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Cultural Identity and Attenuated Psychotic Experiences

A thesis submitted in partial fulfillment of the requirements for the degree Master of Arts in

Psychology

By

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Abstract

Empirical research has shown an increased prevalence of psychosis among immigrant groups living in Westernized contexts. Cultural identity has been researched as a risk/protective factor for psychosis; however no consistent result have emerged. Cultural identity captures an individuals' sense of belonging in a particular cultural group (s), including one's ethnic group (i.e. ethnic identity), and/or mainstream society (i.e. national identity). While previous research has considered both immigrants' ethnic and national identity in relationship to psychosis, current research has not looked at whether the relationship of one identity to the other impacts psychosis. Bicultural identity integration (BII) describes the degree to which an individual's cultural identities are complementary versus oppositional. Having a high BII has been linked to increased well-being even after controlling for the relative strength of each cultural identity. The present study expands on previous research by examining the effects of ethnic and national identity on attenuated positive psychotic symptoms (APPS) in conjunction with BII. A sample of 123 immigrant emerging adults completed self-report inventories of psychosis risk, ethnic and national identity, and BII. Linear regression analyses were conducted to assess the direct association between BII, cultural identity, and APPS. Results indicated that increased cultural identity harmony (a component of BII) was associated with fewer APPS endorsed. In addition, having either a strong ethnic or national identity but not both or neither was related to endorsing less APPS. Cultural conflict may increase immigrants' risk for psychosis. Certain cultural identity combinations may be associated with more cultural conflict.

Cultural Identity and Attenuated Psychotic Experiences

Recent empirical research, emanating primarily from Western Europe, has shown a higher prevalence of psychosis among immigrant groups relative to native populations (Fearon & Morgan, 2006; Coid et. al., 2008). In an effort to account for these differences, researchers have examined ethnic identity and national identity (i.e. cultural identity) as possible risk/protective factors. Current research is highly equivocal, with some studies showing increased dimensions of cultural identification to be protective while others do not (Reininghaus et al., 2010; Veling, Hoek, Wiersma, & Mackenbach, 2010). However, the research that has been done mostly overlooks national identification and the relationship (s) between ethnic and national identities and their possible effect on psychosis risk among immigrants. The current study attempted to examine a fuller picture of immigrant identity by looking at ethnic identity, national identity, the relationship between the two identities, and their associations to psychotic-like experiences in a sample of immigrant emerging adults.

Theoretical Background

Cultural identity is most often discussed in the context of acculturation (Sam & Berry, 2010). Acculturation is most often defined as the phenomena that occur when two cultural groups come into prolonged contact with one another, which leads to changes in the culture of one or both groups (Redfield, Linton, & Herskovits, 1936). While this definition implies that change can occur in both groups, in practice changes largely occur in only one group (Berry, 1997). Specifically, in plural societies where different cultural groups have unequal access to power, acculturation largely affects the non-dominant group (with less power) than the dominant group (with more power) (Berry, 1997; Umaña-Taylor, 2011). Individuals in immigrant groups typically are non-dominant and have to deal with negotiating between their culture (i.e., non-

dominant culture) and that of the mainstream society (i.e., dominant culture) (Sam & Berry, 2010). Traditional definitions of acculturation (e.g. Gordon, 1964) described the process as unidimensional in which immigrants shed their original culture in favor of the culture of the host society (Nguyen, & Benet-Martínez, 2007). However, empirical research conducted since the 1980's has shown that shifting away from one culture towards another (or *Assimilation*) is only one way that individuals can acculturate (Sam & Berry, 2010). Instead, current formulations of acculturation define the process as bi-dimensional, bidirectional, and multidomain (Nguyen, & Benet-Martínez, 2007). According to this view, involvement in one's non-dominant culture is separate from involvement in the dominant culture, with each operating on separate continuums (Sam & Berry, 2006).

The most often cited bidimensional model is that of John W. Berry (1990, 1997). Berry (1997) proposes that acculturating individuals simultaneously face the issue of cultural maintenance (the degree to which one's non-dominant culture and identity is deemed important and its maintenance is allowed and strived for) and contact and participation (the degree to which identifying with and being involved in the dominant culture is allowed and deemed necessary) (Berry, 1997; Nguyen, & Benet-Martínez, 2007). The negotiation of these issues results in four acculturation strategies: Assimilation, Integration, Marginalization, and Separation. The assimilation strategy is defined by lack of identification with and participation in the non-dominant culture and striving to identify with and participate in the dominant culture. The integration strategy is marked by identifying with and participation in both dominant and non-dominant cultures. Conversely, marginalization strategy is defined by lack of cultural identity and involvement in both dominant and non-dominant cultures. Lastly, separation strategy is defined by identifying with and participating in only the non-dominant culture. Generally

speaking “acculturating individuals may be involved in both, either, or neither cultures with regard to their behaviors or practices, values and beliefs, or identity” (Nguyen & Benet-Martinez, 2013, p. 2).

The selection of a particular strategy depends heavily on the attitudes and practices of the dominant group (Berry, 1997). That is, individuals can only pursue certain strategies if they are allowed to do so by the dominant group. For instance, individuals cannot pursue integration or assimilation in societies where segregation is enforced. Similarly, the dominant group can put pressure on the non-dominant group to shed its culture and assimilate into the dominant culture. In addition, there is a variety of other individual level factors (e.g. age, religion, and expectations) and group level factors (e.g. social support in the dominant and non-dominant groups) that influence the selection of a particular strategy (Berry, 1997). Furthermore, these strategies are flexible and can change depending on the situation (Sam & Berry, 2010).

Empirical research has shown support for the validity and utility of the bi-dimensional model and its advantage of over unidimensional models (e.g. Flannery, Reise, & Yu, 2001; Miller, 2007; Sam & Berry, 2006). For instance, Berry, Phinney, Sam, and Vedder’s (2006) analyses of self-report data from 4,334 immigrant adolescents’ revealed acculturation profiles similar to Berry’s strategies. The study looked at participants from 13 countries and their responses to measures of acculturation attitudes, cultural identity, language proficiency and language use, ethnic and national peer contact, and family relationship values. Cluster analyses revealed four acculturation profiles: national, ethnic, integration, and diffuse. Most participants fell into the integrated profile (N = 1,576) and scored highly on both national and ethnic orientations. Those participants who fell into the ethnic profile (N = 975) were highly oriented towards their ethnic group and showed little involvement in larger society. Participants in the

national profile (N = 810) showed the opposite pattern. Lastly, the diffuse profile did not show any clear orientation. The researchers described participants in the diffuse profile as those who are still selecting a particular acculturation path. However, the overall results of the study showed support for Berry's typology.

