonging within their group by engaging with relevant others (Markus & Kitayama 1991; Joy, Hui, Chan, & Cui 2006). Many cross-cultural consumer researchers examining the impact of self-construal on emotions, behaviors, and motivations have found that, generally speaking, individuals from Eastern cultures perceive themselves as less independent and more
interdependent than those from Western cultures (Kolstad & Horpestad 2009; Ma, Yang, & Mourali 2014). However, some studies reported different results, particularly when examining self-construal patterns among immigrants and host members. Further, the absence of consistent between-group differences in the self-construal of ethnic minority members and host members might be due to the fact that immigrants' self-construal patterns can change over time depending on the degree of cultural contact needed to adjust to the new environment (Yamada & Singelis 1999). Unfortunately, some of the previous studies reporting ethnic differences made the simplistic assumption that certain self-construal types are associated with certain ethnicities (Boucher & Maslach 2009; Matsumoto 1999). Hence, we feel that there is a strong need for a more robust treatment of the self-construal construct.

In addition, by pursuing the analysis using only one dominant self-construal dimension for each individual, previous research may have overlooked the effect of coexisting self-construal dimensions (Yamada & Singelis 1999). To address this gap, Yamada & Singelis (1999) explored the coexistence of two self-construal dimensions within an individual, similar to Berry, Trimble, & Olmedo's (1986) four modes of the acculturation process of learning and adapting to a new culture. Berry et al.'s acculturation model specifies four patterns of acculturation (i.e., assimilation, integration, separation, and marginalization) based on two main considerations: (1) the extent to which the individual feels a sense of identification with the culture of origin and (2) the need to relate to the host culture (see Berry, Trimble, & Olmedo 1986 for more details). This multidimensional model promotes a pluralistic approach to understanding the relationship between two cultures (Hong, Morris, Chiu, & Benet-Martínez 2000; LaFromboise, Coleman, & Gerton 1993).

Drawing on these four modes of acculturation, Yamada & Singelis (1999) classify four self-construal groups: (1) Bicultural, with well-developed independent and interdependent self-construal; (2) Western, with high independent and low interdependent self-construal; (3) Traditional, with low independent and high interdependent self-construal; and (4) Alienated, with poorly developed independent and interdependent self-construal (see Figure 1).

![Figure 1](image-url) Yamada & Singelis's (1999) four-dimensional self-construal model has been tested in studies of conflict management styles (Ting-Toomey, Oetzel, & Yee-Jung 2001), dating relationships (Yum 2004), and socio-emotional adjustment (Lam 2006). These studies found that Bicultural self-construal individuals, who are products of a multicultural society, demonstrate an ability to adjust their self-construal so as to function much more successfully in different contexts than do the other three self-construal groups. More specifically, Bicultural self-construal individuals tend to be more adaptive (Yum 2004), have a lower level of distress and a higher level of self-esteem (Lam 2006), and use a more diverse range of conflict resolution styles to manage conflicts (Ting-Toomey, Oetzel, & Yee-Jung 2001). In contrast, Alienated self-construal individuals tend to experience the greatest difficulties in adaptation and in coping with conflict situations. These individuals report a higher level of distress and a lower level of self-esteem than other self-construal individuals. Western and Traditional self-construal individuals tend to develop strategies that are associated with their highly independent or highly interdependent self-construal, respectively.

Authors of these previous studies stress that the four-dimensional self-construal model predicts and explains various psychological and behavioral issues better than the two-dimensional model mainly used in previous research, because it helps to avoid dichotomizing individuals as either an independent or an interdependent self-construal type (Ting-Toomey, Oetzel, & Yee-Jung 2001). Furthermore, it is possible that different self-construal types may be associated with different consumption patterns across ethnic groups. We believe that the four-dimensional self-construal view may allow a more precise conceptualization of self-construal and a more thorough investigation of cross-cultural consumption patterns compared to the two-dimensional view.

Self-gifting

Self-gifting has been studied as a sub-domain of gift-giving literature and shares the same core components of gifts, givers, recipients, and situational conditions (Sherry 1983). Unlike in gift-giving, however, in self-gifting, the giver and the recipient are the same person.

