Ethnocultural Patterns in Social Support Mismatch:
Links with Relationship Satisfaction and Well-being

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Abstract

Stress is a psycho-socio-emotional and/or physiological response to a stressor, and social support may be an effective way of combating the negative influence of stress. However, social support comes in a variety of forms, and the different cultural backgrounds of individuals lead to different perceptions of relationships with others. As a result, cultural background also influences the type of social support desired by the individuals. The current research is a two-part study that focuses on exploring ethnocultural patterns in the links between different kinds of social support and support mis/match with relationship satisfaction, psychological wellbeing, and self-efficacy. Results showed that there is a strong link between emotional support mismatch and relationship and wellbeing for European Americans, and a strong link between instrumental support mismatch and relationship and wellbeing for East Asian Americans. In addition, there was a strong positive link between over support and high satisfaction for Mexican. Various ethnocultural patterns regarding kinds of support and support mis/match were found, showing that support is perceived in different ways in different ethnocultural groups.

Keywords: culture, ethnicity, social support, relationship satisfaction
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Have you ever felt tense or anxious over a certain upcoming project? The feeling that you are experiencing is stress. Stress is, by definition, a “psycho-socio-emotional or physiological response” to threatening situations (Bailey & Wolfe, 1994). The “threatening situation” is also known as the stressor; it is not necessarily always, however, a life-threatening dire situation, as the wording may seem to suggest. A stressor is an objective event that poses threat, challenge, or harm to an organism (Lazarus & Folkman, 1984). It can range from a wide variety of circumstances: from something as minor as an upcoming test or assignment, to something that is more severe and life-impacting such as loss of a job or separation from a loved one.

As stress is an experience that is “accompanied with predictable biochemical, physiological and behavioral changes,” it influences health and well-being in various ways (Bailey & Wolfe, 1994). Past research has shown that stress promotes behavioral coping responses that are harmful to health. The prolonging and repeated activation of physiological systems like the sympathetic nervous system, which is a typical response to stress, can place the individual under higher risks of physical and/or psychiatric disorders (Cohen, 2004). If no actions are taken to alleviate the stress responses, given time, the individual’s physical and psychological well-being will be negatively impacted as these unhealthy stress responses will slowly deteriorate the body and mind.
Social Support

So how can stress be assuaged? Current literature in the field shows that social support is, among others, a very effective way of lessening the negative influences of stress. Social support is the perception or experience that an individual is loved and cared for, esteemed and valued by others, as a part of a mutually supportive social network (Taylor, 2011). It is any information that gives the individual nurturance and affiliation to a group and leads the individual to reaffirm his or her self-worth (Cobb, 1976). In short, the individual, through social support, knows that he or she is not alone to face the problems and hardships in life as he or she has social relationships to fall back on for support. The individual has a social network made up of family, friends, and loved ones that will provide comfort and solace when needed.

Social support helps individuals to improve their mindset and confidence, through which, it becomes beneficial to an individual’s ability to cope with stress. With a healthier and stronger mindset and a boosted confidence provided by social support, one would be able to face a previous obstacle that may seem unsurpassable. Cohen (2004) concluded that social support is linked with better mental and physical health. Specifically, he found that participation in a social network has a general positive effect on an individual’s health. By providing a sense of stability and a sense of belonging and security, social network participation motivates the individual to take better care of oneself. Social support, more specifically, can prevent stress responses that are detrimental to health by providing necessary resources that redefine the negative potential of the situation and increase one’s ability to cope with the demands of the situation. Social interactions result in social controls and peer pressure that promote normative health behaviors, producing positive psychological states. Social support can also reduce maladaptive affective and physiological response to a stressful event.
The literature shows that social support provides the individual access to necessary resources that will both reduce negative impacts of stress and provide a sense of security (Cohen, 2004). The necessary resources may be almost anything, ranging from helpful advice, a pat on the back, or just a simple presence, helping the individual to change their appraisal of the situation and thus perceive a lower stress level. In addition, support can also be used to help to lessen the negative effects of stress by altering the unhealthy behavioral responses that an individual might engage in had there not been support available. On the other hand, support can also reduce the immediate emotional and physiological response to the stressor as the individual has the opportunity, or cushion, to adjust to a healthier response to the stressor (Cohen, 2004).

Social support is a complex concept that involves multiple factors that can influence its effectiveness against stress. We will review below three major concepts of social support: support reciprocity, social support types, and optimal support.

A major factor that influences the effectiveness of social support in stress reduction is the degree of reciprocity of the support. The reciprocity of support, or supportive equity, is the degree to which quantities of social support provided and received by two individuals in a relationship are fair and even. Gleason, Iida, Bolger, and Shrout (2003) showed that reciprocity of support is crucial to the effectiveness of the support in improving mood. A 4-week self-report study was conducted on 85 romantic couples. These individuals were asked to provide daily reports of their mood and support transactions. The researchers assessed the perception of the participant as both a recipient and a provider of support and defined reciprocity of support only when support was perceived to be both received and given. The results showed that the reception of support without proper reciprocation was associated with increases in negative mood whilst the provision of support was always associated with decrease in negative mood. Perceived
reciprocity in support was positively correlated with levels of positive mood and negatively correlated with levels of negative mood. For the support recipient, a lack of reciprocity in social support is less than effective in improving one’s mood, while the presence of support reciprocity was vital to the improvement of mood, both in boosting positive mood and reducing negative mood.

The finding that support reciprocity is influential in the effectiveness of the support against stress was further supported by literature in the field (Gleason et al., 2003). A survey questionnaire study was conducted to examine the effects of reciprocity on psychological and physical health in terms of sufficiency of the social support in Japanese undergraduate students (Jou & Fukada, 2002). The questionnaire consisted of a stressor scale, a social support scale, a negative affect scale, and a mental and physical health scale. The results showed that when individuals received less support than desired, they scored lower on the mental and physical health scale. Similarly, when the individuals provided less support than the other partner in the relationship than was requested, they also reported being less mentally and physically healthy. Hence, the importance of supportive equity is further illustrated, showing that lack of supportive equity negatively influences the psychological and physical health of the recipient and provider of support.

Under the umbrella concept of social support, there are many distinctive types of support. Each support type functions differently and may produce different effects on individuals, depending on the level of match between the recipient’s preferred support and the provider’s provided/exchanged support (Cutrona & Russell, 1990). There are five major social support types: 1) informational support, 2) instrumental support, 3) emotional support, 4) physical affection support, and 5) implicit support.
Informational support is help in “defining, understanding, and coping with problematic events” (Cohen & Wills, 1985). In this type of social support, the individual would receive advice and information that are useful in resolving the stress-inducing problem from the support giver. For example, an individual might be stressed during the search for a summer internship, and a friend offers various potential options that the individuals can apply to. The options here would be useful information and resources. Informational support can be characteristic of supportive relationships, effective in reducing stress (Chentsova-Dutton & Vaughn, 2012).

Instrumental support, on the other hand, is the provision of “financial aid, material resources, and needed services” (Cohen & Wills, 1985). Instrumental support helps to reduce stress for the individual by providing hands-on direct help in a task-oriented approach. For example, a friend may help an individual who is stressed over a test by studying with the individual and also tutoring the individual, helping to answer and analyze any problems in the studying process. The reception of instrumental support is linked to lower levels of anxiety and higher levels of intrinsic motivation (Federici & Skaalvik, 2013).

Emotional support, also known as esteem support in the literature, is illustrated by the provision of information that an individual is esteemed and accepted, enhancing the self-worth of the individual through communication and comfort that the individual is valued (Cobb, 1976; Cohen & Wills, 1985). Communication and encouragement for self-esteem boost are the key to this type of support. For example, emotional support is when an individual feels down and unworthy because he or she has lost an athletic competition, and a friend offers support by providing a shoulder to cry on and consoling the individual that he or she has done the best they can. Emotional support is linked to mood improvement and increase in self-esteem (Gleason et al., 2003; Chen, Kim, & Mojaverian, 2012). Sometimes, emotional support includes physical
**affection support** that involves physical touch that is aimed for the purpose of helping the individual feel better. Anything ranging from a hug, a rub on the back, to sexual behaviors can be viewed as examples of physical affection support when the action is performed by the support giver with the goal to comfort the distressed individual and soothe their anxiety. Support in forms of physical affection is associated to higher levels of self-esteem in the recipient of the support in addition to lower negative mood and levels of stress (Barber & Thomas, 1986; Burleson, Trevathan, & Todd, 2007).

Lastly, *implicit support*, unlike other types of support, does not involve the disclosure of the problem or the stressor. Implicit support is provided through the simple awareness of the existence of a support network and engagement in activities with others for the purpose of comfort without actual disclosure of the problem itself. The support network is never put to use, and disclosure of the specific stressor is absent in implicit support. It is a relatively new concept of support that appeared in the field with Taylor et al. (2007) and since then, has been the focus of an increasing number of studies involving social support and stress in cross-cultural examinations. While the concept of implicit support is relatively new, a similar concept, social companionship, has existed in earlier research. This type of support involves spending time with others in leisure and recreational activities, thereby helping the individual to reduce stress by fulfilling for the individual “a need for affiliation and contact with others, by helping to distract persons from worrying about problems, or by facilitating positive affective moods” (Cohen & Wills, 1985). The two concepts are similar in that both stress the importance of companionship and social network. However, implicit support is slightly more specific, emphasizing stress non-disclosure. Studies have shown that implicit support is associated with reduction of stress, especially for individuals of collectivistic backgrounds (Taylor, Welch, Kim, & Sherman, 2007).
Despite the overall effectiveness of social support against stressful events, not all forms of social support will yield the same effective result on the same stressor. Cutrona and Russell (1990) state that different problems call for a different interpersonal interaction, or in other words, different types of social support. The optimal matching social support model shows that social support is most beneficial and effective when it matches the specific needs of the individual under stress. When the social support type provided matches the social support type sought and desired by the stressed individual, the support is optimally matching. For example, when a stressed individual makes a disclosure of emotions and receives emotional support, optimal support match is achieved. Or, when an individual requests information and then receives informational support, optimal support is also achieved as the desired and received social support also match (Cutrona, Shaffer, Wesner, & Gardner 2007). A total of 39 studies were conducted to investigate the significance of match in desired and received support type in reducing stress (Cutrona & Russell 1990). The results showed that two-thirds of the studies found significant negative correlation between levels of match and stress/depressive symptoms. Higher levels of support type match are correlated with lower levels of stress and/or depressive symptoms. For some events where no significant correlations were found, such as unemployment and medical illness, the results suggest that the achievement of optimal support was not enough by itself; a broad range of social support components would be necessary for the effective recovery from the stressor. The concept of optimal support is therefore vital to the effectiveness of the support against a specific stressor. It is only when the individual receives the specific type of support he or she needs will the support achieve its best potential in combating against stress. For example, if all the individual needs after losing a competition is a hug from a friend, then a long analysis that breaks down the reasons behind the loss and potential room for improvement
from the friend would not be so helpful and can potentially even produce an adverse effect although it had been done out of a genuine desire to help.

**Culture**

Culture is a “systems of meanings” that are learned, socially shared, and variable. It also represents "designs and ways of life" that are normally "transmitted from one generation to another" (Betancourt & Lopez, 1993). While the concept is closely linked to nationality, race, and ethnicity, culture stands separately as a construct. For example, ethnicity, which typically refers to group of individuals under a single nation, is often used as a proxy for culture. Some studies in the field of social support and stress have studied the two constructs separately while some have examined the two together.

Since culture is typically shared by a group of people, by definition there are numerous cultures within our world today, each holding a different system of meaning and thus different values and behaviors. The effectiveness of social support can be influenced by the factor of culture (Wang & Lau, 2015). Despite this great diversity in culture however, cultures around the world can be grouped under two major categories: individualism and collectivism. The two categories each represents a general system of meaning that can be reflected in the individuals’ perception of self and interaction with others.

**Individualism VS Collectivism Cultures**

The individualistic cultures consist of the Western world, which includes Western Europe, United States, Canada, and Australia. In this type of cultural orientation, individuals value distinctiveness and independence and are motivated by their personal needs and preferences. In addition, individuals will tend to prioritize personal goals over collective goals
On the other hand, collectivistic cultures make up the rest of the globe, or the Non-Western world, which includes, broadly speaking: Asia, South America, Central America, Africa, Mediterranean, and Eastern Europe. In the collectivistic cultural orientation, individuals value intergroup relationships and see themselves as a part of a collective group. Individuals will also tend to prioritize collective goals over personal goals (Singelis et al., 1995). In this context, these individuals are generally motivated by responsibilities imposed by the collective identity; they view themselves as a member of a group and value the interdependent relationship with high importance.

Since culture has such a large influence on the way people think and behave, it also influences how an individual perceives and interacts with others. Culture is similar to a “filter” which processes an individual’s thoughts and behaviors into subjective experience. Campos (2015) showed that cultural context determines how an act of social support is perceived. Cultures may possess unique values in certain aspects of social relationship that will cause individuals to approach relationships in varying ways. Different cultures can have different expectations of relationships and different maintenance-mechanisms for those relationships. For example, friendly unsolicited advices that are the norm in collectivistic cultures may potentially be interpreted as a negative judgement for the support receiver in individualistic cultures (Chentsova-Dutton & Vaughn, 2012). In addition, emotions, which are central to relationships, are perceived and expressed in different manners in different cultures. Individuals in collectivistic cultures, for example, tend to be more reluctant in emotion disclosure in comparison to individuals from individualistic cultures (Campos, 2015; Campos & Kim, 2017;
Taylor et al., 2007). Contrary to the popular assumption in the field of social support, social support does not always have to be associated with explicit disclosure of the issue, or the stressor. While such an assumption is true in the individualistic culture of the Western world, it neglects people from collectivistic cultures around the world. For the collectivistic culture, a simple supportive presence in the form of implicit support is often far more helpful.

In the present research literature, European Americans are typically used to represent the individualistic culture, while Asian Americans are typically used to represent the collectivistic culture. However, it is important to note that because collectivism covers a large portion of civilization and can be found all over the world, there are many sub-groups under the common concept of collectivism. For example, another collectivistic ethnic minority population is the Latinx American population. Campos and Kim (2017) present a framework for conceptualizing different types of collectivism, showing that while Asian Americans are known for their prevention approach towards maintaining harmony and balance, Latinx Americans are known for their approach-orientation. Collectivism in Eastern Asian context is conceptualized as *harmony collectivism*. Asian Americans are more negatively influenced by the potential costs of mismanaging the relationships and therefore focus on preventing potential conflicts from occurring. They foster their relationships carefully and avoid at all cost placing burdens on others in the relationship. Collectivism for Latinx, on the other hand, is conceptualized as *convivial collectivism* that consists of open and frequent positive emotion expression, social gatherings, and pleasant politeness that serve to maintaining the honor and dignity of self and others. Emotion expression is thus encouraged in Latinx culture as opposed to in Eastern Asian contexts. The differing mindset and perspective toward relationships lead to differences in social support against stress.
Chang (2015) well illustrates the similarities and differences between the two collectivistic cultures. A qualitative study using focus group interviews was conducted to examine the similarities and differences in social support between Asian and Latino American undergraduate student samples. A questionnaire was given prior to the focus group discussion to collect demographic and background information. During the focus groups, the participants were then asked to answer a list of open-ended questions involving a recent stressor and the coping method used, effectiveness of this coping method, who they asked for support, what supports were given, and in what situation they might or might not ask for support and why, etc. A qualitative analysis was then done on the responses collected.

The Chang (2015) results showed that there were both similarities and differences in how people from the two population groups approach stress and support. Both groups reported generally refraining from seeking family support, despite acknowledging the presence of this support. The motivation behind individuals being reluctant to disclose stress and outwardly seek support in front of family members was due to the desire to avoid creating worries for the family. Despite the common acknowledgement and approach, the two groups held different perceptions of family. While Latinx Americans received and expected to receive parental encouragement and emotional reassurance, Asian Americans expected less and were typically less willing to confide with their parents.

Regarding self-reliance, both groups refrained from seeking social support from anyone, be it family member or friends. The individuals preferred to take problems into their own hands and solve them to the best of their ability. In addition, both expressed concern about the others’ judgement if the stressor was shared. However, the basis of the concern was different for the two groups. Asian Americans were worried about face loss out of the desire to maintain a positive
image and avoid feeling shame or embarrassed in front of others. The source of Latino American’s worry was, on the other hand, *el que dirán* (what others will think). Their primary desire was to maintain harmony in the group and avoid worsening the matter for the group. Lastly, when self-reliance was unsuccessful at solving the issue, both groups sought support from close friends or siblings who can relate to the situation. However, Asian Americans were still more reluctant in comparison to confide about their stressor.

**Independent VS Interdependent Self-Construal Theory**

A self is a continually developing “sense of awareness and agency that guides action and takes shape as the individual… becomes attuned to the environment it inhabits” (Markus & Kitayama, 2010). It is not separated from culture; rather, the two interact socio-culturally. Over interaction, two distinct types of sociality can be formed. One is the independent sociality, where social relations are formed based on the individual’s instrumental interests and goals. The other is the interdependent sociality, where social relations are formed based on the assumption that individuals are “inherently connected” and meaningfulness is achieved through relationships (Markus & Kitayama, 2010). The two drastically different self-construals are typically associated correspondingly with the two types of cultural orientation, where independent self-construal is typically paired with individualistic culture and interdependent self-construal is typically paired with collectivistic culture. The two mindsets view relationships very differently and therefore have different preferences for support as well. For independent self-construal, people focus on their individual expression and tend to view relationships with less importance, without feeling too stressed about severing a tie. For interdependent self-construal, on the other hand, people view themselves as a part of social relations and place great care in maintaining relationships. For example, as shown by Wang and Lau (2018), individuals from collectivistic culture are less
likely to reach out for support. The motivations behind this reluctance to reach out and disclose a need for help is influenced by the cultural importance given to maintaining a smooth and enduring social relationship, and the value given to social perception (Mojaverian, Hashimoto, & Kim, 2012; Taylor, 2007; Wang & Lau, 2018). There are certain cultural values that shape the way individual views social support and relationships. For example, two major concepts on relationship values, fear of losing face and the fear of disrupting group harmony, are very salient in collectivistic cultures and can disincentivize disclosure and support seeking.