In addition to validating the bidimensional model, research looking at acculturation has shown integration to be associated with the best outcomes, such as mental health and well-being (Nguyen, & Benet-Martínez, 2007; Sam & Berry, 2010). For instance, a recent meta-analysis of 83 studies (Nguyen & Benet-Martinez, 2013) found a strong and positive relationship between integration and psychological (e.g. self-esteem and positive affect) and sociocultural (e.g. academic and career success) adjustment. This relationship was stronger than that of mono-cultural orientation's (assimilation or separation) relationship to adjustment. Lastly, those who did not affiliate with any culture (i.e. marginalized) had the poorest outcomes (e.g. high rates of depression, behavioral problems etc.). Furthermore, the advantage of integration over the other acculturation strategies is supported across nations and cultural groups (e.g. Berry & Sabatier, 2010).

As stated above, acculturation involves multiple domains such as traditions, language use, and values (Zane & Mak, 2003). One domain is cultural identity or the degree to which individuals conceive of themselves as being a member of and belonging to a particular cultural group (Berry & Sabatier, 2010; Phinney, Horenczyk, Liebkind, & Vedder, 2001). As with acculturation, cultural identity is currently conceptualized as multidimensional. That is, individuals can identify with the non-dominant group and/or mainstream society or with neither (Phinney, 2003).

Conceptualizations of cultural identity have some of their roots in social identity theory (Tajfel & Turner, 1986), which posits that individuals see themselves and those around them in terms of the social groups that they belong to (Tajfel & Turner, 1986). Individuals self-categorize themselves into social groups based on the perceived similarity between themselves and those in and out of the social group (Hogg, Terry, & White, 1995). Once an individual identifies as a group member, they define themselves in terms of the characteristics and norms of the group. That is, individuals act, think, and feel in accordance with what the social group defines as appropriate (Hogg, Terry, & White, 1995). Furthermore, those outside of the social group come to be perceived in terms of their social group and its status relative to one's own social group. Moreover, individuals within the social group come to be viewed in terms of the shared group identity (Hogg, van Knippenberg, & Rast, 2012). For instance, highly identified individuals see those in and out of their group as more homogeneous than low identifiers (Ellemers, Spears, & Doosje, 1997; Kelly, 1989). Furthermore, the strength of one's social identification has been shown to impact the degree to which individuals behave in group appropriate manner (Ellemers, Spears, & Doosje, 2002).

An individual's self-concept is closely tied to group membership and develops from one's sense of belonging to a particular social group(s) and the feelings and values attached to this membership (Tajfel, 1981). Individuals have more than one social identity, with certain social identities playing a greater role in one's overall self-concept (Hogg, Terry, & White, 1995). Social identities provide an evaluative lens through which individuals assess their own social group as well as other social groups. Individuals strive to maintain a positive view of their own social group relative to others' (Brown, 2000). A positive attitude or affirmation of membership in a social group is associated with a positive self-concept (Phinney, 1992; Brown, 2000) and is

an important component of an individual's self-esteem (Hogg, van Knippenberg, & Rast, 2012). Social identities that carry more weight in an individual's self-concept have a stronger impact on one's self esteem.

In addition to the relative importance of each social identity, different social identities become salient in different contexts (Tajfel & Turner, 1986). Cultural identity becomes salient in the context of acculturation and minority status (Phinney, 1990; Phinney, et al., 2001). In these contexts, acculturating individuals define themselves in relation to their ethnic group (i.e. ethnic identity) as well as the broader society in which acculturation is occurring (i.e. national identity) (Berry & Sabatier, 2010). Both identity constructs are multidimensional and have affective (e.g. feelings of belonging, group pride) as well as cognitive (e.g. self-identification and group evaluation) aspects. Cultural identity is dynamic and develops over time. Cultural identity development is flexible and depends on one's socialization experiences in one's family, community, and larger society. Furthermore, different individuals construct different conceptualizations of the values, behaviors, and norms of their cultural group(s) (Ferdman & Horenczyk, 2000; Phinney et al., 2001). Recent empirical studies have shown support for conceptualizing cultural identity as multidimensional (i.e. both ethnic and national identifications) (Phinney & Devich-Navarro, 1997; Phinney et al., 2001; Sabatier, 2008).

Ethnic identity refers to an individual's subjective sense of membership in an ethnic group (Phinney, 1996). It is a multifaceted construct which includes self-identification with an ethnic group, a sense of belonging, and attitudes towards one's ethnic group (Phinney, 1990). Ethnic identity is said to have greater significance for ethnic minority and immigrant individual's total identity (Phinney, 1996) and contribute more to these individual's well-being than to that of the majority group (Smith & Silva, 2011). Furthermore, ethnic identity

development is theorized to be a crucial component of ethnic minority adolescences' self-concept (Roberts et al., 1999) with continued importance in adulthood (Phinney, 1996). Current empirical research has shown supports for the importance of ethnic identity and ethnic identity development (e.g. St. Louis & Liem, 2005; Umaña-Taylor, Yazedjian, & Bámaca-Gómez 2004; Smith & Silva, 2011; Yoon, 2011).

The theory guiding the bulk of the research on ethnic identity is Phinney's (1990) developmental model, which itself is based on Social Identity Theory (described above) and Erickson's (1968) identity formation theory as operationalized by Marcia (1980). Erickson (1968) argues that identity development occurs during adolescence through the related processes of exploration and commitment. At first, individuals begin with a lack of knowledge and awareness of what a particular identity means to them. This initial stage is followed by a period of exploration of various identity choices, which leads to a commitment to a particular identity stemming from an understanding of that identity. Marcia (1980) operationalized this theory by creating four identity statuses based on degrees of exploration and commitment. According to this typology, individuals who neither explored nor committed to an identity were labeled as diffuse. Those who explored but have not yet committed were considered to be in moratorium. On the other hand, those who committed without exploration were labeled as foreclosed. Lastly, those who have explored and committed had an achieved identity. Similarly, Phinney's (1989, 1992) model breaks down ethnic identity into the exploration of one's ethnicity and the commitment to and affirmation of that ethnic group (Schwartz et. al., 2012). Phinney applied Marcia's formulation to ethnic identity development resulting in a three-stage process: unexamined ethnic identity (diffuse), ethnic identity search (moratorium), and achieved ethnic identity.