Mick and DeMoss (1990a, p. 328) define self-gifting as "symbolic self-communication through special indulgences that tend to be premeditated and highly context bound." Self-gifting differs from other personal acquisitions in terms of its situational and motivational context (Clarke & Mortimer 2013; Mick & DeMoss 1990b; Weisfeld-Spalter & Thakkar 2012). The predominant motivational contexts of self-gifting are categorized into the following nine areas: (1) to reward oneself; (2) to cheer oneself up; (3) to celebrate a public holiday (e.g., Christmas or Valentine's Day); (4) to relieve stress; (5) to be nice to oneself; (6) to provide an incentive toward a goal; (7) to celebrate a private holiday (e.g., birthday or anniversary); (8) to maintain a good mood; and (9) to celebrate and spend extra money that has been earned or obtained (Mick & DeMoss 1990b; McKeage, Richins, & Debevec 1993).
Several researchers suggest that self-gifting may be related to an individual's self-concept and self-esteem because it serves to shape and sustain how individuals define and feel about themselves (Mick 1996; Mick & DeMoss 1990a, 1990b; Oshavsky & Lee 1993). This notion is crucial in cross-cultural self-gifting studies because cultural identifications influence the way people think, feel, and behave (Markus & Kitayama 1991). If consumers in different cultures view themselves differently, it is likely that they may engage in self-gifting in different ways. Self-gifting, therefore, may be linked to both personal and cultural values (McKeage, Richins, & Debevec 1993; Tynan, Heath, Ennew, Wang, & Sun 2010; Weisfeld-Spolter & Thakkar 2007). To understand potential individual differences in consumers' self-gifting attitude and behavior, we studied key elements of self-gifting, such as the propensity toward different self-gift motivations (e.g., reward, therapy, romance, or celebration), the effort expended on self-gift selection (e.g., time or money), and the emotional outcomes after self-gifting (e.g., feeling good or bad).

Self-gift propensity

Mick (1996) suggests that the acceptance of self-gifts might be related to culture, and other cross-cultural self-gifting studies have found that an independent self-construal generally has a positive effect on self-gifting behavior (Joy, Hui, Chan, & Cui 2006; Tynan, Heath, Ennew, Wang, & Sun 2010), because independent self-construal individuals often reside in an individualistic society, which emphasizes individuality, self-development, and pride from accomplishment (Sherry, McGrath, & Levy 1995).

On the other hand, the findings regarding the effect of an interdependent self-construal on self-gifting are inconsistent. Weisfeld-Spolter & Thakkar (2007) reported that an interdependent self-construal has a negative effect on self-gifting, possibly because interdependent self-construal individuals may not find self-gifting behavior to be socially acceptable. Further, Chen, Ng, & Rao (2005) reported that interdependent self-construal individuals tend to postpone instant gratification more often than do independent self-construal individuals. Other studies, however, have found an interdependent self-construal to have a positive effect on self-gifting: when interdependent self-construal individuals engage in self-gifting, they sometimes also give gifts to family members in gratitude for their support (Joy, Hui, Chan, & Cui 2006; Tynan, Heath, Ennew, Wang, & Sun 2010).

Bicultural self-construal individuals have multiple selves relating to themselves, friends, family, and community, in which different selves become dominant under specific circumstances (Ng & Houston 2006). On a daily basis, they surround themselves with symbols and situations that prime the meaning system of the host and home cultures (Hong, Morris, Chiu, & Benet-Martinez 2000). This active priming process may sometimes trigger them to more strongly express their host cultural identity (but at other times it may encourage them to maintain their home cultural identity (Hong, Morris, Chiu, & Benet-Martinez 2000).

Due to their ability to monitor the self, others, and the situation, and to behave accordingly to achieve their desired goals (Yum 2004), Bicultural self-construal individuals may be able to more skillfully employ self-gifting in both host and home cultural situations. Hence, we propose that Bicultural self-construal individuals are more likely to engage in self-gifting than individuals in other self-construal groups (i.e., Western, Traditional, and Alienated). Thus, the following hypothesis is proposed:

H1 Bicultural self-construal individuals have a higher level of self-gift propensity than Western, Traditional, and Alienated self-construal individuals.

Self-gift selection effort

In previous self-gift studies, researchers have limited their investigations to the importance of the time spent on planning and on carrying out self-gifting (McKeage 1992; McKeage, Richins, & Debevec 1993). Generally speaking, for most self-gift motivations, the time spent on planning was found to be much shorter than the time spent on carrying out the activity (McKeage 1992). However, we believe that it is also important to consider the physical and psychological effort involved in self-gifting, as these elements account for the distinctions between self-gifting and purchasing for everyday personal use.

Previous self-construal studies found that independent self-construal individuals care about the expression of choice and place strong emphasis on what they choose (Iyengar & Lepper 1999; Kim & Sherman 2007). In addition, when their motivation is to work toward a goal, independent self-construal individuals require more substantial investment of goal initiation and completion times than interdependent self-construal individuals (Spassova & Lee 2008). Further, when considering others' choices, independent self-construal individuals are poorly adjusted to others' preferences (Wu, Moore, & Fitzsimons 2009). On the other hand, interdependent self-construal individuals are sensitive to others even when making self-choices and are comfortable having others choose for them (Pohlmann, Carranza, Hannover, & Iyengar 2007). Thus, they may not exert much effort when making their self-gifting decision.

Due to the high independent self-construal level of the Bicultural and Western self-construal groups, when choosing something special for themselves, these self-construal groups may pay more attention to their choices (Pohlmann, Carranza, Hannover, & Iyengar 2007). Thus, it is expected that Bicultural and Western self-construal groups may invest more time and effort on self-gift selection to find the best solutions for themselves compared to other self-construal groups. Thus, the following hypothesis is proposed:

H2 Bicultural and Western self-construal individuals expend more effort on self-gift selection than Traditional and Alienated self-construal individuals.