Face loss is the feeling of shame or embarrassment during social interaction. Lau, Fung, Wang, and Kang (2009) investigated the concept of face loss and the extent to which this concept applies to collectivistic and individualistic cultures. The study was done to explore the relationship between ethnicity, emotion recognition, interpersonal attunement and social anxiety in both Asian Americans and European Americans. The participants were asked to complete a 20-minute computer task on emotion recognition that involves three formats: static face, audio, and video. Lau and colleagues (2009) found that Asian Americans reported a greater degree of social anxiety in general. In addition, Asian Americans received lower scores on emotion recognition in comparison to European Americans. In terms of the face loss component, Asian Americans were more likely to endorse face loss concern and also reported a higher incidence of experienced shame. The study shows that Asian Americans are in general much more vulnerable to the concept of face loss. The results showed that the higher social anxiety of Asian Americans can be explained by both higher loss of face value and poorer emotional recognition ability.

Another diary survey study also explores the value of group harmony in collectivistic culture (Wang, Shih, Hu, Louie, & Lau, 2010). Asian American and European American college students were first asked to complete a baseline cultural value survey and then asked to complete
a survey about daily events and support experiences every single day for a period of 10 days. The
data were collected online and then analyzed. The results showed that Asian Americans were
less likely to utilize support in comparison to European Americans in case of stress. Researchers
explained this difference in willingness to seek support between the two groups with the cultural
value of group harmony maintenance taken during the baseline survey. A higher score of group
harmony was associated with a lower instance of support seeking and vice versa. The study also
found that it was emotion harmony, the restraint of emotions to avoid burdening others, that
mediates support use.

_Ethnocultural Shaping of Social Support_

While dominant models of social support prioritize outward expression of emotion,
explicit forms of social support are not always helpful for all individuals (Taylor et al., 2007). As
the cultural fit theory illustrates, when an individual’s thought and behavior match what are
promoted in their cultural context, they are more likely to experience better health and well-
being (Soto, Chentsova-Dutton, & Lee 2013; Wang & Lau, 2018). In western culture, where
expressiveness is the norm and encouraged in society, such behavior tends to be helpful in
soothing stress. However, this does not mean that the same effect can be applied elsewhere. In
collectivistic cultures, such outward expression is often looked at with a more cautious eye. The
individuals in these societies regard relationship as a highly important value; as a result, any
outward expression such as complaints for distress can be seen as factors that can disturb the
balance of the relationship (Campos & Kim, 2017; Kim, Sherman, & Taylor, 2008). For the
individuals in these societies, outward expression of emotion and explicit forms of social support
would not only be unhelpful, but might even produce the opposite effect (Taylor et al., 2007).
Floyd and Ray (2017) show that both receiving and being offered unwanted social support poses
problems for the recipient. Individuals have to risk either dealing with the unwanted support if they accept the support or hurting the support provider if they reject the support. In either case, the individual would be forced to face a burden brought by the undesired support, causing anxiety and stress.

Studies show that collectivistic individuals are less likely to utilize the traditional explicit forms of social support in general. We see this based on the findings of Chen and colleagues (2012), which showed that individuals from collectivistic cultures are far less likely to seek support in comparison to individuals from individualistic cultures. In collectivistic cultures, unsolicited support, where the support provider notices the distress of the individual and initiates support without the distressed individual requesting, appears to be preferred and less stress-inducing (Chentsova-Dutton & Vaughn, 2012; Kim et al., 2008; Taylor et al., 2007). Explicitly seeking support runs the risk of potentially negatively impacting the relationship by disturbing the existing balance. Collectivistic individuals are much more afraid of the potential negative consequences as they highly value the harmony within relationships (Campos & Kim, 2017, Kim et al., 2008). Restrained emotion expression may be the underlying reason to the preference of unsolicited support in collectivistic culture as such behavior are cultural norms. Without outward expression of help-seeking, individuals would need to be sensitive to another’s need and provide support when necessary.

Just as cultural fit behaviors within the cultural context result in a prediction of positive health and well-being, non-matching behaviors will tend to produce an adverse effect. One multimethod study assessed biological, psychological, and behavioral stress responses to examine ethnic moderation in the association between perceived support and emotional expressivity with reaction to stress for Asian Americans and European Americans (Wang & Lau,
The study measured the response to stress using multiple methods: cortisol reactivity, negative mood reactivity, and task performance. The participants were conditioned for stress by asked to complete a mental arithmetic and speech task in front of judges. The participants then completed a post-stressor measure of mood, followed by a set of questionnaires measuring perceived social support and emotional expressivity. The results from the study showed that Asian Americans perceived significantly less social support overall in comparison to European Americans. In addition, perceived support and emotional expressivity were only able to reduce the stress reactivity in European Americans, while having no effect for the Asian American population. This study showed that individuals of the collectivistic culture are less likely to perceive social support in general and even when they do, the effect of the support against stress is not significant, as was the case with European Americans.

In addition to differences in general support usage and perception, researches have also found differences within major concepts of social support such as support reciprocity (Wang & Lau, 2015; Gleason et al., 2003). Gleason et al. (2003) showed that support reciprocity is vitally influential to mood improvement. Similarly, another study produced parallel results for the East Asian sample. However, the results of the study also show that the concept of reciprocity seems to be less important in the European American sample. A 2 x 2 between-subject laboratory stressor experiment was designed to examine whether the response to explicit support seeking in Asian Americans and European Americans would be affected by the mutual or non-mutual nature of the support (Wang & Lau, 2015). The results showed that Asian Americans primed under the mutual support condition experienced less psychological and biological distress than those primed under the non-mutual condition. No significant differences were viewed in the European Americans under both conditions.
Aside from cultural differences in the general effect of social support, studies have also looked at specific social support type preferences between individualistic and collectivistic culture. Despite numerous studies and past literature showing that support seeking is a healthy manner of fighting against stress, bringing positive benefits to the individual’s wellbeing, this has proven less successful in the Asian American population group. The group had in past reported that the social support is not helpful and that they have a habit of refraining from seeking it.

Taylor et al. (2007) examined this curious phenomenon in hopes of finding an effective form of social support for Asian Americans, a previously under-examined group in such studies. Other studies have shown that Asian Americans’ primary concern with social support seeking was the disclosure of the stressor, which is bound to occur as a part of the seeking process (Campos & Kim, 2017, Kim et al., 2008). And since Asian Americans come from a collectivistic background where an interdependent view of self is prevalent, disclosure can therefore have very negative potential connotations because it can create disturbance in the existing relationships. There is simply too much to risk in such an act of disclosure, as individuals in these communities are likely to hold relationships with high values. The researchers thus separated support into two categories for the study: explicit support where the individual actively reaches out for support, and implicit support, where comfort is provided through “awareness of the existence of a support network,” rather than actively seeking support from the network. The key difference between the two support types is that explicit support involves active disclosure of the stressor while implicit support refrains from doing so. A lab-conditioned stress study was conducted for Asian Americans and European Americans in order to investigate the effect of the conditioning.
Forty-one Asian Americans and 40 European Americans were selected as participants. The participants were asked to perform the Trier Social Stress task, which involves a mental-arithmetic task and a speech task. The participants were then randomly assigned to one of the conditions during a short writing task: implicit-support condition, explicit-support condition, no-support condition. The stress levels of the participants were measured by assessing the difference of cortisol level before and after the stress-inducing tasks and a measure of psychological stress and a demographics questionnaire taken at the end of the experiment, where they were asked to answer what they feel at the moment.

A 2 X 3 (culture: Asian American vs. European American X social-support condition: implicit vs. explicit vs. control) analysis of variance was conducted to examine the change in psychological stress of the participants (Taylor et al., 2007). The result of the study showed that explicit support was effective in lowering the cortisol level in European Americans while at the same time implicit support had little to no effect on the cortisol level, resulting in a similar cortisol level change as the individuals under the no support condition. On the other hand, the almost exact opposite effect was seen in the Asian American group. Implicit support was the most effective condition in stress reduction, while explicit support not only failed to lower the cortisol level, but actually resulted in heightened stress when conditioned. The study showed that it is not that social support isn’t helpful for individuals from collectivistic culture like Asians or Asian Americans, but rather, social support needs to be transacted in certain ways to be culturally congruent for different ethnocultural groups.

Ethnocultural patterns have also been found for other support types aside from implicit support. A two-part study consisting of an open-ended survey and a close-ended questionnaire was conducted to examine the differences between Japanese and European Americans in
preference of social support types and the motivation behind them (Chen, Kim, Mojaverian, & Marling, 2012). In the first study, the participants were asked to envision a social situation, and any content in relation to support in the response was coded as either emotion-focused or problem focused. The results showed that European Americans provided a significant greater amount and higher frequency of overall support. The European Americans also reported more emotional support while the Japanese participants reported more problem-focused support. In the second study, a questionnaire was used to assess two motivations in offering social support: the closeness in a relationship and self-esteem. The results showed that for European Americans, social support is associated with both wanting to be close and increasing self-esteem; while for Japanese, the closeness was the only significant motivator for offering social support. This study shows that individuals from an individualistic culture prefer emotional support, while individuals from collectivistic culture prefer problem-focused support, which is similar in concept to informational support. Similarly, Chentsova-Dutton and Vaughn (2012) found similar patterns between Europeans and Russian/Russian Americans, which is an example of collectivistic culture in Eastern Europe. A three-part study was conducted to compare the prevalence and reception of advice-giving, or informational social support in the two cultures. The results showed that Russians and Russian Americans saw informational support as a central method of being supportive. They were more likely to provide informational support for others, doing so with a much higher frequency than European Americans, supporting the findings of Chen (2012) where collectivistic individuals prefer informational support while individualistic individuals saw this type of support with less importance.

In sum, support types are not equally effective in stress reduction in different culture. Studies observe that ethnic patterns of preferred and more effective social support type exist,
often differing based on individualism and collectivism cultural background. Whilst individuals from individualistic cultures tend to prefer and gain most benefits out of emotional support (Chen et al., 2012; Taylor et al., 2007), individuals from collectivistic cultures tend to prefer and gain most out of implicit support and informational support. This difference in pattern may possibly be a result from the varying cultural values involving relationship perception of the two cultural types. Some types of support are more preferred than others because they consist of behaviors that are culturally-congruent.

Aside from social support seeking in an intergroup setting with friends and family, studies have also shown that the reluctance of collectivistic individuals to seek support is applicable even in a professional clinical setting. A survey study was conducted to measure both professional help-seeking propensity and psychological openness to acknowledge the presence of psychological problems in individualistic and collectivistic cultures (Mojaverian et al., 2012). The two population groups used in this study were Japanese and American undergraduates. After using factor analysis, the result showed that the Japanese students were much more reluctant to seek professional help while the American students reported less reluctance in doing so. In addition, it is also notable that in both population groups, women reported a greater willingness to both seek professional help and utilize social support in general. Similar to help seeking in interpersonal relationships, a pattern where collectivistic culture individuals are more reluctant to reach out for support than individualistic culture can again be found. In addition to unwillingness to express emotions, the factor of culture stigma against psychological illness might also contribute to this reluctance. However, the formation of such stigma may have also originated from unwillingness of problem disclosure in collectivistic cultures.

The Current study
The current research involves a two-part study. The primary goal of the pilot study that coded qualitative data from a prior study was to assess the patterns in co-occurrence between ethnocultural backgrounds and specific types of support, specifically, whether certain ethnocultural groups were more likely to provide and receive a certain type of support as opposed to others. In other words, will ethnic patterns be observed in preferred social support types? In addition, the study also probes whether certain cultural groups were more likely to experience certain kinds of dissatisfaction in the relationship.

A second cross-sectional study was designed to further explore the relationship between cultural background and support mismatch. The study looks at whether there are ethnocultural differences in perceived support mismatch in friendships, and examines the associations between support mismatch with measures of relationship satisfaction, psychological well-being, and self-efficacy. Past studies have examined ethnocultural differences in preferences for different support types; however, not much research has been done focused on the mismatch variable, and moreover, the different kinds of mismatch (under-support vs. over-support) have not been examined at all.

**Pilot Study**

The pilot study was conducted using an exploratory approach with previously collected qualitative data on types of support and sources of dissatisfaction in female friendship dyads in Asian American and European samples. Female dyads were focused on for this study as females tend to be more expressive of their emotions and feelings. They are also more likely than men to offer support and help, and more likely to tend-and befriend others in times of distress (Simpson & Stroh, 2004; Taylor, Klein, Lewis, Gruenewald, Gurung, & Updegraff, 2000). In addition, a
female might interact differently with a male friend as opposed to a female friend. Therefore, female samples only were collected to control for gender differences and were collected in same-gender dyads to control for cross-gender dynamics. We also controlled for cultural background; each female dyad was composed of two females with the same cultural background to avoid cross-cultural dynamics.

**Pilot Study Method**

In the pilot study, an exploratory data analysis was done on data collected by Wang Lab in 2016. While the original study collected a wide range of data, this pilot study focused on a previously unanalyzed qualitative dataset on support and friendship dynamics.

**Coding Procedure**

25 female dyads of the same cultural background (12 Euro American dyads, 13 Asian American dyads) were recruited from college undergraduate students of Haverford College, Bryn Mawr College, and University of Pennsylvania. Participants were asked to complete this study with a specific close friend of the same sex and cultural background. The participants were asked to respond to three open-ended prompts based on their friendship with their said close friend:

1) “In what ways does your friend make your life better? Please provide concrete examples,”

2) “In what ways does your friend make your life worse? Please provide concrete examples,”

and

3) “In what particular ways is your friend supportive? Please provide concrete examples.”

A coding manual was created using a grounded theory approach (Corbin & Strauss, 1990) and all responses were doubled coded with another Haverford research assistant. The data
were coded in batches of 5 to 10 participants using an iterative process; coders coded the data separately, then met to compare and come to an agreement. Consensus was reached during these sessions. Throughout the process, the coding manual was refined and improved as the coders clarified codes in order to improve reliability. A total of 11 variables were coded for each of the participants; all were binary codes where 0 = No and 1 = Yes. While interrater-reliability was calculated, all data were double-coded and coders reached consensus.

While there were 11 codes, I will focus on the 5 social support codes that are the most relevant to this thesis. The 5 social support codes include: informational support (Kappa = 0.88; Percent Agreement = 0.96), instrumental support (Kappa = 0.80; Percent Agreement = 0.92), emotional support (Kappa = 0.87; Percent Agreement = 0.96), physical affection support (Kappa = 1; Percent Agreement = 1), and implicit support (Kappa = 0.44; Percent Agreement = 0.78). As mentioned previously, all data were double coded by both coders who reached consensus.

However, we note that implicit support did not reach acceptable levels of interrater reliability (kappa), although the percentage agreement indicates acceptable levels of interrater reliability.

Below the codes are briefly summarized, see appendix for more details (Appendix 1).

**Informational/Advice Support.** Code is given for support that provides the individual with helpful information or resources to address the stressor/problem such as making suggestions, giving advice, etc.

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1 Section A codes addressed positive aspects of the relationship and Section B codes addressed sources of relationship dissatisfaction. There were 3 Section A codes: common interest (Kappa = 0.70*; Percent Agreement = 0.92**), adventurous (Kappa = 0.85**; Percent Agreement = 0.98**), and positive influence (Kappa = 0.63; Percent Agreement = 0.94***). There were 3 Section B codes: unreliable/unavailable (Kappa = 0.74*; Percent Agreement = 0.94***), emotional insecurity (Kappa = 0.91***; Percent Agreement = 0.96***), and negative emotional influence (Kappa = 0.68; Percent Agreement = 0.86**).
**Instrumental Support.** Code is given for support that provides task-oriented hands-on practical help of some kind such as providing a meal, helping the individual to study or work on project.

**Emotional Support.** Code is given for support that provides the individual with empathy, reassurance, encouragement, or comfort to help with a stressor/problem, helps with managing negative emotions. This variable involves disclosure or discussion about the stressor and problem.

**Physical Affection Support.** Code is given for support that provides the individual with physical touch meant to help them feel better about a stressor/problem such as hugs, rubs on the back/shoulder.

**Implicit Support.** Code is given for support that provides the individual with support by another’s simple presence and time spent together (without disclosure of a stressor/problem) through shared activities and enjoying one another’s company.

**Pilot Study Results**

Fisher’s Exact Test was conducted to test the patterns in the co-occurrence of ethnic groups and various coded narrative variables. 2 (Ethnic Group: European Americans, Asian Americans) X 2 (Narrative coded: No, Yes) contingency tables were used. No significant differences by ethnic group were found across all five social support types: Informational ($p = 0.61$), Instrumental ($p = 0.147$), Emotional ($p = 0.179$), Physical Affection ($p = 0.177$), and Implicit ($p = 0.554$). Despite that the series of Fisher’s Exact tests failed to detect any significant patterns of co-occurrence of

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2 For the three positive guidance variables, no significant differences by ethnic group were found: Common Interest ($p = 0.244$), Adventurous ($p = 0.275$), Positive Influence ($p = 0.664$). For the three relationship dissatisfaction source variables, no significant by-group differences were found, Unreliability/Unavailability ($p = 0.373$), Emotional Insecurity ($p = 0.426$), Negative Influence($p = 0.347$).
ethnic group and coded narrative variables, we expect this is due to limited power due to a small sample size (N=50). There appears to be a suggestion from the data that there might have been significant patterns for certain support type codes had the sample size been bigger. For example, the data showed promising pattern of higher frequency of instrumental support for Asian Americans and higher frequencies of emotional and physical affect support for European Americans.