Similar to ethnic identity, national identity describes one's sense of membership in the larger society including the feeling of belonging to and attitudes towards the larger society (Phinney et al., 2001). Conceptualization of national identity is similarly rooted in social identity theory and Erikson's developmental model (Phinney & Devich-Navarro, 1997) and national identity is frequently measured using methods analogous to those designed to assess ethnic identity (Nguyen, & Benet-Martínez, 2007). In the context of the United States (US), national identity refers to American identity. While in a multiethnic country such as the US, American identity should not be attributed more to one group over another, empirical research has shown a tendency for individuals to equate American identity with White racial status (i.e. American = White; Devos & Mohamed, 2014). However, despite these associations evidence shows that ethnic minority individuals (including immigrants) nonetheless often define themselves as belonging to American society (i.e. strong American identity) either by defining America as inclusive of all groups (Phinney & Devich-Navarro, 1997) and/or separating majority group identity (i.e. White identity) from American national identity (Gong, 2007).

Empirical research looking at ethnic identity in relationship to psychological and sociocultural outcomes has yielded mixed findings overall. For instance, studies in the US have shown strong ethnic identity to be associated with increased self-esteem among ethnic-minority high school and college students (Umaña-Taylor, 2004), optimism in Latino adolescence (Roberts et al., 1999), and reduced lifetime prevalence of psychiatric disorders in ethnic-minority adults (Burnett-Zeigler, Inger Bohnert, Kipling M. Ilgen, Mark A. 2013). However, strong ethnic identity has also been associated with negative outcomes including alcohol use in Mexican American college students (Zamboanga, Raffaelli, & Horton, 2006) and increased delinquency among adolescents of Cambodian descent (Go & Le, 2005). Furthermore, some studies fail to

find significant relationships between ethnic identity and outcomes, including depressive symptoms (Roberts et al., 1999) and eating disorders (Cachelin, Phinney, Schug, & Striegel-Moore, 2006)

The mixed findings from the research looking at ethnic identity as well as the findings from studies of acculturation have prompted researchers to look at national identity in addition to ethnic identity. While there currently is a paucity of studies looking at national identity, the research presents more nuanced relationships between cultural identity and psychological and sociocultural outcomes. For example, strong national identity was shown to buffer the negative ramifications of perceived discrimination on school engagement among immigrants from Cape Verde to the US (Coutinho, & Koinis-Mitchell, 2014). In the same sample, ethnic identity was unrelated either directly or indirectly to school engagement. Similarly, strong national identity was associated with academic motivation in adolescent Asian Americans (Kiang, Champagne, & Witkow, 2013). However, the same study showed an equally strong association between academic motivation and strong ethnic identity. Furthermore, the study found positive associations between *both* identities and self-esteem but not depression which was only related to ethnic identity (negatively). Some studies link national identity with negative outcomes. For instance, strong American but not ethnic identity was shown to exacerbate the effects of perceived discrimination on antisocial behavior among Asian American college students (Park, Schwartz, Lee, Kim, & Rodriguez, 2013). Lastly, some studies find significant relationships between only ethnic identity and psychological outcomes and not national identity (e.g., Gartner, Kiang, & Supple, 2013).

In addition to looking at both identity types, some research goes further by looking at the combinations (i.e. interactions) of cultural identities. As was discussed earlier, research looking

at acculturation more broadly has found different outcomes depending on individuals' levels of *both* cultural orientations. The same framework that has been used to examine acculturation is now being applied to identity (Phinney et al., 2001). That is, researchers are looking at identity categories using Berry's acculturation strategies. When applied to identity, the assimilated identity refers to strong national identification and weak ethnic group identification. Integrated identity refers to strong identification with both groups. Separated identity refers to strong ethnic group identification and weak national identification. Lastly, marginalized identity refers to weak identification with both groups. Therefore, individuals with one strong cultural identity can fall into two categories. That is, individuals can also have another equally strong cultural identity or another weak cultural identity or two weak cultural identities.

The limited research that looks at combinations of identities, points to their importance. For instance, Phinney, Horenczyk, Liebkind, and Vedder (2001) looked at psychological adjustment among immigrant adolescents in four countries and found that having two strong identities (i.e. integrated identity) was associated with the highest scores on indicators of psychological well-being and school adjustment. Conversely, adolescents with a marginalized identity fared the worst in terms of both psychological and sociocultural adjustment. Similarly, in the study by Kiang et al. (2013) discussed earlier, the research found a significant interaction effect between ethnic and American identities. The results indicated that having both a strong ethnic and American identity was related to the highest levels of academic motivation while having either a low ethnic or American identity was related to the lowest levels of motivation. These studies demonstrates that having one strong cultural identity may not be as beneficial as having two strong cultural identities and having one weak cultural identity is not as detrimental as having two weak identities.

Other research findings also demonstrate the importance of cultural identity interactions. For instance, Fuller-Rowell, Ong, and Phinney (2013) found that having a strong national identity was associated with increased ethnic identity commitment over time among Latino college students in the US. However, strong national identity was associated with *decreased* ethnic identity commitment when individuals perceived themselves to be targets of discrimination. Therefore, the effect of perceived discrimination on ethnic identity was moderated by participants' level of national identity. Furthermore, Huynh, Devos, and Goldberg (2014) found that perceived discrimination was strongly associated with psychological distress (i.e. anxiety and depression) in Asian American college students with a strong national identity but weak ethnic identity. However, somewhat contrary to Fuller-Rowell et al. the relationship between perceived discrimination and psychological distress was the weakest in individuals with both a strong ethnic and national identity.

As can be seen, evidence exists to support ethnic and national identities being intertwined. Recent theoretical and empirical research has expanded upon these concepts by looking not only at the relative strengths of ethnic and national identity but also at how these identities may conflict and/or blend with one another. Bicultural identity integration (BII) (Benet-Martinez, & Haritatos, 2005) describes the degree to which national and ethnic identities are conflicted and compartmentalized vs. harmonized and blended. BII has two components; cultural harmony (vs. conflict) and cultural blendedness (vs. compartmentalization). Those individuals high in BII see their two identities as compatible (i.e. cultural harmony) and themselves as belonging to a hyphenated culture (i.e. blended culture). On the other hand, bicultural individuals low in BII struggle with balancing the two identities (i.e. cultural conflict) and constantly shifting between them (i.e. compartmentalizing cultures).