Post-emotion of self-gifting

The emotional outcomes of self-gifting are diverse and depend on consumers' self-gifting motivations. Good feelings such as happiness, pleasure, and excitement are often cited in reward self-gift motivation (Mick & DeMoss 1990a, 1990b; Tynan, Heath, Ennew, Wang, & Sun 2010), whereas negative emotions such as guilt, frustration, sadness, and regret are potential outcomes of the cheer-up, nice-to-self, and good-mood-maintenance self-gifting motivations (Clarke & Mortimer 2013; Luomala &
Further, self-gifting sometimes produces mixed emotions that combine satisfaction and guilt, due to the struggle and negotiation between desiring and deserving (Sherry, McGrath, & Levy 1995).

Joy, Hui, Chan, & Cui (2006) found that, to a certain extent, interdependent self-construal individuals feel guilty when participating in non-practical self-gifting due to their interpersonal conflict (i.e., conflict between their own thoughts and feelings and those of their significant others). On the other hand, feelings of guilt and ambivalence are also found among independent self-construal individuals when they face intrapersonal conflict toward acquiring a product (i.e., conflict in their own thoughts and feelings) (Park, Priester, Petty, Lee, & Wang 2002).

As Bicultural self-construal individuals may more easily manage their intrapersonal and interpersonal conflicts (Ting-Toomey, Oetzel, & Yee-Jung 2001), they may also obtain more positive feelings after self-gifting than other self-construal individuals. Thus, the following hypothesis is proposed:

**H3** Bicultural self-construal individuals experience more positive post-emotion of self-gifting than Western, Traditional, and Alienated self-construal individuals.

**METHODS**

Overview and research design

We adopted the four-dimensional self-construal model (i.e., Bicultural, Western, Traditional, and Alienated) developed by Yamada & Singelis (1999) to study different consumption patterns across ethnicity groups, and we designed our empirical work within the context of self-gifting among four ethnicity groups (i.e., British Indians, British Pakistanis, British Bangladeshi, and British Whites) in the UK.

British culture has been characterized as an individualistic culture, whereas South Asian culture has been characterized as a collectivistic culture (Hofstede, Hofstede, & Minkov 2010; Lindridge & Dibb 2003). We looked at all three South Asian ethnicities (i.e., Indians, Pakistanis, and Bangladeshis) because they remain the largest of the ethnic minority groups in the UK, reaching 2.8 million, or more than 5% of the total UK population in 2009 (UK National Statistics 2011). The three South Asian ethnic groups are similar in terms of their physical features and geographical origins (Robinson 2005), and the fact that they emphasize the importance of close and extended family ties and trust (Lindridge & Dibb 2003). However, within-group differences also exist due to the differences in South Asian ethnic groups' nationalities, linguistic traditions, religions, migration histories, and processes of adjustment into the host society (Ghuman 1997; Lindridge 2010).

For example, each of the three South Asian ethnic groups has its own distinct language: Hindi for Indians, Urdu for Pakistanis, and Bengali for Bangladeshis. Although many South Asians in the UK are able to orally communicate with each other in Urdu–Hindi, this is less true for Bengali speakers (Modood, Beishon, & Vindee 1994). Additionally, among the three groups, Pakistanis are found to hold the highest collectivist value, whereas Indians hold the lowest (Hofstede, Hofstede, & Minkov 2010). Pakistanis are found to be less adaptable, as evidenced by their frequent visits to their home country, their migration purpose of ultimately returning to their home country, and their preference for their native language in various situations (Ghuman 1997, Jamal 2003). Indians are found to be upwardly mobile due to their increasingly high socio-economic status, their migration purpose of aspiring to their move becoming permanent, and their bilingual ability (Ghuman 1997; Lindridge 2010). Thus, we believe it behooves us to explore differences in self-gifting at a subcultural group level (i.e., Indians, Pakistanis, and Bangladeshis).

We used a paper-and-pencil survey approach, and our instrument included a one-page cover letter and a six-page questionnaire. For cross-cultural research conducted between host members and bilingual ethnic members within one country, selecting one language for the instrument across subcultural groups is a very challenging task because each group's home countries have different official languages. Using only a home-language translated version of the questionnaire for each ethnic group risks leaving out the large proportion of young British-born participants who may not understand their written home language, because although most second-generation families are bilingual, their British-born children increasingly use English as their first language (Robinson 2005). On the other hand, the use of questionnaires translated into two or more languages within one country has the potential to seriously bias the measurement process (Richard & Toffoli 2009). Thus, we decided to use only the English language for the instrument, so as not to compromise its equivalence and validity, and to minimize the response bias.