**Study 2**

Study 2 is a cross-sectional correlational mixed methods study that examines ethnocultural patterns in social support, and in particular, the links between social support mismatch with various relationship and well-being outcomes. Participants completed surveys assessing their level of individualism and collectivism, ethnic identification, perceived level of social support, emotional expressiveness, psychological well-being, and general self-efficacy. They were also asked to list three of their closest relationships and report on the level of support mismatch and relationship satisfaction within each relationship. In addition, participants were asked to write an open-ended response regarding their receipt of implicit support; however, these data have yet to be coded and are outside the scope of the current thesis project.

Three different cultural groups are included in this study: European Americans, Asian Americans, and Latina Americans. European Americans are typically construed as from an individualistic culture while Asian American and Latinx American are both typically construed as from a collectivistic culture. Asian Americans would represent harmony collectivism, where individuals approach relationship with a preventative orientation due to fear of placing burden on others and thus creating conflicts in the relationships. On the other hand, Latina Americans
would represent convivial collectivism, where individuals approach relationship with an
approach orientation and actively project positive emotion to maintain relationships (Campos &
Kim, 2017). The two collectivistic groups were included in order to examine whether support
pattern differences exist within the branches of collectivistic culture as the two have different
perspective towards relationship. Similar to the pilot study, Study 2 also only focuses on females
to control for gender differences as studies have shown that women are more expressive of their
feelings and emotions compared to men (Simpson & Stroh, 2004) A power analysis was
conducted prior to data collection. With a moderate effect size of 0.5, the suggested sample size
for each is 66 (N = 66), making a total sample size of 198 (EA = 66, AA = 66, LA = 66).

The research questions and hypotheses are as follows:

**Research Question 1:** Does support mismatch (across different kinds of social support)
differentially predict relationship and well-being outcomes for different ethno-cultural groups?

**H1)** The links between instrumental support mismatch with relationship and well-being
outcomes would be magnified for Asian/Asian Americans, in comparison to Euro
Americans.

**H2)** The links between emotional support mismatch with relationship and well-being
outcomes would be magnified for Euro Americans and Latinas, in comparison to
Asian/Asian Americans.

**Research Question 2:** Does the kind of mismatch (over-support & under-support) have the same
links with relationship and well-being outcomes across different ethno-cultural groups?
Study 2 Method

Sample

A total sample of N = 254 female participants was collected, including Euro Americans (n = 101; representing individualistic culture), Latina Americans and Mexicans (LA: n = 51, MX: n = 51; representing convivial collectivistic culture), and Asian Americans from Asian backgrounds (n = 51; China, Korea, Japan, and Taiwan representing harmony collectivistic culture). For both Asian Americans and Latina Americans, the pool is restricted to participants who self-identify as first and second-generation participants to ensure samples that have strong exposure to their heritage cultures. The age range of the participants were generally similar across groups, ranging from 18 – 72 with a mean of $M = 31.07$. The spread of socioeconomic status was also similar across groups, overall: 9.8% of participants reported “finding it difficult to get by,” 26.4% reported “just getting by,” 39.8% reported “doing okay,” and 24% reported “living comfortably.” Compensation was given in monetary form: participants were paid $2.40 for participating in a 20-minute online research study.

Procedure

The online survey platform Qualtrics was used to launch the study, and the web-based labor market, Academic Prolific was used to collect data in the U.S. and in Mexico. A Spanish version of the survey was administered for data collection in Mexico. Validated Spanish translations of Kessler 10, Multidimensional Perceived Social Support Scale, and General Self-Efficacy were used when possible (American Academy of Pediatrics, 2010; Kessler 10 Assessment Form, 2018; Schwarzer & Baessler, 1996). In instances where translations were not available, the back-translation method was used with two English-Spanish bilingual speakers (Brislin, 1970). We included 4 attention check items to assess the attentiveness of the
participants throughout the survey and 2 validity check items to assess the general due diligence of the participants. ³ 15 participants were eliminated due failing at least one attention check item (n = 1, European Americans; n = 1, Latina Americans; n = 1, Asian Americans; n = 12, Mexicans), and 3 participants were eliminated due to failing at least one validity check item (n = 1, European Americans; n = 1, Latina Americans; n = 1, Asian Americans; n = 0, Mexicans). As participants were eliminated based on their responses for the attention and validation check items, data collection was continued to make sure that a sample size of at least n = 100 for European Americans and a sample size of at least n = 50 for Latina Americans, Asian Americans, and Mexicans each were filled.

Participants were asked to list three close individuals in their lives. For each individual, the participants were asked to choose the type of relationship from a provided list (parent, sibling, other family, romantic partner, friend, clergy or counselor, mentor or boss). Then, the participants were asked to rate on a scale of 0 (none at all) to 4 (a great deal) the amount of three kinds of support received from each individual:

Instrumental Support: “How much task-oriented hands-on practical help of some kind or helpful information and task-oriented advice do you receive from this individual?”

Physical Affection Support: “How much physical touch that conveys care and comfort (such as hugs or pats on the back) do you receive from this individual?” and

Emotional Support: “How much empathy, reassurance, encouragement, or comfort that helps with a problem do you receive from this individual?”

³ Attention check items included: “I live on Earth,” “Humans breathe air,” “Rain falls from the sky,” “Water is a liquid”. Validity check items appeared at the end of the study and were: “I verify that I am eligible according to the demographic criteria” and “I verify that I paid attention and made a good faith effort in my study participation”
The participants were then asked to rate on a scale of 0 (not enough) to 4 (too much) whether they feel that the kinds of support received from each individual match with their expectation:

**Instrumental Support:** “Regarding task-oriented hands-on practical help of some kind or helpful information and task-oriented advice, I receive…”

**Physical Affection Support:** “Regarding physical touch that conveys care and comfort (such as hugs or pat on the back), I receive…” and

**Emotional Support:** “Regarding empathy, reassurance, encouragement, or comfort that helps with a problem, I receive…”

Finally, the participants were assessed of the their level of satisfaction of each relationship and asked to report their degree of agreement with the following statement “I feel satisfied with our relationship” on a scale of 0 (strongly disagree) to 3 (strongly agree).

Next, an open-ended prompt assessed the implicit social support received by the participant:

Consider the close relationships you listed above. Have there ever been times where you felt supported when you had a problem or challenge, by the simple presence and time spent together with this person **without telling them of the problem itself**? For the next few minutes, please briefly describe this supportive interaction. 1) what did you do or say? 2) what did they do or say? 3) what was helpful about what they did or said? 4) how did you feel about the interaction afterwards?

The participants were then asked to assess this interaction “Based on the prior interaction you described, how comforted did you feel by the other person?” and rate the interaction on a scale of 0 (not help at all) to 5 (extremely helpful). In cases where the participant reported not having
ever experienced implicit support, the participant was asked to answer another open-ended question:

“You indicated that you have never experienced being supported in this way (i.e., by the presence and time spent with a close other without discussing the problem itself). If you did have this experience, do you think you would find it helpful or not? Why?”

A future step after the thesis is to code these open-ended data and explore implicit support patterns more closely.

Finally, participants completed various established questionnaires on cultural orientation, multigroup ethnic identity, emotion expressivity, perceived social support, psychological wellbeing, and ways of coping.

**Measures**

All questionnaires appear in full in Appendix.

**Cultural Orientation:** The Cultural Orientation Scale is a 16-item scale designed to measure the four dimensions of collectivism and individualism, vertical and horizontal individualism and vertical and horizontal collectivism, on a scale of 1 to 9, where 1 being never or definitely no and 9 being always or definitely yes. Examples of item from the scale includes, “I’d rather depend on myself than others (horizontal individualism),” “it is important that I do my job better than others (vertical individualism),” “if a coworker gets a prize, I would feel proud (horizontal collectivism),” and “it is my duty to take care of my family, even when I have to sacrifice what I want (vertical collectivism)” (Trandis et al., 1988).

**Multigroup Ethnic Identity.** The Multigroup Ethnic Identity Measure (MEIM) is a 12 item self-report questionnaire that measures an individual’s affiliation with one’s ethnic group in
terms of ethnic identity search and of affirmation, belonging and commitment in addition to overall affiliation, on a scale of 1 to 4, with 1 being strongly disagree and 4 being strongly agree. Examples of items from the MEIM includes “I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs (ethnic identity search)” and “I have a clear sense of my ethnic background and what it means to me (affirmation, belonging and commitment)” (Phinney, 1992; Roberts et al., 1999).

**Behavioral Emotion Expression.** The Emotional Expression Scale (EEQ) is a 16 item self-report questionnaire that assesses the tendency of an individual to express emotion. The expressive behavior of both positive and negative emotion of an individual is measured on a scale of 1 to 7, with 1 being not agreeing with the statement at all and 7 being strongly agreeing with the statement. An example of an item from the EEQ is “when I am angry, people around me usually know.” (King and Emmons, 1990)

**Perceived Social Support:** The MSPSS is a 16 item self-report questionnaire that measures level of endorsement of perception of level of support for friends, family, significant others on a scale of 1 to 7, with 1 being very strongly disagree and 7 being very strongly agree. An example of an item from the MSPSS is “there is a special person who is around when I am in need” (Zimet et al., 1988)

**Psychological Wellbeing.** The Kessler Psychological Distress Scale (K10) is a 10 item self-report questionnaire that measures anxiety and depressive symptoms experienced by an individual in the most recent 4-week period on a scale of 1 to 5, with 1 being none of the time and 5 being all of the time. An example for the K10 is “about how often did you feel tired out for no reason?” (Kessler et al., 2002).
**Self-efficacy.** The General Self-Efficacy (GSE) Scale is a 10 item self-report questionnaire that evaluates the individual’s coping ability with daily lives on a scale of 1 to 4, with 1 being the item is not at all true and 4 being the item is exactly true. An example of items from the GSE Scale is “I can always manage to solve difficult problems if I try hard enough” (Schwarzer R & Jerusalem 1995).

**Ways of Coping.** The Ways of Coping Scale is a 12 item self-report questionnaire that measures the level of helpfulness individuals gain after receiving different kinds of support (instrumental, physical affection, emotional, and implicit) on a scale of 1 to 4, with 1 being not at all helpful and 4 being very helpful. This scale is adapted from a 9-item questionnaire developed in Wang’s lab for a previous thesis study and moderated to include 3 items for implicit support. Examples from the scale includes “how helpful has it been to receive comfort and reassurance from someone who know about your stressor? (instrumental)”, “how helpful has it been to receive comforting touches from someone else? (physical affection)”, “how helpful has it been to disclose and share about your specific stressor with someone else? (emotional)”, and “how helpful has it been to spend time having fun in your close relationship (implicit).”

**Study 2 Results**

*Descriptives and Group Differences*

Descriptive statistics and group differences were explored through a series of one-way ANOVAs and bivariate correlation tests. Bivariate correlations of all major study variables are presented in Tables 2.1-2.3, in which Table 2.1 displays the correlations for all 254 participants, Table 2.2 displays the European American group and Latina American group, and Table 2.3 displays the Asian American group and Mexican group.
One-way ANOVAs were used to examine group differences on self-reported variables provided by all participants (N = 254). Results are presented in Tables 1.1. There was no main effect of ethno-cultural group on general self-efficacy, $F(3, 250) = 0.35, p = 0.789$, and anxiety and depressiveness (K10), $F(3, 250) = 0.44, p = 0.724$. Analysis of variance showed a marginally significant main effect of ethno-cultural group on emotional expressiveness, $F(3, 250) = 2.54, p = 0.057$. No significant main effects of ethno-cultural groups were found for the four perceived social support subscales: Friends, $F(3, 250) = 0.41, p = 0.747$; Significant Other, $F(3, 250) = 1.25, p = 0.293$; Family, $F(3, 250) = 0.51, p = 0.679$; and Total Support, $F(3, 250) = 0.42, p = 0.742$. Similarly, no significant ethno-cultural group differences were found across all 4 support helpfulness variables: Implicit, $F(3, 250) = 0.28, p = 0.842$; Emotional CH, $F(3, 250) = 1.15, p = 0.328$; Physical Affection, $F(3, 250) = 1.71, p = 0.166$; and Instrumental, $F(3, 250) = 0.59, p = 0.620$. Significant main effects of ethno-cultural were found for the three of the four individualism-collectivism subscales: horizontal individualism (HI), vertical individualism (VI), and horizontal collectivism (HC). Analysis of variance showed a main effect of ethno-cultural group on HI, $F(3, 250) = 3.33, p = 0.020$. Post-hoc analysis using Tukey’s HSD indicated that HI was lower for European Americans ($M = 27.35, SD = 5.49$) than for Asian Americans ($M = 29.55, SD = 3.73$). A significant main effect of ethno-cultural group was also found for VI, $F(3, 250) = 7.66, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that HI was lower for European Americans ($M = 17.59, SD = 5.85$) than for Asian Americans ($M = 21.51, SD = 6.86$) and for Mexicans ($M = 21.88, SD = 5.76$), and lower for Latina Americans ($M = 18.60, SD = 6.89$) than for Mexicans. Analysis of variance also found a main effect of ethno-cultural group on HC, $F(3, 250) = 3.12, p = 0.027$. Post-hoc analysis using Tukey’s HSD indicated that HC was lower for Asian Americans ($M = 25.25, SD = 5.54$) than for Mexicans ($M$
For vertical collectivism (VC), no main effect of ethno-cultural group was found ($F(3, 250) = 1.20, p = 0.311$. In addition, a significant main effect of ethno-cultural group was found for overall individualism, $F(3, 250) = 8.54, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that HI was lower for European Americans ($M = 44.94, SD = 8.71$) than for Mexicans ($M = 51.24, SD = 7.74$) and for Asian Americans ($M = 51.06, SD = 8.36$). A marginally significant main effect of ethno-cultural group was also found for overall collectivism, $F(3, 250) = 2.47, p = 0.062$.

One-way ANOVAs were also used to find the mean differences on self-reported multi-ethnic identity variables for all participants across the three U.S. groups (European Americans, Latina American, and Asian American; excluding Mexicans). Results are presented in Tables 1.2. Analysis of variance found a significant main effect of ethno-cultural group on total ethnic identity, $F(2, 251) = 22.89, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that total ethnic identity was lower for European Americans ($M = 2.36, SD = 0.60$) than for Latina Americans ($M = 2.91, SD = 0.61$) and for Asian Americans ($M = 2.94, SD = 0.59$). A significant main effect was also found for ethno-cultural group on search for ethnic identity, $F(2, 251) = 24.43, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that ethnic identity search was lower for European Americans ($M = 2.04, SD = 0.64$) than for Latina Americans ($M = 2.62, SD = 0.74$) and for Asian Americans ($M = 2.75, SD = 0.65$). Significant main effect was found for ethno-cultural group on affirmation of ethnic identity, $F(2, 251) = 15.12, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that ethnic identity search was lower for European Americans ($M = 2.59, SD = 0.71$) than for Latina Americans ($M = 3.12, SD = 0.60$) and for Asian Americans ($M = 3.08, SD = 0.64$).
One-way ANOVAs were used to find the mean differences on self-reported relationship and social support variables provided by all participants (N=254). Results are presented in Tables 1.3. No significant main effect of ethno-cultural group was found for relationship satisfaction, $F(3, 250) = 0.85$, $p = 0.469$ and implicit support helpfulness, $F(3, 250) = 1.39$, $p = 0.247$. Analysis of variance showed no significant main effect of ethno-cultural group on amount of instrumental support received, $F(3, 250) = 1.00$, $p = 0.393$. Analysis of variance showed a significant main effect of ethno-cultural group on received emotional support amount, $F(3, 250) = 2.54$, $p = 0.057$. Post-hoc analysis using Tukey’s HSD indicated that emotional support amount was lower for European Americans ($M = 3.64$, $SD = 0.80$) than for Mexicans ($M = 4.00$, $SD = 0.71$). Significant main effect was also found for ethno-cultural group on total support amount received, $F(3, 250) = 7.72$, $p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that total support amount was lower for European Americans ($M = 3.35$, $SD = 0.66$), Latina Americans ($M = 3.36$, $SD = 0.61$), and Asian Americans ($M = 3.43$, $SD = 0.66$) than for Mexicans ($M = 3.85$, $SD = 0.59$).

For support match variables assessing existence of match (0=No, 1=Yes) in types of social support, ANOVAs found a significant main effect of ethno-cultural group on instrumental support match, $F(3, 250) = 3.64$, $p = 0.013$. Post-hoc analysis using Tukey’s HSD indicated that match in instrumental support was higher for European Americans ($M = 1.98$, $SD = 0.97$), Latina Americans ($M = 2.10$, $SD = 1.03$), and Asian Americans ($M = 2.06$, $SD = 1.03$) than for Mexicans ($M = 1.51$, $SD = 1.14$). Significant main effect was found for ethno-cultural group on emotional support match, $F(3, 250) = 6.71$, $p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that match in emotional support was higher for European Americans ($M = 2.01$, $SD = 1.03$) than for Mexicans ($M = 1.81$, $SD = 1.07$), higher for Latina Americans ($M = 1.88$, $SD = 1.03$) than for
than for Mexicans, and higher for Asian Americans ($M = 1.90, SD = 1.03$) than for Mexicans. Significant main effect was also found for total match in support, $F(3, 250) = 8.70, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that total match in support was higher for European Americans ($M = 5.97, SD = 2.25$) than for Mexicans ($M = 4.10, SD = 2.20$), higher for Latina Americans ($M = 5.88, SD = 2.32$) than for Mexicans, and higher for Asian Americans ($M = 5.98, SD = 2.56$) than for Mexicans.