BII is a relatively new concept but the research that exists has shown increased BII to be associated with positive outcomes. For instance, high BII was found to be predictive of positive psychological adjustment among Filipino domestic workers in Hong Kong (Chen, Benet-Martínez, Wu, Lam, & Bond, 2013) and was associated with higher overlap between personality traits ascribed to the self and a typical Latino, the self and a typical Anglo American, and a typical Latino and typical Anglo American in a sample of Mexican Americans (Miramontez, Benet-Martínez, & Nguyen, 2008). High BII individuals respond better to culturally appropriate behavioral cues than those low in BII (Benet-Martínez, Leu, Lee & Morris, 2002). Furthermore, even after controlling for cultural identification, high BII first generation Chinese American immigrants had a more diverse and interconnect network of peers than those with low BII (Mok, Morris, Benet-Martínez, & Karakitapoğlu-Aygün, 2007). In summary, bicultural individuals who find it easy to navigate between their two identities have higher functioning than those that do not.

The research described above points to the importance of considering a more complete framework of cultural group identification by combining ethnic and national identities as well as how the two identities operate in relation to one another (i.e., BII). By only looking at one cultural identity, researchers can ignore how that cultural identity is related to an individual's other cultural identities and possibly conflate those individuals with an integrated identity (i.e. strong ethnic *and* national identity) with those that are separated (i.e. only strong ethnic identity) or assimilated (i.e. only strong national identity). Furthermore, without assessing BII researchers potentially equate individuals who perceive harmony between their two cultures and feel like they belong to both cultures with those that feel conflicted and caught between their two cultures. By using an expanded model of cultural identity, researchers can obtain a more complete picture

of how individuals deal with the experience of navigating between two cultures. Moreover, a more comprehensive model may provide a further nuanced view of cultural identity and help to resolve some of the inconsistent research on cultural group identity and psychological outcomes that currently do not assess the interconnected nature of cultural identity.

A line of research that may benefit from this approach is the study of cultural identities' relationship to experiences in the psychotic spectrum. The psychotic spectrum refers to a continuum of perceptual and cognitive distortions of reality that ranges from mild and non-distressing all the way to full clinical manifestations present in psychotic disorders (Dhossche et al. 2002; Hanssen et al. 2005; Wiles et al. 2006; Dominguez et al. 2011). Recent empirical research, emanating primarily from Western Europe, has shown a higher prevalence of psychosis including schizophrenia and other psychotic disorders among immigrant and ethnic minority groups relative to non-minority native populations (Fearon & Morgan, 2006; Kirkbride et al. 2008; Coid et. al., 2008). This increased prevalence has been typically associated with factors related to immigrant and ethnic minority status (Velthorst et. al., 2012), including racial discrimination (Veling et al., 2007), perceived disadvantage (Cooper et al., 2008), social isolation (Morgan & Hutchinson, 2010), as well as separation from individuals of the same ethnic background or low neighborhood ethnic density (Veling , Susser , Van Os, Mackenbach, Selten , & Hoek, 2008),.

Ethnic identity has been hypothesized as a possible protective factor for psychosis since it has been shown to buffer some of the negative ramifications of discrimination (Cronin, Levin, Branscombe, van Laar, & Tropp, 2012; Romero, Edwards, Fryberg, & Orduña, 2014) as well as reduce the perceptions of disadvantage and exclusion (Tajfel & Turner 2001). Furthermore, ethnic identity has been associated with positive mental health outcomes including self-esteem

(Rhea & Thatcher, 2013) as well as having an achieved ego identity status (Yuh, 2005; St. Louis & Liem, 2005) both of which have been linked to reduced psychotic symptoms and paranoid ideations (Lincoln et al., 2010).

However, empirical research looking at ethnic identity and psychosis has been equivocal. For instance, Veling, Hoek, Wiersma, and Mackenbach, (2010) found that non-Western immigrants (i.e. Moroccan, Turkish, and Surinamese) to the Netherlands with first onset schizophrenia had a weaker and more negative ethnic identity than their non-schizophrenic siblings and controls. Similarly, Velthorst and colleagues (2012) studied Dutch ethnic minority adolescents at risk for developing psychosis and found that ethnic identity was lower in these individuals than a comparative non-risk control group. Furthermore, for Dutch adolescents of Moroccan descent, a strong ethnic identity resulted in less severe overall psychopathology. On the other hand, Reininghaus et al. (2010) found that ethnic identity was stronger in ethnic minority individuals with first onset psychosis relative to healthy controls. In addition, Gonidakis et al. (2013) found that decreased ethnic identity was conducive to higher functioning in immigrant psychotic patients living in Greece.

As it stands there does not appear to be clear direction in the relationship between ethnic identity and psychosis with some studies showing strong ethnic identity to be a protective factor for psychosis and others showing it to be a risk factor. Similarly, the few studies that also examine national identity in relationship to psychosis have failed to yield clear findings. National identity may serve as a protective factor for immigrants due to its positive relationship with sociocultural adjustment (Phinney et al., 2001). However, it may also serve to exacerbate the effects of perceived discrimination (Park, Schwartz, Lee, Kim, & Rodriguez, 2013). For example, in the study described earlier by Velthorst and colleagues (2012), adolescents at risk for

psychosis had higher levels of national Dutch identity relative to healthy controls. However, national identity did not significantly predict any of the study variables and was unrelated to functioning among at risk adolescents. Likewise, no consistent associations emerged between national identity and psychosis in the study of immigrants with first onset psychosis by Veling et al. (2010). However, the study did go a step further and considered identity categories and found that immigrants with psychosis were more likely to have an assimilated and marginalized identity and less likely to have a separated identity. In support of these findings, Gamst et al., (2006) found an association between low ethnic identity, high Anglo orientation, and high scores on a measure of psychosis in chronically homeless Latinos in California. However, in this study chronically homeless participants with a low ethnic identity and high orientations towards Anglo culture (i.e. assimilated) reported more psychosis than participants with a low ethnic identity and low orientation towards Anglo culture (i.e. marginalized). Furthermore, the study did not show any direct relationship between ethnic identity and psychosis and Anglo orientation was unrelated to psychosis among Latinos with acute homeless status (i.e. less than 12 months). Overall, no consistent evidence exists in the relationship between national identity and psychosis.

The Present Study

As can be seen from the review given above, the research on cultural identity and experiences in the psychotic spectrum remains highly equivocal. However, while some of these studies do assess national identity most do not and only one study thus far has looked at identity categories, which capture combinations of ethnic and national identity. Furthermore, the studies that do look at national identity do not consider whether individuals successfully harmonize and blend it with ethnic identity. The aim of the current study is to more fully examine cultural identity and psychosis. Specifically, this study looked at ethnic identity, American identity, their

interaction (i.e. identity categories), as well as how the two identities relate to one another (i.e. BII) and whether these factors are associated with attenuated positive psychotic symptoms (APPS).