When we used UK National Statistics (2006) to identify geographical areas where sampling might provide a high proportion of individuals from the target ethnic groups, London and Manchester were ranked highly in terms of population-concentrated areas of all ethnic minority groups in the UK. Thus, our potential respondents were selected in London and Manchester using a convenience sampling method within each stratified ethnic group and were recruited by door knocking and visiting public places (e.g., shops, supermarkets, restaurants, parks, religious places, travel agencies, schools, universities, and community organizations).

**Measurements**

**Self-construal**

This construct refers to the two images of self: (1) interdependent self-construal, emphasizing the connectedness of the person to situations and relationships with others; and (2) independent self-construal, reflecting the separateness and uniqueness of the individual (Singelis 1994; Singelis et al. 1994). Singelis's Self-construal Scale (1994) was adapted to measure the two types of self-construal. Ten of the 24 items in the original scale were selected to reduce response time and the overall length of the questionnaire (see Appendix 1). Factor analysis revealed two distinct dimensions: five items for the independent self-construal and another five items for the interdependent self-construal. The results showed that the independent and interdependent self-construal have
acceptable levels of reliability, with Cronbach’s alphas for the independent self-construal of 0.70, 0.70, 0.73, and 0.83, and, for the interdependent self-construal, 0.72, 0.79, 0.73, and 0.85 for White, Indian, Pakistani, and Bangladeshi samples, respectively. Participants indicated the extent to which each of the 10 items described them on a seven-point Likert scale (1=strongly disagree; 7=strongly agree). Individual scores on each subscale were summed and then divided by the number of items, resulting in scores for each subscale ranging from 1 to 7.

The independent and interdependent self-construal scores were used to classify the respondents of four ethnicity groups into Yamada & Singelis’s (1999) four self-construal categories using K-means cluster analysis following the procedure used in previous research (Lam 2006; Yum 2004). K-means cluster analysis began with the means for independent and interdependent self-construal of four-cluster solutions. To determine whether the cluster solutions were stable, cluster analysis was conducted on half of the sample, and the means from the clusters of the first half were used as the starting points for cluster solutions using the other half of the sample.

The interpretation of the four clusters replicated previous studies, with group 1, labeled the Alienated self-construal group, being low in both interdependent and independent; group 2, labeled the Traditional self-construal group, being high in interdependent and lower in independent; group 3, labeled the Western self-construal group, being high in independent and lower in interdependent; and group 4, labeled the Bicultural self-construal group, being high in both interdependent and independent.

**Self-gift propensity**

This construct refers to a respondent’s likelihood of engaging in self-gifting behavior under different self-gift motivations. Respondents were asked how often they gave gifts to themselves in response to each of the nine self-gift motivations adopted from Beatty, Kahle, & Homer’s (1991) gift-giving attitude scale, with the change in context from ‘gift for others’ to ‘gift to myself’: (1) I think it is important that I carefully select and give gifts to myself; (2) I almost always spend considerable effort on selecting or making special gifts for myself; and (3) I almost always try to find gifts that express a very personal message to myself. We developed two additional items based on Mick and DeMoss’s self-gifting definition (1990a): (4) I almost always spend a lot of time searching for gifts for myself; and (5) I often look for well-known brands when choosing a gift for myself. Respondents were asked to rate these five items on a seven-point Likert scale (1=never; 5=very often). The self-gift propensity scale yielded Cronbach’s alphas of 0.87, 0.81, 0.88, and 0.87 for White, Indian, Pakistani, and Bangladeshi samples, respectively. All nine items were summed and divided by the number of items to compute a composite score of self-gift propensity for each respondent.

**Self-gift selection effort**

This construct refers to the degree to which the respondents attempted to search, select, and evaluate tangible and intangible self-gift objects in fulfillment of an obligation or in a spontaneous mood. Three of the items used to measure self-gift selection effort were based on Beatty, Kahle, & Homer’s (1991) gift-giving attitude scale, with the change in context from ‘gift for others’ to ‘gift to myself’: (1) I think it is important that I carefully select and give gifts to myself; (2) I almost always spend considerable effort on selecting or making special gifts for myself; and (3) I almost always try to find gifts that express a very personal message to myself. We developed two additional items based on Mick and DeMoss’s self-gifting definition (1990a): (4) I almost always spend a lot of time searching for gifts for myself; and (5) I often look for well-known brands when choosing a gift for myself. Respondents were asked to rate these five items on a seven-point Likert scale (1=strongly disagree; 7=strongly agree). The self-gift selection effort scale achieved high reliability scores, with Cronbach’s alphas of 0.82, 0.84, 0.89, and 0.89 for White, Indian, Pakistani, and Bangladeshi samples, respectively. Scores from the five items were summed and divided by the number of items to compute a composite score of self-gift selection effort.

**Post-emotion of self-gifting**

This construct refers to how respondents felt after engaging in self-gifting (Mick & DeMoss 1990a). They were asked to indicate the level of bad or good feelings after self-gifting for each of nine self-gift motivations on a seven-point Likert scale (1=very bad; 7=very good). The self-gift post-emotion scale showed high levels of reliability, with Cronbach’s alphas of 0.87, 0.86, 0.90, and 0.86 for White, Indian, Pakistani, and Bangladeshi samples, respectively. All responses were summed and divided by the number of items that received scores.