For support mismatch variables, assessing the nature of mismatch/match (0=Under Support, 1=Enough Support/Match, 2=Over Support) in types of social support, ANOVAs showed a marginally significant main effect of ethno-cultural group on instrumental support mismatch, $F(3, 250) = 2.63, p = 0.051$. A significant main effect was found for ethno-cultural group on emotional support mismatch, $F(3, 250) = 11.39, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that emotional support mismatch was lower for European Americans ($M = 0.81, SD = 0.39$) than for Mexicans ($M = 1.25, SD = 0.55$) and Asian Americans ($M = 1.01, SD = 0.41$). Emotional support was lower for Latina Americans ($M = 0.95, SD = 0.47$) than for Mexicans and lower for Asian Americans than for Mexicans. ANOVAs also found a significant main effect of ethno-cultural group on total support mismatch, $F(3, 250) = 12.01, p = 0.000$. Post-hoc analysis using Tukey’s HSD indicated that total support mismatch was lower for European Americans ($M = 0.87, SD = 0.28$), Latina Americans ($M = 0.91, SD = 0.26$), and Asian Americans ($M = 1.00, SD = 0.30$) than for Mexicans ($M = 1.17, SD = 0.40$).

RQ 1: Support mismatch links with relationship and well-being outcomes across ethno-cultural groups.
I analyzed ethno-cultural differences in the links between support mismatch with relationship and well-being outcomes using two analytic approaches: Chi Square and hierarchical multiple regression.

*Chi Squares*

Chi-square tests of independence were used to test the patterns in the co-occurrence of ethno-cultural group and the various types of social support mismatch. While participants were asked to report perceived mismatch in support with three different individuals, only the first individual reported are assessed for this analysis, as we reasoned that the first individual that participants listed in our timed-situation would be the closest to the participant. Patterns tested involved 4 (European Americans, Latina Americans, Asian Americans, Mexicans) X 3 (Under Support, Enough Support, Over Support) contingency tables (yielding \(df = 6\)). Percentage deviation was used as a measure to indicate the degree to which an observed \(\chi^2\) cell frequency differs from the value that would be expected from null hypothesis, or in other words, due to chance alone. The formula used to calculate percentage deviation was \([((\text{observed} – \text{expected}) / \text{expected}) \times 100]\). A positive sign in percentage deviation indicates that observed frequencies were greater than expected (e.g., +15%). A negative sign in percentage deviation indicated that observed frequencies were less than expected (e.g., -15%). The online VassarStats program was used to compute the \(\chi^2\) and the percentage deviation statistics.

Results are presented in Tables 4.1 - 4.3. Significant differences by ethno-cultural group were found in **Instrumental Mismatch** \(\chi^2(6, N = 253) = 14.74, p = 0.022\), for which Latina American reports of Over Support were less frequent (-47.6%) than would be expected by chance. Asian American reports of Under Support were less frequent (-39.6%) than would be
expected by chance. And Mexican report of Over Support were more frequent (+74.8%) than would be expected by chance.

Significant differences by ethno-cultural group were also found in **Emotional Mismatch**. \( \chi^2(6, \ N = 253) = 55.35, \ p = 0.000 \), for which European American reports of Over Support were less frequent (-69.8%), and reports of Under Support were more frequent (+28.1%). Asian American reports of Over support were less frequent (-30.3%), and reports of Under Support were less frequent (-24.8%). And Mexican reports of Over support were more frequent (+178.9%), reports of Enough Support were less frequent (-43.9%), and reports of Under Support were less frequent (-43.6%).

**Hierarchical Multiple Regression**

Hierarchical multiple regression was used to explore the role of culture as a moderator on the association between the amount of support received & level of support mis/match with relationship and well-being outcomes. Interactions between ethno-cultural groups and six perceived social support variables (instrumental support amount & match, emotional support amount & match, total support amount & match) in predicting three relationship and well-being outcome variables (relationship satisfaction, Kessler 10, general self-efficacy) were tested. In step 1, two variables, age and emotional expressiveness (EEQ), were entered as covariates given that there was a marginal group difference on emotional expressiveness. In step 2, support amount and support mis/match variables and three dummy codes for cultural group (D1 = Latina Americans, D2 = Asian Americans, D3 = Mexicans, with European Americans being the reference group always coded as 0) to test for main effects. In step 3, interactions between ethno-cultural group and support amount and support mis/match were added to the model to test for interaction effects. The outcome variables were relationship satisfaction (0 = strongly disagree, 3
= strongly agree), Kessler 10 (10 = no distress, 50 = severe distress) and general self-efficacy (10 = low self-efficacy, 40 = high self-efficacy). Post-hoc sub-group regression analysis was conducted for significant interactions to examine the simple slopes for each group. Results are displayed in Table 3.1 – 3.4.

**Relationship Satisfaction.** Results are presented in Table 3.4. Findings show a main effect of social support amount received on relationship satisfaction ($\beta = 0.56, p = 0.000$). In addition, there was a significant interaction term ($\beta = -0.45, p = 0.056$), suggesting that the relationship between received support amount and relationship satisfaction were significantly different for Asian Americans compared to others. To explore the interaction effect, post-hoc regression analysis was then run for each ethno-cultural group separately. Significant positive relationships between support amount and relationship satisfaction were found for all four groups: European Americans, ($\beta_{EA} = 0.64, p = 0.000$); Latina Americans, ($\beta_{LA} = 0.44, p = 0.005$); Asian Americans, ($\beta_{AA} = 0.50, p = 0.001$); and Mexicans, ($\beta_{MX} = 0.49, p = 0.000$). In general, positive significant relationships were found for Non-Asian Americans ($\beta_{Non-AA} = 0.54, p = 0.000$).

Findings show a main effect of general perceived mis/match in support on relationship satisfaction ($\beta = 0.29, p = 0.000$), indicating that as match increases, relationship satisfaction also increases. A significant interaction term was also found ($\beta = -0.38, p = 0.002$), suggesting that the relationship between general support mis/match perceived and relationship satisfaction were significantly different for Mexicans compared to others. Post-hoc regression analysis were then run for each ethno-cultural group separately to explore the interaction effect. Significant positive relationships between support mis/match and relationship satisfaction were found for three groups: European Americans, ($\beta_{EA} = 0.44, p = 0.000$); Latina Americans, ($\beta_{LA} = 0.43, p = 0.002$);
and Asian Americans, ($\beta_{AA} = 0.37, p = 0.006$). For Mexicans, a significant negative relationship was found ($\beta_{MX} = -0.32, p = 0.020$). In general, a positive significant relationship was found for Non-Mexicans ($\beta_{Non-MX} = 0.41, p = 0.000$).

**Anxiety and Depressiveness (Kessler 10).** Findings show a significant main effect of general support amount on anxiety and depressiveness, measured by Kessler 10, ($\beta = -0.14, p = 0.038$). In addition, a significant interaction was also found ($\beta = 0.61, p = 0.015$), suggesting that the relationship between general support amount and Kessler 10 were significantly different for Asian Americans compared to others. In order to explore this interaction effect, post-hoc regression analysis were then run for each ethno-cultural group separately. For Asian Americans, ($\beta_{AA} = 0.23, p = 0.110$) and Mexicans, ($\beta_{M} = -0.11, p = 0.467$), no significant relationship between support amount and Kessler 10 were found. A significant negative relationship was found for European Americans, ($\beta_{EA} = -0.24, p = 0.020$); and a marginally significant negative relationship was found for Latina Americans, ($\beta_{LA} = -0.27, p = 0.081$). In general, a significant negative relationship was found for Non-Asian Americans ($\beta_{Non-AA} = -0.20, p = 0.005$).

Findings show a main effect of general support mis/match on Kessler 10 ($\beta = -0.20, p = 0.001$), indicating that as match increases, Kessler 10 decreases. There was also a significant interaction term ($\beta = 0.36, p = 0.007$), suggesting that the relationship between support mis/match and Kessler 10 were significantly different for Mexicans compared to others. Post-hoc regression analysis were then run for each ethno-cultural group separately to explore the interaction effect. No significant relationship between support mis/match and Kessler 10 were found for Asian Americans, ($\beta_{AA} = -0.11, p = 0.409$), and Mexicans, ($\beta_{M} = 0.15, p = 0.289$). Significant negative relationships were found for both European Americans, ($\beta_{EA} = -0.26, p = 0.003$), and Latina Americans, ($\beta_{LA} = -0.43, p = 0.002$). In general, a significant negative
relationship was found for Non-Mexicans ($\beta_{\text{Non-MX}} = -0.26$, $p = 0.000$) while no significant relationship was found for Mexicans.

**General Self-Efficacy.** Findings show a marginal main effect of general support amount on general self-efficacy ($\beta = 0.12$, $p = 0.076$). In addition, a marginally significant interaction term ($\beta = -0.44$, $p = 0.083$), suggesting that the relationship between support amount received and self-efficacy were marginally significantly different for Asian Americans compared to others. To explore this marginal interaction effect, post-hoc regression analysis were then run for each ethno-cultural group separately. No significant relationships between support amount and general self-efficacy were found for all four groups: European Americans, ($\beta_{\text{EA}} = 0.17$, $p = 0.123$); Latina Americans, ($\beta_{\text{LA}} = 0.08$, $p = 0.609$); Asian Americans, ($\beta_{\text{AA}} = -0.08$, $p = 0.640$); and Mexicans, ($\beta_{\text{MX}} = 0.18$, $p = 0.189$). However, a significant positive relationship was found for Non-Asian Americans ($\beta_{\text{Non-AA}} = 0.17$, $p = 0.026$).

Findings show that there was no main effect of general support mis/match on general self-efficacy. However, there was a significant interaction term ($\beta = 0.39$, $p = 0.036$), suggesting that the relationship between support amount and self-efficacy were significantly different for Latina Americans compared to others. No significant relationships between support amount and general self-efficacy were found for three groups: European Americans, ($\beta_{\text{EA}} = 0.01$, $p = 0.949$); Asian Americans, ($\beta_{\text{AA}} = 0.10$, $p = 0.471$); and Mexicans, ($\beta_{\text{MX}} = -0.03$, $p = 0.816$). A significant positive relationship was found for Latina Americans, ($\beta_{\text{LA}} = 0.37$, $p = 0.008$) but a null association was found for Non-Latina Americans.

**H1:** Cultural differences in links of instrumental support mis/match with relationship and well-being outcomes
Relationship Satisfaction. Results are presented in Table 3.1. Findings show that there was no main effect of amount of instrumental support received on relationship satisfaction. There was, however, a marginally significant interaction term ($\beta = -0.36, p = 0.078$), suggesting that the relationship between instrumental support amount received and relationship satisfaction were marginally significantly different for Asian Americans compared to others. Post-hoc regression analysis were then run for each ethno-cultural group separately to explore the interaction effect. For Latina Americans and Asian Americans, there were no significant relationship between instrumental support amount and relationship satisfaction. The relationship was significant and positive for both European Americans ($\beta_{EA} = 0.32, p = 0.001$) and Mexicans ($\beta_{MX} = 0.28, p = 0.050$). In general, there was a significant positive relationship between instrumental support amount and relationship satisfaction for Non-Asian American group ($\beta_{Non-AA} = -0.36, p = 0.078$).

Findings show that there was a main effect of perceived mis/match in instrumental support ($\beta = 0.20, p = 0.001$), indicating that as match increases, relationship satisfaction also increases. There was also a significant interaction term ($\beta = -0.38, p = 0.002$), suggesting that the relationship between instrumental support mis/match and relationship satisfaction was significantly different for Mexicans compared to others. In order to explore the interaction effect, post-hoc test were run separately for each group. For Latina Americans and Mexicans, no significant relationship between instrumental support mis/match and relationship satisfaction was found. There was however, a significant positive relationship for European Americans ($\beta_{EA} = 0.31, p = 0.001$) for Asian Americans ($\beta_{AA} = 0.46, p = 0.000$). Overall, there was a significant positive relationship between instrumental support mis/match and relationship satisfaction for Non-Mexicans ($\beta_{Non-MX} = 0.31, p = 0.000$).
Anxiety and Depressiveness (Kessler 10). Findings show that there was no main effect of perceived level of mis/match in instrumental support on anxiety and depressiveness. In addition, there were no significant interaction terms in the findings to suggest that the relationships between instrumental support mis/match and anxiety and depression were significantly different across groups.

Findings show that there was a main effect of level of perceived mis/match in instrumental support received on Kessler 10, which measures anxiety and depressiveness ($\beta = -0.13, p = 0.029$), indicating that as match increases, Kessler 10 decreases. There was also a marginally significant interaction term ($\beta = -0.36, p = 0.078$) suggesting that the relationship between instrumental support mis/match and Kessler 10 were marginally significantly different for Mexicans compared to others. In order to explore this interaction effect, post-hoc regression analysis were run for each group separately. There were no significant relationships between instrumental support mis/match and Kessler 10 for all four groups (European Americans, Latina Americans, Asian Americans, Mexicans). Overall, however, there was a significant negative relationship for the Non-Mexican group ($\beta_{Non-MX} = -0.19, p = 0.004$).

General Self-Efficacy. Findings show that there was no main effect of level of amount of instrumental support received on self-reported general self-efficacy. The findings do show, however, that there was a marginally significant interaction ($\beta = -0.36, p = 0.075$) suggesting that the relationship between instrumental support amount and general self-efficacy were marginally significantly different for Asian Americans compared to others. Post-hoc regression analyses were run for each group separately to explore this interaction effect. There was no significant relationship between instrumental support amount and general self-efficacy for any of the four groups.
There was no main effect of mis/match in instrumental support on general self-efficacy. However, there was a significant interaction term ($\beta = -0.36, p = 0.078$) suggesting that the relationship instrumental support mis/match and self-efficacy were significantly different for Latina Americans compared to others. Post-hoc regression analyses were run for each group separately in order to explore this interaction effect. The results show that there was no significant relationship between instrumental support mis/match and general self-efficacy for any of the four groups.

**H2: Cultural differences in links of emotional support mis/match with relationship and well-being outcomes**

**Relationship Satisfaction.** Results are presented in Table 3.3. Findings show that there was no main effect of amount of emotional support received on relationship satisfaction. There was a significant interaction ($\beta = -0.37, p = 0.050$), suggesting that the relationship between emotional support amount and relationship satisfaction were significantly different for Latina Americans compared to others. To explore this interaction effect, post-hoc regression analysis were then run for each ethno-cultural group separately. Significant positive relationships were found for all four groups: European Americans ($\beta_{EA} = 0.59, p = 0.000$), Latina Americans ($\beta_{LA} = 0.42, p = 0.005$), Asian Americans ($\beta_{AA} = 0.61, p = 0.000$), and Mexicans ($\beta_{M} = 0.62, p = 0.000$). There was in general a significant positive relationship between emotional support amount and relationship satisfaction for the Non-Latina American group ($\beta_{Non-LA} = 0.62, p = 0.000$).

Findings show there was no main effect of perceived mis/match of emotional support on relationship satisfaction, indicating that as match increases, relationship satisfaction also increases. However, there were two significant interaction terms: ($\beta = 0.42, p = 0.005$),
suggesting that the relationship between emotional support mis/match and relationship satisfaction were significantly different for Asian Americans compared to others, and ($\beta = 0.42$, $p = 0.005$), suggesting that the relationship was significantly different for Mexicans compared to others. Post-hoc regression analysis were then run for each group to explore these two interaction effects. For Asian Americans ($\beta_{AA} = 0.15$, $p = 0.280$) and Mexicans ($\beta_{MX} = -0.20$, $p = 0.157$), no significant relationship between emotional support mis/match and relationship satisfaction was found. Significant positive relationships were found for both European Americans ($\beta_{EA} = 0.43$, $p = 0.000$) and Latina Americans ($\beta_{LA} = 0.49$, $p = 0.000$). Overall, significant positive relationships were found for Non-Asian Americans ($\beta_{Non-AA} = 0.25$, $p = 0.000$) and Non-Mexicans ($\beta_{Non-MX} = 0.37$, $p = 0.000$).

**Anxiety and Depressiveness (Kessler 10).** Findings show that there was a main effect of amount of emotional support on Kessler 10 ($\beta = -0.17$, $p = 0.008$). In addition, there was also a significant interaction term ($\beta = 0.69$, $p = 0.004$), suggesting that the relationship between emotional support amount and Kessler 10 were significantly different for Asian Americans compared to others. Post-hoc regression analysis were run for each individual group separately to explore this interaction effect. For Asian Americans ($\beta_{AA} = 0.22$, $p = 0.105$) and Mexicans ($\beta_{MX} = -0.14$, $p = 0.344$), no significant relationship between emotional support amount and Kessler 10 were found. Significant negative relationships were found for both European Americans ($\beta_{EA} = -0.27$, $p = 0.004$) and Latina Americans ($\beta_{LA} = -0.30$, $p = 0.048$). In general, there was a significant negative interaction for Non-Asian Americans ($\beta_{Non-AA} = -0.24$, $p = 0.001$).