APPS are expressed at sub-threshold levels and are milder than symptoms experienced at threshold levels (e.g. perceptual abnormalities rather than auditory and/or visual hallucinations). APPS appear frequently in the general population (van Os, Linscott, Myin-Germeys, Delespaul, & Krabbendam, 2009) and for some may fully develop into clinical psychosis (Cannon et. al., 2008; Poulton et. al., 2000). However, even if they do not lead to clinical psychosis, APPS nonetheless induce significant psychological distress (Lewis-Fernandez et. al., 2009). Ethnic and American identities have both been shown to offer protective benefits in terms of psychological and sociocultural outcomes among immigrant populations and may therefore serve as a protective factor for APPS. However, given the evidence that has emerged thus far, they may also be revealed to be risk factors for APPS. Similarly, the categorizations that emerge from different cultural identity strengths may also be related to the expression of APPS. Specifically, having an integrated identity has been associated with increased psychological health and well-being, while having a marginalized identity has been consistently linked with poor psychological outcomes (Nguyen & Benet-Martinez, 2013; Phinney et al., 2001). Therefore, individuals with an integrated identity may have fewer APPS than those that have a marginalized identity (Veling et al., 2010). Lastly, perceiving harmony among one's identities and having a blended cultural identity (i.e. high BII) may serve to protect immigrants from APPS by decreasing the degree of difficulty inherent in navigate between two cultures and by further bolstering psychological health (Cheng, Lee, Benet-Martínez, & Huynh, 2014). Given these assumptions, the study set out to test five hypothesis (listed below).

H1: Ethnic identity is related to the frequency of APPS.

H2: National (i.e. American) identity is related to the frequency APPS.

H3: Different combinations of cultural identity strengths are related to frequency of APPS. Specifically, individuals with a strong ethnic *and* American identity (i.e., integrated identity) will have fewer APPS than those with both a weak ethnic *and* American identity (i.e., marginalized identity).

H4: Increased cultural identity harmony is related to fewer APPS.

H5: Increased cultural identity blendedness is related to fewer APPS.

Methods

Participants

Participants were undergraduate students from a large public university in the Northeast, recruited through the university online subject pool. In order to take part in the study, participants had to be between the ages of 18 and 29 and self-identify as Black, African American, of African descent and/or as a first or second generation immigrant. These inclusion criteria were chosen to specifically target racial and ethnic minority emerging adults. A total of 137 individuals took part in the study and completed a series of self-report questionnaires on a computer in a laboratory setting. Average completion time was around one hour. One participant was excluded due to being below the age cutoff (17 years of age). Since the focus of this study is the experiences of immigrants, 13 other participants who were neither first nor second generation immigrants were excluded from the present analysis: eight self-identified as African Americans, one as Caribbean/West Indian, two as Hispanic, one as Asian, and one as other. The final number of participants was 123. The university's Institutional Review Board approved the study. Prior to

beginning the study, participants provided written informed consent. In return for taking part in the study, participants received course credit.

Measures

APPS. Attenuated positive psychotic symptoms were assessed using the Prodromal Questionnaire (PQ) (Loewy, Bearden, Johnson, Raine, & Cannon, 2005; Loewy, Johnson, & Cannon, 2007). PQ is a 92-item self-report measure of attenuated psychotic symptoms experienced during the course of one month in the absence of alcohol, drugs, and/or medications. The measure was developed from and subsequently validated against the Structured Interview for Prodromal Symptoms (SIPS; Miller et al., 2002). Similar to the SIPS, PQ has four subscales capturing positive, negative, disorganized, and general attenuated psychotic symptoms. The positive symptom subscale (45 items; e.g., unusual thought content and perceptual abnormalities) has been shown to be the most valid predictor of psychosis risk syndrome (Loewy et al, 2005). Sample items include: “Previously familiar surroundings have seemed strange, confusing, threatening or unreal.” and “I have seen unusual things like flashes, flames, blinding light or geometric figures”. For the purposes of this study, all 45 positive PQ items were summed into a single number indicating the total amount of APPS experienced by each participant (a dimensional variable).

Ethnic Identity. Ethnic Identity was measured using the Multigroup Ethnic Identity Measure-Revised (MEIM-R) (Phinney & Ong, 2007). MEIM-R is a self-report measure consisting of six questions that capture identity exploration and affirmation/commitment. Responses are recorded using a five point Likert scale ranging from strongly disagree (1) to strongly agree (5) with 3 being neutral. Sample items include: “I have often done things that will help me understand my ethnic background better” and “I have a strong sense of belonging to my

own ethnic group.” Prior to answering the questions, participants answer an open-ended question that asks them to indicate their ethnic background. The scale has shown good reliability and internal consistency (Cronbach’s α from .81 to .89) (Phinney & Ong, 2007; Yoon, 2011). MEIM-R demonstrated good internal consistency in the present study (Cronbach’s $\alpha = 0.87$). MEIM-R is scored by tacking the mean of all six items. Higher mean scores indicate stronger ethnic identity.

American Identity. American Identity was assessed with the American Identity Measure (AIM) (Schwartz et al. 2012). AIM is a 12 item self-report instrument that measures American culture identification. The scale is an adaptation of the multigroup ethnic identity measure (Phinney, 1992) and has the same two-factor structure, exploration and affirmation/commitment. Participants respond to each item using a likert-type response scale ranging from 1 (strongly disagree) to 5 (strongly agree) with 3 being neutral. The scale has high internal consistency (Cronbach’s α .74 for identity exploration and .83 for affirmation/commitment) and correlates well with other measures of American identity and culture (Schwartz et al. 2012). The scale demonstrated good overall internal consistency in the current sample (Cronbach’s $\alpha = 0.90$). Sample items include: “I have spent time trying to find out more about the United States, such as its history, traditions, and customs” and “I feel good about being American.” AIM is scored by tacking the mean of all 12 items. Higher mean scores indicate stronger American identity.

Bicultural Identity Integration. BII was measured using the Bicultural Identity Integration Scale – Version 2 (BIIS-2) (Huynh, & Benet-Martínez, 2011, Manuscript in preparation) a 19 item self-report questionnaire. Participants are instructed to relate their experience as biculturals by thinking about how much their cultures conflict (or harmonize) and how much they tend to combine (or separate) their cultures. Participants respond using a 5 point

likert scale (1 strongly disagree - 5 strongly agree). Prior to answering the questions, participants first indicate their heritage culture in an open-ended question. Responses from to the first item fill in blank spaces in the rest of the items indented for the participant's ethnic background. Sample items include: "I find it easy to harmonize [heritage culture] and American cultures." and "I rarely feel conflicted about being bicultural." BIIS has two subscales, Harmony vs. Conflict and Blendedness vs. Compartmentalization, The two subscales are independent and are not combined to create a total scale score. Internal consistency was good for both subscales (Cronbach's α .80 for Harmony vs. Conflict and .74 for Blendedness vs. Compartmentalization). The two subscales are scored by reverse coding the appropriate items and tacking the mean of each subscale. Higher mean scores indicate increased cultural harmony (for Harmony vs. Conflict) and increased cultural blendedness (for Blendedness vs. Compartmentalization).