The sample

A total of 670 participants, including 235 Whites, 151 Indians, 163 Pakistanis, and 121 Bangladeshis, completed self-administered questionnaires (see Appendix 2). The ethnic classification was based on self-identification. Further analysis of the provided demographic data showed that there were no significant differences between the four ethnic groups in terms of gender ($\chi^2$(3) = 0.92, $p = 0.82$) or average age ($M_{\text{White}} = 38.02$ years, $M_{\text{Indian}} = 37.43$, $M_{\text{Pakistani}} = 35.93$, $M_{\text{Bangladeshi}} = 36.00$; $F(3, 653) = 0.75$, $p = 0.52$). However, we found significant differences among the ethnic groups in terms of educational level ($\chi^2$(9) = 23.25, $p < 0.01$), employment status ($\chi^2$(12) = 43.47, $p < 0.001$), and personal income level ($\chi^2$(9) = 20.80, $p < 0.05$).

In terms of self-construal, 653 participants were classified into 187 Bicultural, 207 Western, 132 Traditional, and 127 Alienated self-construal individuals (see Appendix 3). Comparisons of the four self-construal groups showed that they did not differ significantly in gender proportions ($\chi^2$(3) = 2.36, $p = 0.50$). However, there were significant differences among self-construal groups in terms of age ($M_{\text{Bicultural}} = 34.06$, $M_{\text{Western}} = 34.64$, $M_{\text{Traditional}} = 40.95$, $M_{\text{Alienated}} = 40.66$; $F(3, 644) = 8.83$, $p < 0.001$), education level ($\chi^2$(9) = 30.26, $p < 0.001$), employment status ($\chi^2$(12) = 35.16, $p < 0.001$), personal income level ($\chi^2$(9) = 17.42, $p < 0.05$), and ethnicity ($\chi^2$(9) = 46.91, $p < 0.001$).

Statistical analyses

In this study, we sought to examine differences in self-gift behaviors among four self-construal groups (i.e., Bicultural, Western, Traditional, and Alienated), composed of participants from four ethnic groups (White, Indian, Pakistani, and Bangladeshi). The dependent variables were individual respondents’ mean scores of self-gift propensity, self-gift selection effort, and self-gift post-emotion.
Similar to previous studies (e.g., Luomala & Laaksonen 1999; Mick & DeMoss 1992; McKeage, Richins, & Debevec 1993; Sherry, McGrath, & Levy 1995), our data showed that certain demographic variables have significant effects on the chosen self-gift behaviors. For example, previous research showed that self-gift propensity is negatively correlated with age and education (Mick & DeMoss 1992; McKeage, Richins, & Debevec 1993). In addition, several self-gift studies indicated that self-gifting is done predominantly by women (Luomala & Laaksonen 1999; Mick & DeMoss 1992; Sherry, McGrath, & Levy 1995). Although income level is unrelated to self-gift propensity (Mick & DeMoss 1992), there are some differences in income level, occupation status, and ethnicity among the four self-construal groups. Thus, these variables are included as covariates in all models. More specifically, they include age (continuous variable), gender, education, employment status, income, and ethnicity (see Appendix 4 for the details of dummy coding for categorical variables).

To test $H1$, $H2$, and $H3$, we conducted one-way analysis of covariance (ANCOVA) tests to determine the significance of differences across the four self-construal groups in each dependent variable, while including demographic variables as covariates. In addition, for each significant result, we also conducted all possible pairwise comparisons of the covariate-adjusted means across the four self-construal groups. The Bonferroni procedure was used to control for Type I error across all pairwise comparisons.