Findings show that there was a main effect of perceived emotional support mis/match on Kessler 10 ($\beta = -0.18$, $p = 0.004$), indicating that as match increases, Kessler 10 decreases. There was also one significant interaction term ($\beta = 0.29$, $p = 0.006$), suggesting that the relationship
between emotional support mis/match and Kessler 10 were significantly different for Mexicans compared to others, and one marginally significant interaction term ($\beta = 0.24, p = 0.075$), suggesting that the relationship was marginally significantly different for Asian Americans compared to others. To explore these two interaction effects, post-hoc regression analysis were run for each group separately. For Asian Americans ($\beta_{AA} = -0.029, p = 0.823$) and Mexicans ($\beta_{M} = 0.15, p = 0.294$), no significant relationship between emotional support mis/match and Kessler 10 were found. Significant negative relationships however, were found for European Americans ($\beta_{EA} = -0.29, p = 0.001$) and Latina Americans ($\beta_{LA} = -0.38, p = 0.006$). In general, there were significant negative relationships between emotional support mis/match and Kessler 10 for both Non-Asian Americans ($\beta_{Non-AA} = -0.18, p = 0.005$) and Non-Mexicans ($\beta_{Non-M} = -0.23, p = 0.0$), while the association was null for Asian Americans and MXs.

**General Self-Efficacy.** Findings show that there was a main effect of amount of emotional support received on general self-efficacy ($\beta = 0.19, p = 0.003$). There was also a significant interaction term ($\beta = 0.69, p = 0.004$), suggesting that the relationship between emotional support amount and self-efficacy was significantly different for Mexicans compared to others. To explore this interaction effect, post-hoc regression analysis were run for each ethnocultural group separately. For European Americans ($\beta_{EA} = 0.10, p = 0.3$), Latina Americans ($\beta_{LA} = 0.20, p = 0.19$), and Asian Americans ($\beta_{AA} = 0.19, p = 0.22$), no significant relationship between emotional support amount and general self-efficacy were found. Significant positive relationship was found for Mexicans ($\beta_{M} = 0.34, p = 0.012$). In addition, significant positive relationship was found for Non-Mexicans ($\beta_{Non-M} = 0.15, p = 0.033$).

Findings show that there was no main effect of perceived mis/match in emotional support on general self-efficacy. In addition, there were no significant interaction terms in the findings to
suggest that the relationships between emotional support mis/match and general self-efficacy were significantly different across groups.

**RQ 2: Exploration of mismatch type and its links with relationship and well-being outcomes across ethno-cultural groups.**

A series of two-way 4 X 3 ANCOVA [covariates: Age, Emotional Expressiveness] were conducted to analyze the between subject effects of Ethno-Cultural Group (European Americans, Latina Americans, Asian Americans, Mexicans) and Social Support Mismatch Type (Under support, Enough Support, Over-support) on relationship satisfaction and well-being outcomes. Age and Emotional Expressiveness (EEQ) were controlled for given that there were marginal ethno-cultural group differences on emotional expressiveness.

**Relationship Satisfaction.** Findings showed a significant main effect of ethno-cultural group, $F(2, 254) = 5.11, p = 0.007$, but a non-significant main effect of instrumental mismatch type was found $F(2, 254) = 0.50, p = 0.68$. A significant interaction was also found between ethno-cultural group and instrumental mismatch type, $F(2, 254) = 2.23, p = 0.041$, suggesting that the effect of ethno-cultural group on relationship satisfaction differs based on type of mismatch in instrumental support.

One-way ANOVAs and Tukey’s HSD post-hoc tests were then run for each ethno-cultural group separately to explore this interaction effect. For European Americans, the analysis of variance showed a main effect of instrumental support mismatch type on relationship satisfaction, $F(2, 101) = 5.40, p = 0.006$. Post-hoc analysis using Tukey’s HSD indicated that relationship satisfaction was lower for European Americans with Under Support than for European Americans with Enough Support ($p = 0.007$) and Over Support ($p = 0.012$), but
relationship satisfaction did not differ significantly between European Americans with Enough and Over Support. For Latina Americans, the analysis of variance did not show a main effect of instrumental support mismatch types on relationship satisfaction, $F(2, 51) = 1.37, p = 0.265$. For Asian Americans, the analysis of variance showed a main effect of instrumental support mismatch types on relationship satisfaction, $F(2, 51) = 4.45, p = 0.017$. Post-hoc analysis using Tukey’s HSD indicated that relationship satisfaction was marginally lower for Asian Americans with Under Support than Asian Americans with Enough Support ($p = 0.070$) and that relationship satisfaction was marginally lower for Asian Americans with Over Support than Asian Americans with Enough Support ($p = 0.066$), but relationship satisfaction did not differ significantly between Asian Americans with Under and Over Support. For Mexicans, the analysis of variance showed a main effect of instrumental support mismatch type on relationship satisfaction, $F(2, 51) = 4.72, p = 0.013$. Post-hoc analysis using Tukey’s HSD indicated that relationship satisfaction was lower for Mexicans with Under Support than Mexicans with Over Support ($p = 0.012$), but relationship satisfaction did not differ significantly between Mexicans with Under and Enough Support or between Mexicans with Enough and Over Support (See Figure 4).

One-way ANOVAs and Tukey’s HSD post-hoc tests were also run for each type of instrumental support mismatch separately to explore this interaction effect. The analysis of variance did not show main effect of ethno-cultural group on relationship satisfaction for the three separate mismatch groups: Under Support, $F(3, 33) = 0.87, p = 0.466$; Enough Support $F(3, 164) = 0.87, p = 0.461$; Over Support, $F(3, 57) = 2.67, p = 0.057$.

Findings showed no significant main effect of ethno-cultural group, $F(2, 254) = 0.065, p = 0.978$, but a significant main effect of emotional support mismatch type was found, $F(2, 254) = \ldots$
11.42, \( p = 0.000 \). In addition, a marginally significant interaction was found between ethno-cultural group and emotional support mismatch type, \( F(2, 254) = 1.81, p = 0.097 \), suggesting that the effect of ethno-cultural group on relationship satisfaction marginally differs based on type of mismatch in emotional support.

To explore this interaction effect, one-way ANOVA and Tukey’s HSD post-hoc tests were then run accordingly for each ethno-cultural group separately. For European Americans, the analysis of variance showed a main effect of emotional support mismatch type on relationship satisfaction, \( F(2, 101) = 10.53, p = 0.000 \). Post-hoc analysis using Tukey’s HSD indicated that relationship satisfaction was lower for European Americans with Under Support than for European Americans with Enough Support (\( p = 0.000 \)) and Over Support (\( p = 0.006 \)), but relationship satisfaction did not differ significantly between European Americans with Enough and Over Support. For Latina Americans, the analysis of variance showed no main effect of emotional support mismatch type on relationship satisfaction, \( F(2, 51) = 1.53, p = 0.228 \). For Asian Americans, the analysis of variance showed a main effect of emotional mismatch type on relationship satisfaction, \( F(2, 51) = 12.16, p = 0.000 \). Post-hoc analysis using Tukey’s HSD indicated that relationship satisfaction was lower for Asian Americans with Under Support than Asian Americans with Enough Support (\( p = 0.001 \)) and Asian Americans with Over Support (\( p = 0.000 \)), but relationship satisfaction did not differ significantly between Asian Americans with Enough and Over Support. For Mexicans, the analysis of variance showed a marginal main effect of emotional mismatch type on relationship satisfaction, \( F(2, 51) = 3.09, p = 0.055 \). Post-hoc analysis using Tukey’s HSD indicated that relationship satisfaction was marginally lower for Mexicans with Under Support than Mexicans with Over Support (\( p = 0.093 \)), but relationship
satisfaction did not differ significantly between Mexicans with Under and Enough Support or between Mexicans with Enough and Over Support.

One-way ANOVAs and Tukey’s HSD post-hoc tests were then also run for each type of emotional support mismatch separately to explore this interaction effect. The analysis of variance showed did not show significant main effect of ethno-cultural group on relationship satisfaction for the three separate mismatch groups: Under Support, $F(3, 53) = 0.88, p = 0.456$; Enough Support $F(3, 151) = 0.78, p = 0.510$; Over Support, $F(3, 50) = 1.62, p = 0.198$.

**Anxiety and Depressiveness (Kessler 10).** Findings showed that there were no significant main effects of either ethno-cultural group, $F(2, 254) = 0.50, p = 0.278$ or instrumental mismatch type were found $F(2, 254) = 0.38, p = 0.682$. In addition, there was no significant interaction found between ethno-cultural group and instrumental support mismatch type, $F(2, 254) = 1.34, p = 0.242$, suggesting that the effect of ethno-cultural group on anxiety and depressiveness, measured by Kessler 10, does not differ based on type of mismatch in instrumental support.

Findings showed that there were no significant main effect of ethno-cultural group, $F(2, 254) = 0.97, p = 0.41$ and no significant main effect of emotional support mismatch type, $F(2, 254) = 0.76, p = 0.47$ found. No significant interaction term was found between ethno-cultural group and emotion support mismatch type, $F(2, 254) = 1.22, p = 0.30$. The effect of ethno-cultural group on anxiety and depressiveness did not show to differ based on types of mismatch in emotional support.

**General Self-Efficacy.** Findings showed that there were no significant main effect for both ethno-cultural group, $F(2, 254) = 0.40, p = 0.755$ and instrumental support mismatch type, $F(2, 254) = 0.18, p = 0.840$. In addition, no significant interaction were found between ethno-
cultural group and instrumental mismatch type, $F(2, 254) = 0.61, p = 0.726$, suggesting the
effect of ethno-cultural group on general self-efficacy did not differ based on mismatch types in
instrumental support.

Findings show that no significant main effects were found for ethno-cultural group $F(2, 254) = 0.19, p = 0.907$, and for emotional support mismatch type, $F(2, 254) = 1.14, p = 0.322$. There was also no significant interaction found between ethno-cultural group and emotional support mismatch type, $F(2, 254) = 0.81, p = 0.564$, suggesting that the effect of ethno-cultural group on general self-efficacy did not differ across types of mismatch in emotional support.

**Discussion**

The pilot study results did not show significant patterns in the co-occurrence of ethno-
cultural group and the coded narrative variables, though the small sample size and limited power
are likely the primary reasons. However, the results did show promising trends that indicated that
the results may have been significant had the sample size been bigger. Asian Americans seemed
to be receiving more instrumental support than European Americans in their female dyad
relationship. Euro Americans on the other hand, seemed to be receiving more emotional and
physical affection support in comparison to Asian Americans. This led to the design and
development of Study 2.

Study 2 explored ethnocultural differences in the effects of support mismatch across
different types of social support on different relationship and well-being outcomes using a cross-
sectional mixed-method design. Data were collected from four ethno-cultural groups, with
European Americans representing individualist culture, Latina Americans and Mexicans
representing convivial collectivist culture, and Asian Americans representing harmony
collectivist culture. The hypothesis that the European Americans had stronger links between emotional support mismatch and relationship and wellbeing was supported by the data. Consistent with initial predictions, the European Americans had a stronger relationship than Asian Americans, in that a strong significant positive relationship was found for European Americans between match and amount of emotional support and relationship and wellbeing. The hypothesis that stronger links between instrumental support mismatch and relationship and wellbeing would be found for Asian Americans was also supported: Asian Americans appeared to have a stronger association between instrumental support mismatch and outcomes than did European Americans. In addition, ethno-cultural patterns were also found in the relationship between forms of mismatch and relationship satisfaction, showing that under and over support are perceived differently in different cultural groups. It is also interesting to note out of the three outcomes examine (relationship satisfaction, anxiety and depressiveness, and general self-efficacy), relationship satisfaction was the one with the most significant associations. This may have been a result of relationship satisfaction being the most proximal variable in this study and are thus most directly affected by the support variables that were assessed in this study. The other two variables, anxiety and depressiveness, and general self-efficacy, on the other hand, are more distant variables and relate to the support variables more indirectly and thus are more subject to influences of other untested variables that were not controlled for.

*Instrumental VS Emotional Support*

We had originally hypothesized that the links between instrumental support mismatch with relationship and well-being outcomes would be magnified for Asian Americans, in comparison to European Americans. The data supported this prediction. Positive links between mismatch and relationship satisfaction were found for both European Americans and Asian
Americans, signifying that for individuals from either group, higher frequencies of match were correlated with higher relationship satisfaction. As predicted, the link was stronger for Asian Americans than European Americans. The results align with findings from Chentsova-Dutton and Vaughn (2012) that found that individuals from collectivistic backgrounds were more likely to provide instrumental support and tend to prefer instrumental support over other support forms. Collectivistic culture tends to discourage emotional expression. On the over hand, instrumental support align more with the values of the reserved collectivistic culture as practical acts of care and support are preferred and encouraged. While Russians were used as the collectivistic group, rather than Asian Americans, it is still worth noting collectivistic individuals seemed to receive higher satisfaction from instrumental support in our data. Asian Americans received more satisfaction in their relationships when their expectation of instrumental support was met compared to European Americans.

For emotional support, we had hypothesized that the links between support mismatch with relationship and well-being outcomes would be magnified for European Americans and Latinas, in comparison to Asian Americans. This hypothesis was supported by the data. A strong positive link between mis/match and relationship satisfaction was found, showing that the higher the frequency of match, the higher the satisfaction that European American individuals perceived from the relationship. Similarly, a strong negative link between mis/match and Kessler 10 was found, showing that the higher the frequency of match, the lower the symptoms of anxiety and depression for European Americans. Similar links were also found for Latina Americans. For Asian Americans, on the other hand, no significant links between support mis/match and the relationship and well-being variables were found. Similar trends were suggested by previous study, which showed that emotional expressivity was beneficial for European Americans but
hindering for Asian Americans in terms of relieving stress (Wang & Lau, 2018). As emotional support involves the outward expression of emotion, it makes sense that European Americans report higher relationship satisfaction from their expected receiveal of emotional support was met by the other individual in relationship. In comparison to others, emotion expression is not as valued in harmony collectivism culture as it poses potential risk to relationship. Individuals have a high desire to maintain a positive image in front of members of their group and highly concerned with potentials of face loss as such would both disrupt their positive image and group integrity (). Expressing too much emotion would heighten the chance of face-loss occurrence and in order to avoid so, harmony collectivists would choose to be more reserved about their emotion expression. However, counter to our prediction, no significant links between emotional support mismatch and relationship and wellbeing were found for Mexicans, the other Latina group. In opposite to our expectation, the Mexican and Latina American group were not similar in aspects of perception of social support mismatch. We had originally hypothesis that the two group would be similar due to their common Latino culture. It seems, however, that Mexican is a specific Latinx culture that cannot be simply written off as a subpart of general Latinx culture. The Latina American group, on the other hand, may be been more diverse as there exists multiple specific Latinx cultures in America due the history of immigration. These specific Latinx cultures that together form the Latina American group may have each been inherently unique as the Mexican culture but when combined together, their uniqueness may have been compromised to an extent, causing the divergence of results found for the two group in this study.

Interestingly, the descriptive statistics showed that these four ethno-cultural groups did not differ in terms of perceived social support or in self-reported helpfulness from instrumental and emotional support. In other words, while there are no ethno-cultural differences in the
question of whether support is available when need and in the level of perceived helpfulness from receiving support (instrumental and emotional), ethno-cultural patterns were found in the way instrumental amount and match/mismatch link with relationship satisfaction and general wellbeing.

*Forms of Mismatch: Under VS. Over*

One of our research questions was to explore whether over-support and under-support have similar links with relationship and wellbeing across the different ethno-cultural groups. The data revealed that the links for forms of support mismatch does indeed differ across groups for relationship satisfaction. For Mexicans, over-support was correlated with higher relationship satisfaction than both under-support and enough support. As Figure 4 shows, an almost linear relationship can be seen: relationship satisfaction increases in ascending order for Mexicans with under-support, enough-support, and over-support. A similar trend was found for emotional support, where over-support is linked to higher satisfaction for Mexicans (Figure 5). These trends indict that for Mexicans, receiving more support than is needed is in fact the most beneficial in terms of relationship satisfaction. Having this form of support mismatch not only does not hinder wellbeing, it is actually better than receiving just enough support. One can say that it is the amount of support received that is correlated with relationship satisfaction rather than the notion of match in support.

This trend is further supported by other data analysis. Our findings show that for Mexicans, across the three relationship and wellbeing outcome variables, significant positive links were found between instrumental support amount and both relationship satisfaction and general self-efficacy. A significant positive link was also found between emotional support amount and relationship satisfaction. On the other hand, no significant links were found for
either instrumental or emotional support match, indicating again that it is the *amount* of support (and not support match) that matters for relationships and wellbeing for Mexicans. In other words, reception of higher support amount was found to be beneficial for Mexicans regardless of its level of match to the individual’s need. In addition, significantly more Mexicans reported receiving over-support than would be expected by chance alone in chi square tests, suggesting that over-support is common in addition to explaining both why no significance was found between match and relationship and wellbeing and why over-support mismatch is common and beneficial (Figure 1, 3). This valuation of support amount over-match can perhaps be explained by the nature of collectivism in Latino culture. The form of collectivism embodied by Latinos is convivial collectivism, where the projection of positivity is the norm and encouraged in the community. They are more likely to engage in simpatía behavior, which involves strong displays of graciousness and hospitality (Campos & Kim, 2017; Holloway, Waldrip, & Ickes, 2009).

Given that Latinos are so used to and familiar with outward projection of positivity and support, an “excess” of support may thus be view as positive and beneficial rather than an annoyance or burden (for individualistic cultures) and a risk for upsetting relationship harmony (for harmony collectivistic cultures).