Sociodemographics. Participants completed a Sociodemographic questionnaire and indicated their age (in years), gender (male or female), race and/or ethnicity, and immigrant status. Race and/or ethnicity was assessed using a question where participants were asked to "Choose one category that best captures how you see yourself "and given several options. Responses were grouped into five categories: 1) Black 2) Hispanic 3) Asian 4) White and 5) Other.

Statistical analyses

Bivariate relationships between APPS and cultural identity indicators as well as age were assessed using Pearson correlations. Mean group (i.e., gender; race/ethnicity) differences in APPS were assessed using ANOVAs or t-tests. In order to test the study hypothesis, I performed a five step hierarchical multiple regression analysis of APPS as a function of ethnic identity, American identity, and their interaction, as well as both of the BII indicators (i.e. Harmony vs.

Conflict and Blendedness vs. Compartmentalization). All of the predictor variables were centered on their respective means (Aiken & West, 1991). I computed the interaction term by multiplying the mean centered ethnic and American identity variables. The predictor variables were entered into the regression model in the following order: Step 1, ethnic identity; Step 2, American identity; Step 3, interaction of ethnic and American identity; Step 4, BII Harmony vs. Conflict; Step 5, BII Blendedness vs. Compartmentalization.

In addition, I used median splits of ethnic and American identities to create four categorizations based on Berry's (1997) acculturation strategies: Integrated (high ethnic and American identities), Assimilated (high American and low ethnic identities), Separated (high ethnic and low American identities), and marginalized (low ethnic and American identities). I used an ANOVA to compare mean levels of APPS in the four groups. Lastly, I dummy coded the identity categories (with marginalized as reference group) and performed a three step multiple hierarchical regression with the dummy variables and both mean centered indicators of BII predicting APPS. The predictor variables were entered into the second regression model in the following order: Step 1, assimilated identity, separated identity, integrated identity, (with marginalized as reference group); Step 2, BII Harmony vs. Conflict; Step 3, BII Blendedness vs. Compartmentalization.

Results

Sample Characteristics and Descriptive Results

Sample demographic characteristics and descriptive information are presented in Table 1. The majority of the sample were females (60%) and second generation immigrants (63%). The sample was almost evenly comprised of Black (22%), Hispanic (31%) and Asian (30%) participants. White participants and those categorized as other comprised 20 percent of the

sample (9% White and 8% other). Average age was 19.1 (SD = 1.64) and ranged between 18 and 26 years old.

Mean number of APPS in the sample was 14, with 100 percent of participants endorsing at least one APPS item. The highest number of symptoms was 39. These findings are similar to those reported in other studies using the prodromal questionnaire (e.g. Loewy et al., 2007). Analyses of variance did not reveal any significant differences in the mean number of APPS across gender, racial/ethnic, or immigrant categories. Pearson correlations of study variables are shown in table 2. The number of APPS did not significantly correlate with age. Furthermore, APPS did not significantly correlate with either ethnic or American identities or cultural Blendedness vs. Compartmentalization. In support of hypothesis four, APPS was significantly and negatively correlated with BII Harmony vs. Conflict ($r = -0.260, p < .01$), indicating that those who perceived greater harmony among their two cultures endorsed fewer APPS items than those that perceived less harmony (i.e. greater conflict).

Multiple Hierarchical Regression

Results of linear regression analysis of ethnic identity, American identity, and BII predicting APPS are presented in table 3. There was no evidence of multicollinearity, as the variance inflation factors (VIF) for all predictor variables were less than two (table 3, column 7). The results of the regression are consistent with those obtained via correlational analysis and provide some support for the study hypotheses. Specifically, in support of hypothesis four, BII Harmony vs. Conflict was a significant predictor of APPS (Step 5; $b = -3.330, p < .05$), with greater perceived cultural harmony being predictive of fewer APPS items endorsed. In addition, in support of hypothesis three, the interaction between ethnic and American identities was marginally significant (Step 5; $b = 1.904, p < .1$). Specifically, as revealed by a simple slope

analysis (figure 1), having a high American identity but low ethnic identity was associated with the least APPS while having both a low ethnic and American identity was associated with the most APPS. Participants with a high ethnic but not American identity had the second lowest frequency of APPS while those with both high ethnic and American identities had the third highest frequency of APPS. The regression analysis did not provide any support for hypotheses one, two, and three. That is, ethnic identity, American identity, and Blendedness vs. Compartmentalization did not directly predict APPS.

Categorical Analysis

In order to better understand the interaction of ethnic and American identities, I performed an ANOVA comparing mean number of APPS across four identity categories: marginalized identity, assimilated identity, separated identity, and integrated identity. The analysis showed a significant difference among identity categories ($F(3, 120) = 2.732, p < .05$). Specifically, in support of the findings from the regression analysis, Tukey post-hoc test revealed that marginalized participants ($M = 17.69, SD = 1.58$) endorsed significantly more APPS than assimilated participants ($M = 11.55, SD = 1.75$). These results held in adjusted analyses via multiple hierarchical regression (table 4, column 2), which showed that relative to those in the marginalized category, being in the Assimilated ($b = -5.583, p < .05$) and Separated ($b = -4.694, p < .05$) categories was predictive of fewer APPS. Furthermore, these differences in APPS between marginalized and assimilated and marginalized and separated participants became non-significant ($p > .05$) once BII Harmony vs. Conflict was entered into the regression (Table 4, Columns 3 and 4). In support of hypothesis four, BII Harmony vs. Conflict significantly and negatively predicted APPS ($b = -3.02, p < .05$). These results suggest that the difference in the mean frequency of APPS between the identity categories was partly explained by the level of

bicultural conflict that exists between these identity categories. The regression model (2) which included Harmony vs. Conflict, explained twice as much variance as the model with identity categories alone (0.067 vs. 0.032). BII Blendedness vs. Comprtmentalizations was not significantly related to APPS in the models adjusted for identity categories and Harmony (Table 4, column 4).