**Results**

$H1$ related to the differences among four self-construal groups in terms of self-gift propensity. A one-way ANCOVA test showed that there was a significant effect of self-construal type on self-gift propensity after controlling for covariates ($F(3, 412) = 4.59, p < 0.01$) (see Table 1). The covariates, gender ($F(1, 412) = 6.07, p = 0.01$) and age ($F(1, 412) = 22.26, p < 0.001$), had significant effects on self-gift propensity. With the Bonferroni adjustment, a priori comparison showed that Bicultural self-construal individuals have significantly higher levels of self-gift propensity than Traditional ($M_{Bicultural} = 2.33$ vs. $M_{Traditional} = 1.77; t = 3.49, p = 0.001$) and Alienated self-construal individuals ($M_{Bicultural} = 2.33$ vs. $M_{Alienated} = 1.92; t = 2.65, p = 0.008$), whereas there was no significant difference between the Bicultural and Western self-construal groups ($M_{Bicultural} = 2.33$ vs. $M_{Western} = 2.12; t = 1.34, p = 0.18$). In addition, the results showed that although Western self-construal individuals have significantly higher self-gift propensity than Traditional ($M_{Western} = 2.12$ vs. $M_{Traditional} = 1.77; t = 2.45, p = 0.02$), there was no statistically significant differences between Western and Alienated ($t = 1.52, p = 0.13$), and Traditional and Alienated self-construal groups ($t = 0.94, p = 0.35$) (see Table 2). Thus, $H1$ is partially supported.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>6.25</td>
<td>6.07*</td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>23.07</td>
<td>22.26***</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A level</td>
<td>1</td>
<td>0.33</td>
<td>0.32</td>
</tr>
<tr>
<td>First degree</td>
<td>1</td>
<td>1.55</td>
<td>1.50</td>
</tr>
<tr>
<td>Master's/doctoral degree</td>
<td>1</td>
<td>0.98</td>
<td>0.95</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time student</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Full-time employment</td>
<td>1</td>
<td>1.27</td>
<td>1.23</td>
</tr>
<tr>
<td>Part-time paid work</td>
<td>1</td>
<td>0.63</td>
<td>0.61</td>
</tr>
<tr>
<td>Retired from work</td>
<td>1</td>
<td>1.80</td>
<td>1.74</td>
</tr>
<tr>
<td>Annual income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>£10,000–£19,999</td>
<td>1</td>
<td>1.75</td>
<td>1.69</td>
</tr>
<tr>
<td>£20,000–£29,999</td>
<td>1</td>
<td>1.61</td>
<td>1.55</td>
</tr>
<tr>
<td>£30,000 or more</td>
<td>1</td>
<td>1.31</td>
<td>1.27</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Table 2.** Pairwise comparisons: self-gift propensity by self-construal groups.

<table>
<thead>
<tr>
<th>Self-construal groups</th>
<th>Adjusted mean</th>
<th>SE</th>
<th>Bicultural</th>
<th>Western</th>
<th>Traditional</th>
<th>Alienated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicultural</td>
<td>2.33</td>
<td>0.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td>2.12</td>
<td>0.09</td>
<td></td>
<td>0.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>1.77</td>
<td>0.12</td>
<td>0.56***</td>
<td></td>
<td>0.35*</td>
<td></td>
</tr>
<tr>
<td>Alienated</td>
<td>1.92</td>
<td>0.11</td>
<td>0.41**</td>
<td>0.20</td>
<td>0.15</td>
<td></td>
</tr>
</tbody>
</table>

*\(p<0.05\), **\(p<0.01\), ***\(p<0.001\)

**H2** focused on the differences among four self-construal groups in terms of self-gift selection effort. A one-way ANCOVA test revealed a significant effect of self-construal type on self-gift selection effort, after controlling for the covariates (\(F(3,407)=6.32, p=0.001\)) (Table 3). The covariate, Indian group, was significantly related to self-gift selection effort (\(F(1,407)=4.57, p=0.03\)). With the Bonferroni adjustment, *a priori* comparison showed that the Bicultural self-construal group expended more self-gift selection effort than the Traditional (\(M_{Bicultural}=4.17\) vs. \(M_{Traditional}=3.46, t=-2.99, p=0.002\)) and Alienated self-construal groups (\(M_{Bicultural}=4.17\) vs. \(M_{Alienated}=3.24, t=-4.07, p<0.001\)). In addition, the Western self-construal group also expended more self-gift selection effort than the Alienated self-construal group (\(M_{Western}=3.83\) vs. \(M_{Alienated}=3.25, t=-2.65, p=0.008\)). However, there were no significant differences in self-gift selection effort between Bicultural and Western (\(t=1.71, p=0.09\)), Western and Traditional (\(t=1.61, p=0.11\)), and Traditional and Alienated self-construal groups (\(t-0.83, p=0.41\)) (see Table 4). Thus, **H2** is partially supported.

**Table 3.** One-way analysis of covariance: self-gift selection effort.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>(F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>0.16</td>
<td>0.07</td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>1.14</td>
<td>0.47</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A level</td>
<td>1</td>
<td>4.38</td>
<td>1.79</td>
</tr>
<tr>
<td>First degree</td>
<td>1</td>
<td>3.39</td>
<td>1.39</td>
</tr>
<tr>
<td>Master’s/doctoral degree</td>
<td>1</td>
<td>1.66</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Employment status

---

**Table 2** Pairwise comparisons: self-gift propensity by self-construal groups.

**Table 3** One-way analysis of covariance: self-gift selection effort.
### Table 4: Pairwise comparisons: self-gift selection effort by self-construal groups

<table>
<thead>
<tr>
<th>Self-construal groups</th>
<th>N</th>
<th>Adjusted mean</th>
<th>SE</th>
<th>Adjusted mean differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bicultural</td>
<td></td>
<td>Western</td>
</tr>
<tr>
<td>Bicultural</td>
<td>123</td>
<td>4.17</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td>140</td>
<td>3.83</td>
<td>0.14</td>
<td>-0.34</td>
</tr>
<tr>
<td>Traditional</td>
<td>77</td>
<td>3.46</td>
<td>0.19</td>
<td>0.72**</td>
</tr>
<tr>
<td>Alienated</td>
<td>86</td>
<td>3.25</td>
<td>0.17</td>
<td>0.93***</td>
</tr>
</tbody>
</table>