In addition to the positive over-support pattern found for Mexicans, the results also revealed various patterns for other ethno-cultural groups. For Asian Americans, the pattern differs depending on the kind of social support in question. A trend similar to what that was found for Mexicans can be seen between *emotional support* and relationship satisfaction (See Figure 5). Relationship satisfaction was higher for over-support in comparison to both enough-support and under-support. A gradually increasing relationship can be seen; in comparison to Mexicans, the difference between over and enough support is less significant, suggesting that the
strength of this relationship may be weaker in comparison. For instrumental support, however, a completely different trend was found between types of support and relationship satisfaction. Higher relationship satisfaction was shown to be correlated with enough-support while both under and over support were similarly linked to lower relationship satisfaction, displaying an upside-down “V” (Figure 4). These varying trends indicate that for Asian Americans, receiving more support is positive and favorable for emotional support but negative and unfavorable for instrumental support in terms of relationship satisfaction. In other words, whereas more than enough emotional support is beneficial for relationship satisfaction, the same for instrumental support is hindering. For instrumental support, it is a question of whether the support received matches the individual’s expectation that matters the most for relationship satisfaction: higher match is linked with higher satisfaction. In sum, it is the amount of emotional support and the match of instrumental support that is important for relationship satisfaction for Asian Americans.

This differing preference of support amount and match based on support kind may potential be explained by the harmony nature of collectivism in Asian culture. In harmony collectivism, individuals prioritize the maintenance of the balance within relationships (Campos & Kim, 2017). As a result, they tend to be more aware of the contribution of the other partner in the relationship and whether this contribution matches with their own, as both too little or too much contribution from one side results in imbalance and thus poses potential threat in disrupting the relationship. This notion that Asian Americans are more affected by the mutual factor of support in relationship is supported by findings from past studies. For example, Wang & Lau (2015) found that non-mutual support caused more distress for Asian Americans than mutual support, whereas for European Americans, the notion of mutual or non-mutual supports poses no difference, as concerns of harmony have been found to explain the decrease of support
use among Asian Americans (Taylor et al., 2004; Wang et al., 2010). The results of this study seem to suggest that the harmony characteristic of Asian collectivism is more applicable for instrumental support rather than emotional support. The more quantifiable nature of instrumental support could possibly explain this divergence. It is much easier and likely for an individual to keep track of how much instrumental support as oppose to emotional support. Instrumental support may be more discrete as it primarily involves hands-on practical help; the experience of being over-support in terms of instrumental support as result, may be relatively more salient. Emotional support, on the other hand, may be less quantifiable since they may be exchanged in less explicit ways. Since Asian Americans are belong to the harmony collectivistic culture, they will tend to view mutual-interdependence with high importance. The reception of too much support would thus be unfavorable for Asian Americans as they are more averse to the relational implications of so. While over-support would disturb the harmony of relationship, receiving just enough support aligns with the principle values of mutual-interdependence, and is therefore optimal for relationship satisfaction. For emotional support, since it may be less explicit and quantifiable, would not be as subjected to the careful calculation of balance as instrumental support is; it is the abundancy, rather than the match, of emotional support that matters the most for relationship satisfaction.

Unlike Mexicans and Asian Americans who had displayed a pattern where the amount aspect of support rather than match or vice versa predicted relationship satisfaction and well-being outcomes, albeit depending on the kind of support, we find that European Americans perceived both to be important for relationship satisfaction. Both amount of and match in instrumental and emotional support had strong positive relationships with relationship satisfaction, where higher amount of support received and higher match with expectation were
correlated with higher relationship satisfaction. This finding of importance in support match is in line with previous research on the nature of reciprocal exchange nature in individualism culture. Individuals that are high in individualism, such as the European Americans tend to have exchange relationships, which employ a quid pro quo approach for favors and gifts, in which the giving of a benefit comes with the expectation or obligation that a benefit of comparable value will be given in return (Clark & Mills, 2011; Miller et al., 2014). This seemly contradicts with the findings of Wang & Lau (2015) which show that individualists are not affected by the mutual contribution of support in relationship. However, when looking at the divergence more closely, these differences are more different pieces of a puzzle as opposed to polarizing views on the same topic. It is important to note that this finding was involved with the distress level of individuals in seeking support when conditioned to either support has or has not been provided on their end in the past. The match variable used in this study, on the other hand, is measured by the match of received support with the individual’s expectation, considering only one side of a relationship. Whereas one study involves acknowledgment of support provided by the individual in the past, the other only assesses expectation. These findings together show that European Americans had no trouble in seeking support from other but were sensitive in whether their expectation has been met by others in support. While reciprocal exchange is highly important in individualistic culture, past studies have not distinguished emphasize of self or partner in a relationship in terms of reciprocation. In combination with results for this study, the findings together seem to suggest that European Americans are highly sensitive and aware of whether the other had completed their share of contribution of support in relationship, hence, their expectation of support. At the same time, they tend to be less sensitive of completion status of their own end of the deal. In other words, although tally-mark keeping is the practice for
European Americans, the question of who in the relationship is taking records is highly important. On the other hand, the equal importance of received support amount on relationship satisfaction showed again that an abundancy of support in beneficial.

**Individualism VS. Collectivism: Surprising Patterns**

The classic INDCOL scale was administered for all participants for this study to access the individualistic and collectivistic nature of the participants. The data however, showed completely reversed trends in comparison to existing studies in the field. Numerous past studies have shown that European Americans tends to score higher on individualism and Latino and Asians are more likely to score higher on collectivism (Campos & Kim, 2017; Taylor et al., 2007; Singelis et al., 1995). Findings from the present study show that European Americans scored the lowest on individualism and highest on collectivism, Asian Americans, on the other hand, scored the highest on individualism and lowest on collectivism. Latina Americans and Mexicans also scored similar high scores as Asian Americans on individualism. The cause of this drastic shift in pattern is up to debate. It may very well be possible that this pattern was a result from technological error in the process of data retrieval in Qualtrics, the online platform used to administer the survey. In such case, the differing patterns can be written off as unreliable data and disregarded. On the other hand, there have been studies that showed changes in the traditional individualism-collectivism regional trends. Oyserman, Coon & Kemmelmeier (2002) presented their findings in a meta-analysis of the INDCOL scale, suggesting that European Americans are not more individualistic than Latinos and while being less collectivistic than Asians, the significance had only a small effect size. Other studies have also suggested that there lies potential problem in the widely used INDCOL scale including the sometimes-low reliability and possible misinterpretation when using mean comparison (Christopher et al., 2006; Probst et
al., 1999; Singelis et al., 1995). The cause of reversal trends found in this study may therefore be
either due to fundamental problems of the scale or due to the gradually closing gap between
individualism and collectivism as a result of globalization.

Strengths and Limitations

The present research possesses several points of strength. For example, the design allows
a comparison between native and immigrant cultural in term of support links with relationship
and wellbeing. The study was designed to include two Latino population groups, the immigrant
Latina Americans and the native Mexicans, providing an opportunity to discern differences
between what would typically be categorized under the broad umbrella term of Latino culture.
The resulting analysis, on the other hand, did show that the two Latino cultures had different
patterns in terms of perception of support mismatch. The study also explores two support
variables – received support amount and perceived support match/mismatch. This setup allowed
for side-by-side comparisons of how amount and match/mismatch of each form of support
relates to relationship and well-being across the ethno-cultural groups. Moreover, the study is
also— to our knowledge — the first to disentangle support mismatch, looking at both under- and
over support, in examining ethno-cultural moderation on relationship and well-being outcomes.
The results show that the two forms of mismatch indeed link differently with relationship
satisfaction (but not the other outcome variables) for different ethno-cultural groups.

Despite the various strengths, there are however several limitations of this study that must
be noted. When the study was originally designed, the sample was five ethno-cultural groups,
including a Chinese group representing the native Asian population. The idea was to have both a
native and an immigrant American population for each of the two forms of collectivism for the
sake of comparison. However, due to physical regional constraint, data was only collected for
four of the five groups as the online crowd-sourcing platform, Academic Prolific, used for this research, is inaccessible inside China. Thus, while the Latina American and Mexican groups were successfully collected to represent Latino convivial collectivism, only the Asian American group was collected for Asian harmony collectivism. I am looking forward to collecting a Chinese sample in future steps for this project. Another weakness of design is the unequal sample across groups. Due to the initial expectation that the Latina American and Mexican group will be similar enough that they may be combined together into one Latina group, the two groups had only half the number of participants as the European American group did. The Asian American group was also halved in terms of participants due to the same issue. As results later show, however, the links between support and relationship and well-being outcome are statistically different between Latina Americans and Mexicans and thus they should be treated as separate groups. Data were thrown out based on the attention check item implement in the questionnaire and throughout the survey and several new participants were gathered and administered the corrected survey to fill the shortness of sample size. However, there still remains the chance that participants from the first round may have guessed on that portion of survey and answered correctly by chance the attention check item. The reliability of these data would therefore be somewhat debatable.

*Future Directions*

Due to time and practicality restraints, we were not able to include a sample of native Asians such as Chinese as originally planned. For future studies, it would be interesting to include another native Asian American group for comparison with the immigrant Asian American group. As the results from this study showed, the Latina American and the native Mexican group are actually very different in terms of response in relationship and wellbeing to
social support. It would be very interesting to see if the same pattern would be found in the Asian convivial culture. Similarly, it would be interesting to include another native Western European group, as it is possible that this native group may differ from European Americans against our expectation. In addition, due to this difference observed in native and immigrant Latina population, for future studies, they should be treated as separate individual groups as the European Americans were and their sample sizes should in turn be increased. The present study is one of the first to look into the ethno-cultural patterns of different types of mismatch in forms of social support, despite the various limitation. A future direction could thus be to repeat this study once again with the addition of sample size adjustment. In addition, due to the time restraints, we were unable to code and analyze the open-ended responses collected. In the future, these narratives involving implicit support will be coded and analyzed using the coding manual developed for the Pilot study and the ethnocultural patterns of implicit support will be explored.

Conclusion

In short, this study has explored and assessed the various ethnocultural patterns in support and support mis/match. Ethnocultural links between support and relationship and wellbeing, especially relationship satisfaction have been found. This study was also the first to look into the question of amount verses match of instrumental and support in cultural context. Results from the study show that support match and support amount hold differing importance for different ethno-cultural groups. In alignment with previous research, the ethnocultural background of individuals serves as a differing variable in regards to the kind, forms of mismatch, and amount vs. match of support in terms of relationship satisfaction.
### Table 1.1 Descriptive statistics and cultural group differences on study self-report variables

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<tr>
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† p < .10; * p < .05; ** p < .01; *** p < .001. Shared superscripts represent statistically significant differences between specific groups. Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).
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<th>Mean (SD)</th>
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| MEIMmean              | 2.36<sup>a,b</sup> (0.60) | 2.91<sup>a</sup> (0.61) | 2.94<sup>b</sup> (0.59) | 22.89  | 0***    | European American < Latina American  
                       |           |           |           |        |         | European American < Asian American |
| MEIMsearch            | 2.04<sup>a,b</sup> (0.64) | 2.62<sup>a</sup> (0.74) | 2.75<sup>b</sup> (0.65) | 24.43  | 0***    | European American < Latina American  
                       |           |           |           |        |         | European American < Asian American |
| MEIMaffirmation       | 2.59 (0.71) | 3.12 (0.60) | 3.08 (0.64) | 15.12  | 0***    | European American < Latina American  
                       |           |           |           |        |         | European American < Asian American |

† p < .10; * p < .05; ** p < .01; *** p < .001. Shared superscripts indicate statistically significant differences between specific groups.

Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).
Table 1.3 Descriptive statistics and cultural group differences on study self-report relationship and social support variables

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† p < .10; * p < .05; ** p < .01; *** p < .001. Shared superscripts represent statistically significant differences between specific groups.

Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).
Table 2.1: Bivariate correlations for self-report measures and self-report dependent variables (N=254)

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† p < .10; * p < .05; ** p < .01; *** p < .001.

Note. Values below the diagonal reflect correlations for entire sample (N = 254)

Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).

Note. Kessler 10 measures anxiety and depressive symptoms; GSE refers to the general self-efficacy scale; EEQ refers to the emotional expressiveness questionnaire;

MSPSS refers to the multi-dimensional scale of perceived social support (Friends, Significant Other, Family subscales)
Table 2.2: Bivariate correlations for self-report measures and self-report dependent variables

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† p < .10; * p < .05; ** p < .01; *** p < .001.

Note. Values above the diagonal reflect correlations for European Americans (n = 101), and values below the diagonal reflect correlations for Latina Americans (n=51)

Note. Kessler 10 measures anxiety and depressive symptoms; GSE refers to the general self-efficacy scale; EEQ refers to the emotional expressiveness questionnaire;

MSPSS refers to the multi-dimensional scale of perceived social support (Friends, Significant Other, Family subscales)
Table 2.3: Bivariate correlations for self-report measures and self-report dependent variables (N=51)

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† p < .10; * p < .05; ** p < .01; *** p < .001.

Note. Values above the diagonal reflect correlations for Asian Americans, and values below the diagonal reflect correlations for Mexicans.

Note. Kessler 10 measures anxiety and depressive symptoms; GSE refers to the general self-efficacy scale; EEQ refers to the emotional expressiveness questionnaire;

MSPSS refers to the multi-dimensional scale of perceived social support (Friends, Significant Other, Family subscales)
### Table 3.1: Individual's Perceived Instrumental Support Predicting Relationship Satisfaction and Well-Being Measures

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<td>Latina American a</td>
<td>0.022</td>
<td>0.092</td>
<td>0.016</td>
</tr>
</tbody>
</table>
### Step 3: Interactions

<table>
<thead>
<tr>
<th></th>
<th>Instrumental Match</th>
<th>Instrumental Match</th>
<th>Instrumental Match</th>
<th>Instrumental Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian American⁵</td>
<td>0.088</td>
<td>0.093</td>
<td>0.067</td>
<td>-0.722</td>
</tr>
<tr>
<td>Mexican⁶</td>
<td>0.155</td>
<td>0.095</td>
<td>0.118</td>
<td>-1.281</td>
</tr>
</tbody>
</table>

Note. Each panel denotes a hierarchical regression model with a different observed instrumental support variable (Panel A: Instrumental Support Amount; Panel B: Instrumental Support Match). \( N = 254 \).

Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).

⁵ Latina American = 1, European American = 0
⁶ Asian American = 1, European American = 0
⁷ Mexican = 1, European American = 0

† \( p < .10 \); * \( p < .05 \); ** \( p < .01 \); *** \( p < .001 \).
Table 3.2: Individual's Perceived Physical Affection Support Predicting Relationship Satisfaction and Well-Being Measures

<table>
<thead>
<tr>
<th>Satisfaction and Well-being</th>
<th>Relationship Satisfaction</th>
<th>Anxiety and Depression</th>
<th>General Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>SE</td>
<td>β</td>
<td>ΔR²</td>
</tr>
</tbody>
</table>

**PANEL A**

*Step 1: Covariate*
- Age: -0.002 0.003 -0.048 0.036* -0.188 0.04 -0.277*** 0.162*** 0.023 0.028 0.05 0.118***
- Emotional Expressiveness: 0.125 0.041 0.192** -2.414 0.568 -0.249*** 2.193 0.398 0.331***

*Step 2: Main Effect*
- Physical Affection Support Amount: 0.2 0.039 0.365*** 0.097*** -0.221 0.572 -0.027 0.003 0.248 0.401 0.045 0.004
- Latina American: 0.028 0.09 0.021 -0.978 1.308 -0.05 -0.606 0.917 -0.045
- Asian American: 0.076 0.09 0.058 -0.806 1.312 -0.041 -0.11 0.92 -0.008
- Mexican: -0.053 0.097 -0.041 -0.665 1.416 -0.034 0.003 0.992 0

*Step 3: Interactions*
- Latina American X Physical Affection Amount: 0.096 0.094 -0.248 0.007 -0.402 1.371 -0.051 0.011 -1.28 0.958 -0.238 0.018
- Asian American X Physical Affection Amount: -0.102 0.095 -0.257 2.124 1.374 0.259 1.736 0.96 -0.31†
- Mexican X Physical Affection Amount: -0.094 0.102 -0.294 0.885 1.476 0.144 0.296 1.03 0.07

**PANEL B**

*Step 1: Covariate*
- Age: -0.002 0.003 -0.048 0.036* -0.188 0.04 -0.277*** 0.162*** 0.023 0.028 0.05 0.118***
- Emotional Expressiveness: 0.125 0.041 0.192** -2.414 0.568 -0.249*** 2.193 0.398 0.331***

*Step 2: Main Effect*
### ETHNOCULTURAL PATTERNS IN SUPPORT MISMATCH

<table>
<thead>
<tr>
<th>Physical Affection Support Match</th>
<th>Latina American(^a)</th>
<th>Asian American(^b)</th>
<th>Mexican(^c)</th>
<th>Step 3: Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.079 0.032 0.159* 0.031(\dagger)</td>
<td>-0.922 0.44 -0.125 0.017 0.994 0.559 0.122(\dagger) 0.014</td>
<td>-1.146 1.299 -0.059 0.497 0.913 -0.037</td>
<td>-1.528 1.365 -0.078 0.187 0.957 -0.014</td>
<td>0.021 0.093 0.035 0.043(\ast) -1.085 1.311 -0.12 0.016 1.595 1.402 -0.292 0.019</td>
</tr>
<tr>
<td>0.049 0.093 0.037</td>
<td>-0.865 1.3 -0.044 -0.18 0.915 -0.013</td>
<td>-0.245 0.08 -0.352(\ast) 1.769 1.13 0.171 0.856 1.432 0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.103 0.093 0.078</td>
<td>-0.641 1.183 0.077 2.335 1.342 -0.443(\dagger)</td>
<td>0.641 1.183 0.077 2.335 1.342 -0.443(\dagger)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Each panel denotes a hierarchical regression model with a different observed Physical Affection support variable (Panel A: Physical Affection Support Amount, Panel B: Physical Affection Support Match). N = 254.