Discussion

The results of this study provide support for the need to examine cultural identification and its relationship to experiences in the psychotic spectrum using an expanded model encompassing multiple dimensions of identity. Specifically, the results of the study revealed that among immigrant emerging adults in the US, neither ethnic nor national identity were independently associated with APPS. However, when the relationships between the two identities were considered (i.e. BII), those immigrants that experienced the least amount of conflict between their ethnic heritage and American cultures, reported experiencing the fewest number of APPS. Furthermore, feeling a lack of belonging to one's ethnic group *and* in broader American society (i.e. marginalized identity) was associated with increased APPS. On the other hand, having a strong sense of connection to *either* American society *or* one's ethnic group *but not both* (i.e. integrated identity) was associated with fewer APPS. Having a strong sense of being an American more so than being a member of an ethnic group (i.e. assimilated identity) may be associated with the fewest number of APPS. However, the evidence for these findings was only marginally significant. In addition, no significant relationship was found between APPS and the second component of BII, identity blendedness, indicating that the degree of experiencing your identity as hyphenated (i.e. Mexican-American, Chinese-American) is unrelated to APPS.

Overall, the degree of harmony between heritage and American cultures was more consistently found to reduce the frequency of APPS. Immigrant individuals who see their two identities and cultures as compatible may struggle less with having to navigate between them which may reduce psychological and sociocultural stress (Cheng, Lee, Benet-Martínez, & Huynh, 2014), resulting in fewer APPS. Increased cultural harmony may also be related to a more stable identity and a more coherent worldview which may make it easier for immigrants to understand their environment. Conversely, feeling caught between the two cultures and having to constantly move between the two, may lead to increased stress and a fractured sense of identity (Benet-Martínez & Haritatos, 2005). Increased identity instability and psychological stress may make it more difficult for immigrant individuals to properly assess their reality which they may see as composing of two incompatible parts.

The results of this study also validate BII as a concept. The foundation of BII is the notion that different individuals experience biculturalism (i.e. internalizing two cultures) differently and having two strong cultural identities does not necessarily imply that the two identities relate positively to one another for all individuals (Benet-Martínez, & Haritatos, 2005). Instead, having a strong ethnic and national identity may lead some individuals to feel conflicted and trapped between the identities resulting in psychological distress (Rudmin, 2003). Consistent with this idea, some studies have linked the integration strategy with negative outcomes such as maladjustment (e.g. Vivero & Jenkins, 1999). In the current study, having an integrated identity did not consistently emerge as a protective factor for APPS since it may have been a source of cultural conflict in this sample of immigrants (i.e. integrated identity but low bicultural identity harmony). Instead, the outcome of the study provides some evidence for the benefit of having only one strong cultural identity (i.e. assimilated or separated). Given the strong and consistent

relationship between APPS and cultural identity harmony, having only one strong cultural identity may be related to decreased identity conflict since only one identity is deemed as truly important. Furthermore, having a strong national identity and weak ethnic identity (i.e. assimilated identity) may be associated with the least amount of conflict since assimilation is heavily encouraged by some mainstream societies (Berry, 1997).

The results presented here are also largely consistent with those of previous research on psychosis and cultural identity, cultural identity generally, and bicultural identity integration. Consistent with the study by Veling et al. (2010), having a marginalized identity was associated with increased psychotic symptomatology and having a separated identity was associated with reduced symptomatology. Contrary to the findings in Veling et al and Gamst et al., (2006), having an assimilated identity was shown to be related to the lowest frequency of attenuated psychotic experiences. Furthermore, unlike what was found by Phinney et al., (2001) in their study of immigrant adolescents, having an integrated identity was not associated with a positive psychological outcome (i.e., reduced APPS). However, in line with that study, marginalized identity was related to the poorest outcome (i.e., highest frequency of APPS). In addition, as with other studies of BII, having an increased sense of cultural identity harmony was associated with a positive psychological outcome in the form of reduced frequency of APPS.

Limitations and Future Directions

While this study used validated and reliable methods to obtain the results, it has several limitations. Given the cross-sectional nature of data, it is possible that experiencing attenuated psychotic experiences may lead to perceiving one's identity and cultures as conflicted. That is, individuals experiencing a fracturing of their psyche may feel a fracturing of their identity as well, resulting in the perception of their two identities as conflicted. However, since there was

also evidence showing different frequencies of APPS across identity combinations, it may not be the case that APPS leads to cultural conflict since those with the fewest frequency of APPS also had only one strong cultural identity. Therefore, the results indicated another pattern in which cultural conflict may be reduced. Specifically, those individuals with one strong cultural identity may experience less conflict than those with two or with none. If there was no such pattern in identity combinations, it is more probable that individuals with more APPS feel more conflicted overall.

Another limitation of the study includes the reliance on self-reported experiences of APPS. While an individual's perception of their own experience is critical to assessing psychosis risk, without a comprehensive evaluation it is impossible to know whether the symptoms reported are truly attenuated or are at full clinical manifestation. Furthermore, it is not yet known how much endorsing APPS is related to being at a greater risk for psychosis. However, research has shown that individuals endorsing APPS are up to 3.5 times more likely to convert to full psychosis in one year than those who do not report APPS (Kaymaz et al., 2012). Therefore, the results of this study may be relevant for those at risk for a psychotic disorder.

Lastly, this study relied on reports from college students which may not be representative of all immigrants to the US. Thus, the results of this study may not generalize beyond the college student population. However, young college students provide an opportunity to examine cultural identity in those individuals where cultural identity is largely formed (Phinney, 1996). Furthermore, young adulthood is an opportune developmental period to examine attenuated psychotic symptoms before the potential onset of full psychosis at a later age. Lastly, the makeup of the sample was characteristic of immigrants living in New York City, both in terms of ethnic background and socio-economic status.

Overall, this study used an appropriate methodology to assess cultural identity and psychosis risk in a sample of immigrant emerging adults. However, future studies should strive to address the limitations of this study. Specifically, future research should use a more comprehensive sample of immigrants and use a more stringent method of capturing psychosis risk. Furthermore, there are currently no longitudinal studies of cultural identity and psychosis. Future research needs to examine cultural identity and psychosis over time in order to assess the causal relationships between the two. Lastly, the results of this study need to be replicated by other researchers in order to draw more meaningful conclusions from the results presented here.

Conclusion

In conclusion, this study is the first step in broadening the approach to the research on cultural identity and psychosis. Using the approach presented here, this study was able to show that assessing the strength of an individuals' cultural identity (s) may not be enough to show significant associations with experiences in the psychotic spectrum. Specifically, while the results of the study did not show any associations between either ethnic or national identity on their own, their combination and degree of conflict was significantly related to APPS. Thus, each identity separately may not be associated with psychosis but it is how these identities intertwine and interact which may cause immigrant individuals to struggle with properly assessing their experience of reality.