*p < 0.05, **p < 0.01, ***p < 0.001

H3 focused on the differences among four self-construal groups in terms of self-gift post-emotion. A one-way ANCOVA test showed that there was a significant effect of self-construal type on self-gift post-emotion after controlling for the covariates (F(3, 360) = 2.53, p = 0.05) (Table 5). The covariate, income in the £20,000–29,999 bracket, was significantly related to self-gift post-emotion (F(1, 360) = 4.73, p = 0.03). With the Bonferroni adjustment, *a priori* comparison showed that the Bicultural self-construal group experienced a more positive self-gift post-emotion than the Alienated self-construal groups (M_Bicultural = 5.77 vs. M_Alienated = 5.28; t = 2.78, p = 0.006), whereas there were no significant differences between the Bicultural and Western self-construal groups (M_Bicultural = 5.77 vs. M_Western = 5.61; t = 1.06, p = 0.29) or between the Bicultural and Traditional self-construal groups (M_Bicultural = 5.77 vs. M_Traditional = 5.55; t = 1.16, p = 0.25). In addition, the results showed that there were no significant differences in self-gift post-emotion between Western and Traditional (t = 0.31, p = 0.76), Western and Alienated (t = 1.89, p = 0.06) and Traditional and Alienated self-construal groups (t = 1.35, p = 0.18) (see Table 6). Thus, H3 is only marginally supported.
### Table 5
One-way analysis of covariance: post-emotion of self-gifting

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>2.27</td>
<td>1.63</td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>1.89</td>
<td>1.36</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A level</td>
<td>1</td>
<td>4.63</td>
<td>3.33</td>
</tr>
<tr>
<td>First degree</td>
<td>1</td>
<td>2.09</td>
<td>1.51</td>
</tr>
<tr>
<td>Master's/doctoral degree</td>
<td>1</td>
<td>0.15</td>
<td>0.11</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time student</td>
<td>1</td>
<td>1.48</td>
<td>1.06</td>
</tr>
<tr>
<td>Full-time employment</td>
<td>1</td>
<td>0.45</td>
<td>0.33</td>
</tr>
<tr>
<td>Part-time paid work</td>
<td>1</td>
<td>0.48</td>
<td>0.34</td>
</tr>
<tr>
<td>Retired from work</td>
<td>1</td>
<td>0.94</td>
<td>0.68</td>
</tr>
<tr>
<td>Annual income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>£10,000–19,999</td>
<td>1</td>
<td>0.19</td>
<td>0.13</td>
</tr>
<tr>
<td>£20,000–29,999</td>
<td>1</td>
<td>6.58</td>
<td>4.73*</td>
</tr>
<tr>
<td>£30,000 or more</td>
<td>1</td>
<td>4.74</td>
<td>3.41</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indian</td>
<td>1</td>
<td>0.12</td>
<td>0.08</td>
</tr>
<tr>
<td>Pakistani</td>
<td>1</td>
<td>1.24</td>
<td>0.89</td>
</tr>
<tr>
<td>Bangladeshi</td>
<td>1</td>
<td>2.14</td>
<td>1.54</td>
</tr>
<tr>
<td>Self-construal</td>
<td>3</td>
<td>3.51</td>
<td>2.53*</td>
</tr>
<tr>
<td>Error</td>
<td>364</td>
<td>1.39</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>383</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* \( p < .05 \)

### Table 6
Pairwise comparisons: post-emotion of self-gifting by self-construal groups

<table>
<thead>
<tr>
<th>Self-Construal Groups</th>
<th>Adjusted mean</th>
<th>SE</th>
<th>Bicultural</th>
<th>Western</th>
<th>Traditional</th>
<th>Alienated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicultural</td>
<td>5.77</td>
<td>.11</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td>5.61</td>
<td>.10</td>
<td>0.16</td>
<td>–</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This study extends our understanding of the significance of the role of self-construal in self-gifting behaviors by comparing four self-construal types across different ethnicity groups in the UK. We applied Yamada & Singelis's (1999) four-dimensional self-construal model to categorize British Whites, British Indians, British Pakistanis, and British Bangladeshis according to the four self-construal types: Bicultural, Western, Traditional, and Alienated. Our results largely align with the growing view that both independent and interdependent self-construal can coexist within individuals and in any given culture (Hong, Morris, Chiu, & Benet-Martinez 2000; Lau-Gesk 2003; Levinson, Langer, & Rodebaugh 2011).

As predicted, we found that the Bicultural self-construal group has a higher level of self-gift propensity and expends significantly more self-gift selection effort than the Traditional and Alienated self-construal groups. However, the Bicultural self-construal group does not significantly differ from the Western self-construal group in any of the self-gifting behaviors studied in this research. The lack of differences between these two self-construal groups may be partially attributed to the stronger impact of high independent self-construal level on self-gifting behaviors.