*Note.* European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).

\(^a\) Latina American = 1, European American = 0
\(^b\) Asian American = 1, European American = 0
\(^c\) Mexican = 1, European American = 0

\(\dagger p < .10; \ast p < .05; \ast\ast p < .01; \ast\ast\ast p < .001.\)
Table 3.3: Individual’s Perceived Emotional Support Predicting Relationship Satisfaction and Well-Being Measures

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction</th>
<th>Anxiety and Depression</th>
<th>General Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>SE</td>
<td>β</td>
<td>ΔR²</td>
</tr>
<tr>
<td><strong>PANEL A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1:</strong> Covariate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.002</td>
<td>0.003</td>
<td>-0.048</td>
</tr>
<tr>
<td>Emotional Expressiveness</td>
<td>0.125</td>
<td>0.041</td>
<td>0.192**</td>
</tr>
<tr>
<td><strong>Step 2: Main Effect</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Support Amount</td>
<td>0.371</td>
<td>0.037</td>
<td>0.565***</td>
</tr>
<tr>
<td>Latina American a</td>
<td>0.095</td>
<td>0.08</td>
<td>0.072</td>
</tr>
<tr>
<td>Asian American b</td>
<td>0.038</td>
<td>0.08</td>
<td>0.029</td>
</tr>
<tr>
<td>Mexican c</td>
<td>0.02</td>
<td>0.082</td>
<td>0.015</td>
</tr>
<tr>
<td><strong>Step 3: Interactions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latina American a X Emotional Amount</td>
<td>-0.174</td>
<td>0.088</td>
<td>-0.367*</td>
</tr>
<tr>
<td>Asian American b X Emotional Amount</td>
<td>-0.104</td>
<td>0.098</td>
<td>-0.232</td>
</tr>
<tr>
<td>Mexican c X Emotional Amount</td>
<td>0.071</td>
<td>0.104</td>
<td>0.167</td>
</tr>
<tr>
<td><strong>PANEL B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1:</strong> Covariate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.002</td>
<td>0.003</td>
<td>-0.048</td>
</tr>
<tr>
<td>Emotional Expressiveness</td>
<td>0.125</td>
<td>0.041</td>
<td>0.192**</td>
</tr>
<tr>
<td><strong>Step 2: Main Effect</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Support Match</td>
<td>0.133</td>
<td>0.031</td>
<td>0.268</td>
</tr>
</tbody>
</table>
### Step 3: Interactions

<table>
<thead>
<tr>
<th></th>
<th>Latina American&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Asian American&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Mexican&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.061 0.091 0.046 -1.234 1.289 -0.063</td>
<td>0.123 0.091 0.094 -1.058 1.291 -0.054</td>
<td>0.222 0.097 0.169* -1.945 1.367 -0.099</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.486 0.913 -0.036</td>
<td>0.021 0.915 0.002</td>
<td>0.69 0.969 0.052</td>
</tr>
</tbody>
</table>

**Note.** Each panel denotes a hierarchical regression model with a different observed Emotional support variable (Panel A: Emotional Support Amount, Panel B: Emotional Support Match). N = 254.

**Note.** European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).

<sup>a</sup> Latina American = 1, European American = 0
<sup>b</sup> Asian American = 1, European American = 0
<sup>c</sup> Mexican = 1, European American = 0

† p < .10; * p < .05; ** p < .01; *** p < .001.
Table 3.4: Individual's Perceived Total Support Predicting Relationship Satisfaction and Well-Being Measures

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction and Well-being</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relationship Satisfaction</td>
<td>Anxiety and Depression</td>
<td>General Self-Efficacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>β</td>
<td>ΔR²</td>
</tr>
<tr>
<td><strong>PANEL A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1:</strong> Covariate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.002</td>
<td>0.003</td>
<td>-0.048</td>
<td>0.036*</td>
</tr>
<tr>
<td>Emotional Expressiveness</td>
<td>0.125</td>
<td>0.041</td>
<td>0.192**</td>
<td>-2.414</td>
</tr>
<tr>
<td><strong>Step 2: Main Effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Support Amount</td>
<td>0.452</td>
<td>0.05</td>
<td>0.564</td>
<td>0.244***</td>
</tr>
<tr>
<td>Latina American a</td>
<td>0.08</td>
<td>0.082</td>
<td>0.061</td>
<td>-1.152</td>
</tr>
<tr>
<td>Asian American b</td>
<td>0.055</td>
<td>0.082</td>
<td>0.042</td>
<td>-0.667</td>
</tr>
<tr>
<td>Mexican c</td>
<td>-0.066</td>
<td>0.086</td>
<td>-0.05</td>
<td>-0.202</td>
</tr>
<tr>
<td><strong>Step 3: Interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latina American a X Total Amount</td>
<td>-0.134</td>
<td>0.126</td>
<td>-0.249</td>
<td>0.012</td>
</tr>
<tr>
<td>Asian American b X Total Amount</td>
<td>-0.232</td>
<td>0.121</td>
<td>-0.446†</td>
<td>4.68</td>
</tr>
<tr>
<td>Mexican c X Total Amount</td>
<td>-0.042</td>
<td>0.129</td>
<td>-0.125</td>
<td>2.056</td>
</tr>
<tr>
<td><strong>PANEL B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1:</strong> Covariate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.002</td>
<td>0.003</td>
<td>-0.048</td>
<td>0.036*</td>
</tr>
<tr>
<td>Emotional Expressiveness</td>
<td>0.125</td>
<td>0.041</td>
<td>0.192**</td>
<td>-2.414</td>
</tr>
<tr>
<td><strong>Step 2: Main Effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Support Match</td>
<td>0.063</td>
<td>0.014</td>
<td>0.287</td>
<td>0.081***</td>
</tr>
<tr>
<td>Latina American a</td>
<td>0.05</td>
<td>0.091</td>
<td>0.038</td>
<td>-1.134</td>
</tr>
<tr>
<td>Asian American b</td>
<td>0.106</td>
<td>0.091</td>
<td>0.081</td>
<td>-0.895</td>
</tr>
<tr>
<td>Ethnic Group</td>
<td>Beta 1</td>
<td>SE 1</td>
<td>Beta 2</td>
<td>SE 2</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Mexican</td>
<td>0.237</td>
<td>0.097</td>
<td>0.18*</td>
<td>0.097</td>
</tr>
<tr>
<td>Latina</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Match</td>
<td>-0.004</td>
<td>0.036</td>
<td>-0.02</td>
<td>0.036</td>
</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Match</td>
<td>-0.05</td>
<td>0.034</td>
<td>-0.25</td>
<td>0.034</td>
</tr>
<tr>
<td>Mexican</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Match</td>
<td>-0.181</td>
<td>0.038</td>
<td>-0.654*</td>
<td>0.038</td>
</tr>
</tbody>
</table>

**Step 3: Interactions**

**Note.** Each panel denotes a hierarchical regression model with a different observed Total support variable (Panel A: Total Support Amount, Panel B: Total Support Match). N = 254.

**Note.** European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).

* Latina American = 1, European American = 0
* Asian American = 1, European American = 0
* Mexican = 1, European American = 0

† p < .10; * p < .05; ** p < .01; *** p < .001.
Table 4.1: Individual’s Perceived Instrumental Support Mismatch Level by Ethno-cultural Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Instrumental Support Match (1st Individual)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under</td>
</tr>
<tr>
<td>European Americans</td>
<td>14 (+6.7%)</td>
</tr>
<tr>
<td>Latina American</td>
<td>8 (+20.7%)</td>
</tr>
<tr>
<td>Asian American</td>
<td>4 (-39.6%)</td>
</tr>
<tr>
<td>Mexican</td>
<td>7 (+5.6%)</td>
</tr>
</tbody>
</table>

$\chi^2 (6) = 14.74, \ p = .022$

Note. Percentage deviations are presented in the parentheses.

Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).
Table 4.2: Individual’s Perceived Physical Affection Support Mismatch Level by Ethno-cultural Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Physical Affection Support Match (1st Individual)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under (with deviation)</td>
</tr>
<tr>
<td>European Americans</td>
<td>20 (+0.6%)</td>
</tr>
<tr>
<td>Latina American</td>
<td>15 (+49.4%)</td>
</tr>
<tr>
<td>Asian American</td>
<td>9 (-10.4%)</td>
</tr>
<tr>
<td>Mexican</td>
<td>6 (-40.2%)</td>
</tr>
</tbody>
</table>

$\chi^2 (6) = 30.98, \ p = .000$

Note. Percentage deviations are presented in the parentheses.

Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).
Table 4.3: Individual's Perceived Emotional Support Mismatch Level by Ethno-cultural Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Under</th>
<th>Enough</th>
<th>Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Americans</td>
<td>27 (+28.1%)</td>
<td>68 (+13.3%)</td>
<td>6 (-69.8%)</td>
</tr>
<tr>
<td>Latina American</td>
<td>12 (+12.8%)</td>
<td>30 (-1.1%)</td>
<td>9 (-10.4%)</td>
</tr>
<tr>
<td>Asian American</td>
<td>8 (-24.8%)</td>
<td>36 (+18.7%)</td>
<td>7 (-30.3%)</td>
</tr>
<tr>
<td>Mexican</td>
<td>6 (-43.6%)</td>
<td>17 (-43.9%)</td>
<td>28 (+178.9%)</td>
</tr>
</tbody>
</table>

χ² (6) = 55.35, p = .000

Note. Percentage deviations are presented in the parentheses.

Note. European Americans (n = 101), Latina Americans (n = 51), Asian Americans (n = 51), Mexicans (n = 51).
Figure 1. Instrumental support mismatch for ethno-cultural groups

Figure 2. Physical affection support mismatch for ethno-cultural groups
Figure 3. Emotional support mismatch for ethno-cultural groups

Figure 4. Instrumental support match and estimated marginal means of relationship satisfaction

Figure 5. Emotional support match and estimated marginal means of relationship satisfaction

Covariates appearing in the model are evaluated at the following values: Age = 31.07, EQ Mean = 4.0673
Figure 6. Interaction between ethno-cultural group and instrumental support amount in predicting relationship satisfaction
Figure 7. Interaction between ethno-cultural group and instrumental support match in predicting relationship satisfaction

Figure 8. Interaction between ethno-cultural group and emotional support amount & match in predicting relationship satisfaction
Figure 9. Interaction between ethno-cultural group and instrumental support match in predicting Kessler 10

Figure 10. Interaction between ethno-cultural group and emotional support amount & match in predicting Kessler 10
Figure 11. Interaction between ethno-cultural group and instrumental support amount & match in predicting general self-efficacy
Works Cited


Appendix 1

CODING MANUAL FOR OPEN-ENDED RESPONSES
VARIABLES AND CODES

**Section A:**
Prompt 1: “In what ways does your friend make your life better? Please provide concrete examples.”

***If they discuss support, please code according to Section C.***

1. **Common Interest** -- friend who shares common interests/activities and is willing to spend time together for pleasure/enjoyment
   a. 0=No
      i. Ex: (17B): “Also, we always have fun together and love spending time with one another”
      1. Does not explicitly state common interest/activity
   b. 1=Yes
      i. Ex: (28B) “We also have many shared interests that allow us to spend time together, such as sports, or being outside in nature”

2. **Adventurous** -- friend who encourages the individual to try out new and exciting things
   a. 0=No
   b. 1=Yes
      i. Ex: (34B) “She is friends with absolutely everyone on campus so I get to branch out and meet new people whenever I'm with her”

3. **Positive Influence** -- friend who acts as a positive influence on the individual; a character that the individual may look up to; *(positive impact on the individual’s actions and thoughts, there should be indications of some kind of change or willingness due to this positive influence)*
   a. 0=No
      i. Ex: (9B) “she is really funny and positive….she is also a very likable person, and my mom even commented on the same thing”
      1. Friend is admired simply for positive traits, but no change in action/thought was witnessed for the individual
   b. 1=Yes
      i. Ex: (11A) “overall, she makes my life better because her positive and hardworking attitude is something I strive to achieve in myself”
Section B:
Prompt 2: “In what ways does your friend make your life worse? Please provide concrete examples.”

Responses to this question are coded categorically based on the dissatisfaction type. Three types of dissatisfaction can be identified: (1) unreliable/unavailable, (2) emotional insecurity, (3) draining.

1. **Unreliable/Unavailable** -- friend who is not present or available when needed, inconsistent in responsiveness to contact, or is simply unresponsive and ignoring (note: social withdrawal or forgetfulness at events does not count as being unreliable/unavailable when needed)
   a. 0=No
   b. 1=Yes
   i. Ex: (6A) “when I ask her to do something […] she doesn't respond”
   ii. Ex: (11A) “she is absent or unresponsive when I need to talk to her”

2. **Emotional Insecurity** -- individual feels insecure and uncertain in the stability of the relationship. There may be feelings of being left out or less valued/prioritized in comparison to other friends. There may be feelings of competition and jealousy in terms of how the individual compares to the friend. There may be unresolved issues that leads the individual to view the relationship as potentially unstable.
   a. 0=No
   b. 1=Yes
   i. Ex: (15A) “I love both of them and love that we are all friends, but sometimes I do feel left out”
   ii. Ex: (23A) “…that unenables (sic) to participate in the conversation and also that makes me feel lonely”
   iii. Ex: (29A) “I can't help but be struck by how popular she is and how people aren't that excited to talk to me. I wish I was that well liked”
   iv. Ex: (8A) “when a friend says something that’s offensive or rude and I don’t tell this person how I’m feeling afterwards, it creates stress for me because this kind of situation can happen again then”

3. **Negative Emotional Influence (Draining)** -- individual feels upset due to friend’s emotions. For example, the friendship is too energy-draining or time-consuming or...
worrying in some way. Friend may be unreasonably insecure, needy, or demanding in some way. Individual may end up taking on the negative emotions of the friend. (note: focus on the feeling of the individual rather than the friend’s)

a. 0=No
   i. *Note: not all problems in the relationship are caused by draining
   ii. Ex: (13B) “I guess she is not super energetic all the time like me, which makes me feel my needs not heard sometimes”
      1. Dissatisfaction was resulted from personality difference rather than energy/time draining
   iii. Ex: (15A) “Even if there are times when it’s been inconvenient for me to help her….that doesn’t in any way make my life worse - I like feeling that there is a support system between the two of us that goes both ways”
      1. Example of inconvenience/draining has been stated, but individual explicitly states that this does not result in negative effects in her life
   iv. Ex: (17A) “She is more extrovert than I am and so sometimes she displays too much emotion and I send to suppress mine. This difference makes communicating hard sometimes”
      1. The source of the issue is personality clash

b. 1=Yes
   i. Ex: (9B) “Actually, every time there has been drama, it’s always centered around her. She tends to overreact when it comes to certain situations, and it causes a lot of problems.”
   ii. Ex: (16B) “sometimes friends take up a lot of energy, often mental energy”
   iii. Ex: (21B) “when she is sad, I feel sad”
   iv. Ex: (25A) “I don't like to see her always in an inconvenient position because people take advantage of her”
Section C:
Prompt 3: “In what particular ways is your friend supportive? Please provide concrete examples.”

Responses to this question are coded categorically based on the support type. Five types of support can be identified: (1) the support is advice, (2) the support is instrumental, (3) the support is emotional, (4) the support is physical affection, (5) the support is implicit support.

1. **Informational/Advice Support** -- provides the individual with helpful information or resources to address the stressor/problem (e.g., making suggestions, giving advice)
   a. 0=No
   b. 1=Yes
   i. Ex: (8A) “I expect them to listen and provide some sort of feedback”
   ii. Ex: (12A) “she is very resourceful and open to sharing resources”

2. **Instrumental Support** -- provides task-oriented hands-on practical help of some kind. (e.g., providing a meal, helping me study or work on project). The task should be done for the purpose of help
   a. 0=No
   b. 1=Yes
   i. Ex: (29A) “so she invited me to her apt and made me dinner and gave me ice cream”
   ii. Ex: (6A) “applications are so stressful, could you proofread this/give me some ideas?”
   iii. Ex: (9B) “i have to her for econ support, and she has been very helpful with that. In freshman year, we studied together for all our tests.”