Similar to previous self-gift studies, we found that the Western self-construal participants consistently show a strong independent self-construal, and they are likely to have a high level of self-gift propensity and expend significant effort on self-gift selection. The evidence from this research showed that the Western self-construal group expends more effort on self-gift selection than the Alienated self-construal group. This is most likely due to the fact that the high independent self-construal individuals place a strong emphasis on choice (Iyengar & Lepper 1999). The expression of choice leads them to be more invested in, and more careful about, what they choose for themselves (Kim & Sherman 2007). Further, after the Western self-construal group engages in self-gifting, ego-focused emotions (e.g., pride and happiness) may emerge and contribute to their high level of satisfaction after engaging in self-gifting (Markus & Kitayama 1991).

In contrast, Traditional self-construal consumers have the lowest level of self-gift propensity and expend less effort on self-gift selection, which corresponds with their dominant interdependent self-construal. However, when Traditional self-construal consumers engage in self-gifting, they have more positive emotional self-gift experiences.

Although Alienated self-construal consumers do not show the lowest level of self-gift propensity, they appear to expend less effort on self-gift selection. Previous research has highlighted that Alienated self-construal individuals may have little concern for the consequences of their actions because of weak cultural contribution to their behavioral intentions (Yamada & Singelis 1999). Thus, their behavior may often stem from their emotions rather than from rationalization. In addition, when it comes to the post-emotion in relation to self-gifts, Alienated self-construal individuals may face interpersonal and intrapersonal conflicts when engaging in self-gifting, which could influence their negative feelings (Park, Priester, Petty, Lee, & Wang 2002).

In addition, our findings tackle issues around the assumption that self-construal exists as a function of the country of origin. We measured self-construal at the individual level (rather than assigning a type of self-construal to an entire ethnic group) and demonstrated that some of the inconsistent findings of previous cross-cultural consumer research might be due to simplistic assumptions about self-construal: although the cultural background of each ethnic group may determine their chronic self-construal, people are capable of shifting their chronic type of self-construal in response to situational accessibility (Hong, Morris, Chiu, & Benet-Martinez 2000; White, Lehman, & Cohen 2006).

To extend knowledge and produce a more complete picture of self-gifting behavior among these four self-construal groups, researchers might consider exploring various self-gifting motivations more deeply, particularly when individuals are experiencing events relevant to mood maintenance and mood repair. Previous research found that mood maintenance behavior is social oriented, whereas mood repair behavior is more personal oriented (Luomala & Laaksonen 1999). Thus, the self-gifting behavior of interdependent self-construal individuals, who value the group's feelings over their own, may differ from that of independent self-construal individuals.

As predicted, we found that the Bicultural self-construal group has a higher level of self-gift propensity and expends significantly more self-gift selection effort than the Traditional and Alienated self-construal groups. However, the Bicultural self-construal group does not significantly differ from the Western self-construal group in any of the self-gifting behaviors studied in this research. The lack of differences between these two self-construal groups may be partially attributed to the stronger impact of high independent self-construal level on self-gifting behaviors.

Further, researchers may extend their investigation in future studies to examine the effect of self-construal on co-consumption between individuals and their close and distant others (e.g., family, friends, colleagues, or clients). For example, the degree of closeness between different self-construal individuals may affect the frequency and value of their consumption behaviors. Such results may explain the consumption preferences of Bicultural, Western, Traditional, and Alienated self-construal individuals.
Alienated self-construal individuals when interacting and socializing with diverse groups. Research in this area may shed some light on the similarities and differences of self-construal patterns in response to consumption behavior in various cultures and situations.

**Uncited reference**

National Statistics, 2006

**Appendix A. Supplementary data**

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.jcps.2016.02.001.

**References**


Mick and DeMoss M., To me from me: A descriptive phenomenology of self-gifts, In: Goldberg M. L. and Gorn G. and Pollay L. W. (Eds.), *Advances in consumer research*, 17, 1990b, Association for Consumer Research; Provo, UT, 677–682.


Supplementary data

Appendix A

Queries and Answers

Query:
Your article is registered as a regular item and is being processed for inclusion in a regular issue of the journal. If this is NOT correct and your article belongs to a Special Issue/Collection please contact a.mutale1@elsevier.com immediately prior to returning your corrections.

Answer: Yes
The author names have been tagged as given names and surnames (surnames are highlighted in teal color). Please confirm if they have been identified correctly.

Answer: Yes

Query:

Please check if the changes made here are OK.

Answer: OK

Query:

Uncited reference: This section comprises references that occur in the reference list but not in the body of the text. Please position each reference in the text or, alternatively, delete it. Thank you.

Answer: Please delete it.

Query:

Supplementary caption was not provided. Please check the suggested data if appropriate, and correct if necessary.

Answer: No correction needed