3. **Emotional Support** -- provides the individual with empathy, reassurance, encouragement, or comfort to help with a stressor/problem, helps with managing negative emotions, involves disclosure/talking about a stressor/problem (having someone to talk to or provide a listening ear, being able to vent)
   a. 0=No
   b. 1=Yes
   i. Ex: (15A) “someone to cry to”
   ii. Ex: (28B) “always there when I need somebody to talk about…”
   iii. Ex: (31B) “listens to me complain”

4. **Physical affection support** -- provides the individual with physical touch meant to help them feel better about a stressor/problem (providing hug, rub back/shoulder)
   a. 0=No
   b. 1=Yes
i. Ex: (11A) “… provides me with someone to hug”

5. **Implicit Support** -- provides the individual with support by simple presence and time spent together **without disclosure of a stressor/problem** (shared activities, enjoying one another’s company). (Note: if it can be inferred that some type of disclosure of stressor/problem has occurred, code 0 for implicit support) (*Consider: it will rare that the implicit support is specifically stated within the passage, use a holistic approach to assess whether companionship/common activities was used for support)
   a. 0=No
   b. 1=Yes
   i. Ex: (28A) “I can always count on her to cheer me up and listen to me when I am sad or stressed out [Emotional Support]. It is also nice that we like to do similar activities together, like play field hockey and hike outside [Implicit Support]”
   ii. Ex: (6A) “She’s just someone who I can rely on in times of big crisis and for chill things like games we play or shows we watch….it’s good to know that someone has your back”
   iii. Ex: (18B) “…. and I can count on my friend to be there even if she doesn’t know what exactly to do or say. Simply being there shows that she cares, and that’s important to me.”
   iv. Ex: (23A) “When I could not sleep enough and upset about my work, she realized my nervous feeling even though I said nothing”
Appendix 2

Online Survey Administered for Study 2

Demographics Questionnaire (US Version)

1. Sex (check one): ☐ Male ☐ Female ☐ Other (please specify)

2. Age: _______________

3. Ethnicity (check all that apply):
   ☐ European American/White
   ☐ Asian/Asian American (specify ethnicity below)
     __ Korean/Korean American
     __ Chinese/Chinese American
     __ Japanese/Japanese American
     __ Other Asian (please specify) ________________
   ☐ Latino/Hispanic/Latino American (specify ethnicity below)
     __ Mexican/Mexican American
     __ Central American
     __ Puerto Rican
     __ Other Latino American (please specify) ________________
   ☐ Other (please specify) ________________

4. Marital Status (check one)
   ☐ Single
   ☐ In a steady dating relationship
   ☐ Living with partner
   ☐ Married
   ☐ Separated/Divorced
   ☐ Other: ____________

5. Were you born in the United States?
   ☐ Yes (skip to #6)
   ☐ No (go to next item)
a. In what country were you born? ________________

b. How old were you when you came to the U.S. to live? ___________ years old.

c. How many years have you lived in the United States? ___________ years

6. What language is most frequently spoken in your home?
   □ English
   □ Spanish
   □ Chinese
   □ Korean
   □ Japanese
   □ Other (please specify) ________________

7. Circle the generation that best applies to YOU.
   1) 1st generation – You were born in another country.
   2) 2nd generation – You were born in the US and at least one of your parents was born in another country.
   3) 3rd generation – You were born in US, both parents born in US, and all of your grandparents were born in another country.
   4) 4th generation – You and your parents were born in US, and at least one grandparent was born in other country, and the other grandparents were born in US.
   5) 5th generation – You, your parents, and all grandparents were born in US.

8. Father’s highest level of education completed.
   1) None
   2) Pre-school
   3) Elementary
   4) Junior High
   5) High School
   6) Vocational School / Junior college
   7) College degree
   8) Graduate/Professional degree
9. Mother’s highest level of education completed.
   1) None
   2) Pre-school
   3) Elementary
   4) Junior High
   5) High School
   6) Vocational School / Junior college
   7) College degree
   8) Graduate/Professional degree
   7) Graduate/Professional degree

10. Overall, how would you rate the financial wellbeing of yourself/your family in comparison to other members of your community? (Federal Reserve).
    ○ Finding it difficult to get by
    ○ Just getting by
    ○ Doing okay
    ○ Living comfortably

11. Overall, my health is
    ○ Excellent
    ○ Above average
    ○ Average
    ○ Below Average
    ○ Poor

12. Overall, the town that I reside in is __________ in terms of ethnic and cultural diversity.
    ○ Excellent
    ○ Above average
    ○ Average
    ○ Below Average
    ○ Poor
Demographics Questionnaire (China Version)

1. Sex (check one): □ Male □ Female □ Other (please specify)

2. Age: ______________

3. Ethnicity (check all that apply):
   □ Chinese
   □ Other (please specify) ____________________

4. Marital Status (check one)
   □ Single
   □ In a steady dating relationship
   □ Living with partner
   □ Married
   □ Separated/Divorced
   □ Other: ____________

5. What language is most frequently spoken in your home?
   □ Chinese
   □ Other (please specify) ____________________

6. Father’s highest level of education completed.
   1) None
   2) Pre-school
   3) Elementary
   4) Junior High
   5) High School
   6) Vocational School / Junior college
   7) College degree
   8) Graduate/Professional degree

7. Mother’s highest level of education completed.
   1) None
   2) Pre-school
   3) Elementary
4) Junior High
5) High School
6) Vocational School / Junior college
7) College degree
8) Graduate/Professional degree

8. Overall, how would you rate the financial wellbeing of yourself/your family in comparison to other members of your community?
☐ Finding it difficult to get by
☐ Just getting by
☐ Doing okay
☐ Living comfortably

9. Overall, my health is
☐ Excellent
☐ Above average
☐ Average
☐ Below Average
☐ Poor

10. Overall, the town that I reside in is _________ in terms of ethnic and cultural diversity.
☐ Excellent
☐ Above average
☐ Average
☐ Below Average
☐ Poor
Demographics Questionnaire (Mexico Version)

1. Sex (check one): □ Male □ Female □ Other (please specify)

2. Age: _______________

3. Ethnicity (check all that apply):
   □ Latino/Hispanic (specify ethnicity below)
     ___ Mexican
     ___ Other Latino (please specify) ____________________
   □ Other (please specify) ____________________

4. Marital Status (check one)
   □ Single
   □ In a steady dating relationship
   □ Living with partner
   □ Married
   □ Separated/Divorced
   □ Other: ____________

5. What language is most frequently spoken in your home?
   □ Spanish
   □ Other (please specify) ____________________

6. Father’s highest level of education completed.
   1) None
   2) Pre-school
   3) Elementary
   4) Junior High
   5) High School
   6) Vocational School / Junior college
   7) College degree
   8) Graduate/Professional degree

7. Mother’s highest level of education completed.
   1) None
2) Pre-school
3) Elementary
4) Junior High
5) High School
6) Vocational School / Junior college
7) College degree
8) Graduate/Professional degree

8. Overall, how would you rate the financial wellbeing of yourself/your family in comparison to other members of your community?
☐ Finding it difficult to get by
☐ Just getting by
☐ Doing okay
☐ Living comfortably

9. Overall, my health is
☐ Excellent
☐ Above average
☐ Average
☐ Below Average
☐ Poor

10. Overall, the town that I reside in is _________ in terms of ethnic and cultural diversity.
☐ Excellent
☐ Above average
☐ Average
☐ Below Average
☐ Poor
**Individual Collectivism Scale (Cultural Orientation Scale)**

A 16-item scale designed to measure four dimensions of collectivism and individualism:

*Vertical Collectivism*: seeing the self as a part of a collective and being willing to accept hierarchy and inequality within that collective.

*Vertical Individualism*: seeing the self as fully autonomous, but recognizing that inequality will exist among individuals and that accepting this inequality.

*Horizontal Collectivism*: seeing the self as part of a collective but perceiving all the members of that collective as equal.

*Horizontal Individualism*: seeing the self as fully autonomous, and believing that equality between individuals is the ideal.

Scale: The items should be mixed up prior to administering the questionnaire. All items are answered on a 9-point scale, ranging from 1 = never or definitely no and 9 = always or definitely yes.
Using the 1-9 scale below please indicate the extent to which each statement is characteristic of you.

1 - never or definitely no  2 - 6 - 8 - definitely yes

**Horizontal individualism items:**

_____ 1. I'd rather depend on myself than others.
_____ 2. I rely on myself most of the time; I rarely rely on others.
_____ 3. I often do "my own thing."
_____ 4. My personal identity, independent of others, is very important to me.

**Vertical individualism items:**

_____ 1. It is important that I do my job better than others.
_____ 2. Winning is everything.
_____ 3. Competition is the law of nature.
_____ 4. When another person does better than I do, I get tense and aroused.

**Horizontal collectivism items:**

_____ 1. If a coworker gets a prize, I would feel proud.
_____ 2. The well-being of my coworkers is important to me.
_____ 3. To me, pleasure is spending time with others.
_____ 4. I feel good when I cooperate with others.

**Vertical collectivism items:**

_____ 1. Parents and children must stay together as much as possible.
_____ 2. It is my duty to take care of my family, even when I have to sacrifice what I want.
_____ 3. Family members should stick together, no matter what sacrifices are required.
_____ 4. It is important to me that I respect the decisions made by my groups.

_____ **I live on Earth. (Attention Check)**
**Qualtrics: Orders Mixed-up**

1. I’d rather depend on myself than others.
2. Parents and children must stay together as much as possible.
3. It is important that I do my job better than others.
4. If a coworker gets a prize, I would feel proud.
5. The well-being of my coworkers is important to me.
6. It is my duty to take care of my family, even when I have to sacrifice what I want.
7. I rely on myself most of the time; I rarely rely on others.
8. Winning is everything.
9. To me, pleasure is spending time with others.
10. I often do "my own thing."
11. Competition is the law of nature.
12. Family members should stick together, no matter what sacrifices are required.
13. My personal identity, independent of others, is very important to me.
14. I feel good when I cooperate with others.
15. When another person does better than I do, I get tense and aroused.
16. It is important to me that I respect the decisions made by my groups.
17. **I live on Earth. (Attention Check)**

*Sub-score Items*

Horizontal individualism items: 1, 7, 10, 13

Vertical individualism items: 3, 8, 11, 15

Horizontal collectivism items: 4, 5, 9, 14

Vertical collectivism items: 2, 6, 12, 16
The Multigroup Ethnic Identity Measure (MEIM-US Only)

Please fill in: In terms of ethnic group, I consider myself to be ____________________

Use the numbers below to indicate how much you agree or disagree with each statement.

1  2  3  4
Strongly Disagree  Disagree  Agree  Strongly Agree

_____ 1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.

_____ 2. I am active in organizations or social groups that include mostly members of my own ethnic group.

_____ 3. I have a clear sense of my ethnic background and what it means for me.

_____ 4. I think a lot about how my life will be affected by my ethnic group membership.

_____ 5. I am happy that I am a member of the group I belong to.

_____ 6. I have a strong sense of belonging to my own ethnic group.

_____ 7. I understand pretty well what my ethnic group membership means to me.

_____ 8. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.

_____ 9. I have a lot of pride in my ethnic group.

_____ 10. I participate in cultural practices of my own group, such as special food, music, or customs.

_____ 11. I feel a strong attachment towards my own ethnic group.

_____ 12. I feel good about my cultural or ethnic background.

_____ 13. My ethnicity is

(1) Asian or Asian American, including Chinese, Japanese, and others
(2) Hispanic or Latino, including Mexican American, Central American, and others

(3) European American; non-Hispanic; white

(4) Mixed; Parents are from two different groups

(5) Other (write in): _____________________________________

_____ 14. My father's ethnicity is (use numbers above)

_____ 15. My mother's ethnicity is (use numbers above)
Multidimensional Scale for Perceived Social Support

Use the scale below to indicate the extent to which you agree with each statement.

1 ---------------- 2 ------------------ 3 -------------------- 4 --------------------- 5 ------------------ 6 ------------------ 7
Strongly Disagree
Neither Agree Nor Disagree
Strongly Agree

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

Sub-score Items
Family: 3, 4, 8, 11
Significant other: 1, 2, 5, 10
Friends: 6, 7, 9, 12

Humans breathe air (Attention Check)
Ways of Coping Questionnaire

Please indicate the extent to which these coping strategies have been helpful for you in dealing with different problems and challenges:

1 ---------------------------- 2 --------------------------- 3 --------------------------- 4
Not at all helpful           A little helpful       Helpful           Very helpful

_____ 1. How helpful has it been to disclose and share about your specific stressor with someone else? (emotional)
_____ 2. How helpful has it been to simply be around your friends or family without disclosing your stressor? (implicit)
_____ 3. How helpful has it been to receive comforting touches from someone else? (Physical affection)
_____ 4. How helpful has it been to reflect upon how loved and connected you are in your relationships? (implicit)
_____ 5. How helpful has it been to receive advice from someone else? (instrumental)
_____ 6. How helpful has it been to receive practical support from someone else (money, food, other material needs, etc.)? (instrumental)
_____ 7. How helpful has it been to be hugged and embraced by someone else? (Physical affection)
_____ 8. How helpful has it been to receive comfort and reassurance from someone who know about your stressor? (emotional)
_____ 9. How helpful has it been to talk to someone who could do something concrete to help you address the problem? (instrumental)
_____ 10. How helpful has it been to talk to someone about how you are feeling? (emotional)
_____ 11. How helpful has it been to spend time having fun in your close relationships? (implicit)
_____ 12. How helpful has it been to receive pats of encouragement from someone else? (Physical affection)
Emotion Expressiveness Questionnaire

Using the 1-7 scale below please indicate the extent to which each statement is characteristic of you.

1 --------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 --------------- 7
not at all        extremely
characteristic    characteristic

____ 1. I often tell people that I love them.
____ 2. When I am angry people around me usually know.
____ 3. I often touch friends during conversations.
____ 4. I laugh a lot.
____ 5. People can tell from my facial expressions how I am feeling.
____ 6. Whenever people do nice thing for me, I feel “put on the spot” and have trouble expressing my gratitude.
____ 7. When I really like someone they know it.
____ 8. I apologize when I have done something wrong.
____ 9. Watching television or reading a book can make me laugh out loud.
____ 10. If someone makes me angry in a public place, I will “cause a scene.”
____ 11. I often laugh so hard that my eyes water or my sides ache.
____ 12. If a friend surprised me with a gift, I wouldn’t know how to react.
____ 13. When I am alone, I can make myself laugh by remembering something from the past.
____ 14. I always express disappointment when things don’t go as I’d like them to.
____ 15. My laugh is soft and subdued.

____ **Rain falls from the sky (Attention Check)**

____ 16. I show that I like someone by hugging or touching that person.
Anxiety and depression checklist (K10 test)

1 --------------------------------- 2 --------------------------------- 3 --------------------------------- 4 --------------------------------- 5
None of the Time                 A Little of the Time            Some of the Time              Most of the Time               All of the Time

_____ 1. About how often did you feel tired out for no good reason?

_____ 2. About how often did you feel nervous?

_____ 3. About how often did you feel so nervous that nothing could calm you down?

_____ 4. About how often did you feel hopeless?

_____ 5. About how often did you feel restless or fidgety?

_____ 6. About how often did you feel so restless you could not sit still?

_____ 7. About how often did you feel depressed?

_____ 8. About how often did you feel that everything was an effort?

_____ 9. About how often did you feel so sad that nothing could cheer you up?

_____ 10. About how often did you feel worthless?
General Efficacy Scale (GSE)

Use the scale below to indicate the extent to which you agree with each statement.

1 --------------------------- 2 --------------------------- 3 --------------------------- 4
Not True at all               Hardly True             Moderately True           Exactly True

_____ 1. I can always manage to solve difficult problems if I try hard enough
_____ 2. If someone opposes me, I can find the means and ways to get what I want.
_____ 3. It is easy for me to stick to my aims and accomplish my goals.
_____ 4. I am confident that I could deal efficiently with unexpected events.
_____ 5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
_____ 6. I can solve most problems if I invest the necessary effort.
_____ 7. I can remain calm when facing difficulties because I can rely on my coping abilities.
_____ 8. When I am confronted with a problem, I can usually find several solutions.
_____ 9. If I am in trouble, I can usually think of a solution
_____ 10. I can usually handle whatever comes my way.

_____ **Water is a liquid (Attention Check)**
Norbeck Social Support Questionnaire (Modified)

This next section will ask you to reflect on important people in your life.
1) Please write about 3-5 important people in your life. Insert their first names or initials.

2) Select the relationship category from the pull down menu. (parent, sibling, other family, romantic partner, friend, clergy or counselor, mentor or boss)

3) How much task-oriented hands-on practical help of some kind or helpful information and task-oriented advice do you receive from this individual? 0=none at all 1=little 2=moderate 3=quite a bit 4=a great deal

4) Regarding task-oriented hands-on practical help of some kind or helpful information and task-oriented advice, I receive 0=not enough 1=just enough 2=moderate 3=quite a bit 4=a great deal

5) How much physical touch that conveys care and comfort (such as hugs or pats on the back) do you receive from this individual? 0=none at all 1=little 2=moderate 3=quite a bit 4=a great deal

6) Regarding physical touch that conveys care and comfort (such as hugs or pat on the back), I receive 0=not enough 1=just enough 2=moderate 3=quite a bit 4=too much

7) How much empathy, reassurance, encouragement, or comfort that helps with a problem do you receive from this individual? 0=none at all 1=little 2=moderate 3=quite a bit 4=a great deal

1

2

3

4

5
Prompt for Implicit Support

Consider the close relationships you listed above. Have there ever been times where you felt supported when you had a problem or challenge, by the simple presence and time spent together with this person without telling them of the problem itself?

☐ Yes
☐ No

☒ Yes

(NEXT PAGE)

For the next few minutes, please briefly describe this supportive interaction.

1. What did you do or say?

2. What did they do or say?

3. What was helpful about what they did or said?

4. How did you feel about the interaction afterwards?

(NEXT PAGE)

Based on the prior interaction you described, how comforted did you feel by the other person?

☐ 1 = No at all
☐ 2
☐ 3
☐ 4
☐ 5 = Extremely
(NEXT PAGE)

You indicated that you have never experienced being supported in this way (i.e., by the presence and time spent with a close other without discussing the problem itself). If you did have this experience, do you think you would find it helpful or not? Why?
Final Validation Check

Last, we want to ask you two final questions to ensure the validity of your responses for research purposes. **There is no penalty to you and you will be paid regardless of your response.** We just want to know whether to use your data since including poor quality data will damage our study. Again, there is no penalty to you and you will be paid.

1. I verify that I am eligible according to the demographic criteria.
   - ☐ Yes
   - ☐ No

2. I verify that I paid attention and made a good faith effort in my study participation.
   - ☐ Yes
   - ☐ No