References

- Aiken LS, West SG. Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage; 1991
- Benet-Martínez, V., & Haritatos, J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of Personality*, 73, 1015-1050.
- Benet-Martínez, V., Leu, J., Lee, F., & Morris, M. W. (2002). Negotiating biculturalism cultural frame switching in biculturals with oppositional versus compatible cultural identities. *Journal of Cross-Cultural Psychology*, 33(5), 492-516.
- Berry, J. W. (1990). Psychology of acculturation. In J. J. Berman (Ed.), *Nebraska Symposium on motivation, 1989: Cross-cultural perspectives* (pp. 201 – 234). Lincoln, NE: University of Nebraska Press.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, 46, 5-68.
- Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity, and adaptation. *Applied psychology*, 55(3), 303-332.
- Berry, J. W., & Sabatier, C. (2010). Acculturation, discrimination, and adaptation among second generation immigrant youth in Montreal and Paris. *International Journal of Intercultural Relations*, 34(3), 191-207.
- Brown, R. (2000). Social identity theory: Past achievements, current problems and future challenges. *European Journal of Social Psychology*, 30(6), 745-778.
- Burnett-Zeigler, Inger Bohnert, Kipling M. Ilgen, Mark A. 2013 Ethnic identity, acculturation and the prevalence of lifetime psychiatric disorders among Black, Hispanic, and Asian adults in the U.S.; *Journal of Psychiatric Research*, Vol 47(1), Jan, 2013. pp. 56-63.

- Cachelin, F. M., Phinney, J. S., Schug, R. A., & Striegel-Moore, R. H. (2006). Acculturation and eating disorders in a Mexican American community sample. *Psychology of Women Quarterly, 30*(4), 340-347.
- Cannon, T. D., Cadenhead, K., Cornblatt, B., Woods, S. W., Addington, J., Walker, E., ... & Heinssen, R. (2008). Prediction of psychosis in youth at high clinical risk: a multisite longitudinal study in North America. *Archives of general psychiatry, 65*(1), 28-37.
- Chen, S. X., Benet-Martínez, V., Wu, W. H., Lam, B. P., & Bond, M. H. (2013). The role of dialectical self and bicultural identity integration in psychological adjustment. *Journal Of Personality, 81*(1), 61-75. doi:10.1111/j.1467-6494.2012.00791.x
- Cheng, C. Y., Lee, F., Benet-Martínez, V., & Huynh, Q. L. (2014). 13 Variations in Multicultural Experience: Influence of Bicultural Identity Integration on Socio-Cognitive Processes and Outcomes. *The Oxford Handbook of Multicultural Identity, 276*.
- Coutinho, M. T., & Koinis-Mitchell, D. (2014). Black immigrants and school engagement: Perceptions of discrimination, ethnic identity, and American identity. *Journal Of Black Psychology, 40*(6), 520-538. doi:10.1177/0095798413498095
- Coid, J. W., Kirkbride, J. B., Barker, D., Cowden, F., Stamps, R., Yang, M., & Jones, P. B. (2008). Raised incidence rates of all psychoses among migrant groups: findings from the East London first episode psychosis study. *Archives of General Psychiatry, 65*(11), 1250-1258.
- Cooper, C., Morgan, C., Byrne, M., Dazzan, P., Morgan, K., Hutchinson, G., ... & Fearon, P. (2008). Perceptions of disadvantage, ethnicity and psychosis. *The British Journal of Psychiatry, 192*(3), 185-190.

- Cronin, T. J., Levin, S., Branscombe, N. R., van Laar, C., & Tropp, L. R. (2012). Ethnic identification in response to perceived discrimination protects well-being and promotes activism: A longitudinal study of Latino college students. *Group Processes & Intergroup Relations*, *15*(3), 393-407. doi:10.1177/1368430211427171
- Devos, T., & Mohamed, H. (2014). Shades of American Identity: Implicit Relations between Ethnic and National Identities. *Social and Personality Psychology Compass*, *8*(12), 739-754.
- Dhossche, D., Ferdinand, R., van der Ende, J., Hofstra, M. B., & Verhulst, F. (2002). Diagnostic outcome of self-reported hallucinations in a community sample of adolescents. *Psychological Medicine*, *32*(4), 619-627. doi:10.1017/S003329170200555X
- Dominguez, M. G., Wichers, M., Lieb, R., Wittchen, H., & van Os, J. (2011). Evidence that onset of clinical psychosis is an outcome of progressively more persistent subclinical psychotic experiences: An 8-year cohort study. *Schizophrenia Bulletin*, *37*(1), 84-93. doi:10.1093/schbul/sbp022
- Ellemers, N., Spears, R., & Doosje, B. (1997). Sticking together or falling apart: In-group identification as a psychological determinant of group commitment versus individual mobility. *Journal of Personality and Social Psychology*, *72*(3), 617.
- Ellemers, N., Spears, R., & Doosje, B. (2002). Self and social identity*. *Annual review of psychology*, *53*(1), 161-186.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Fearon, P., & Morgan, C. (2006). Environmental factors in schizophrenia: the role of migrant studies. *Schizophrenia bulletin*, *32*(3), 405-408.

- Ferdman, B. M., & Horenczyk, G. (2000). Cultural identity and immigration: Reconstructing the group during cultural transition. *Language, identity and immigration*, 81-100.
- Flannery, W. P., Reise, S. P., & Yu, J. (2001). An empirical comparison of acculturation models. *Personality and Social Psychology Bulletin*, 27, 1035-1045.
- Fuller-Rowell, T. E., Ong, A. D., & Phinney, J. S. (2013). National identity and perceived discrimination predict changes in ethnic identity commitment: Evidence from a longitudinal study of Latino college students. *Applied Psychology: An International Review*, 62(3), 406-426. doi:10.1111/j.1464-0597.2012.00486.x
- Gamst, G., Herdina, A., Mondragon, E., Munguia, F., Pleitez, A., Stephens, H., & ... Cuéllar, I. (2006). Relationship Among Respondent Ethnicity, Ethnic Identity, Acculturation, and Homeless Status on a Homeless Population's Functional Status. *Journal Of Clinical Psychology*, 62(12), 1485-1501. doi:10.1002/jclp.20323
- Gartner, M., Kiang, L., & Supple, A. (2014). Prospective links between ethnic socialization, ethnic and American identity, and well-being among Asian-American adolescents. *Journal of youth and adolescence*, 43(10), 1715-1727.
- Go, C. G., & Le, T. N. (2005). Gender differences in Cambodian delinquency: The role of ethnic identity, parental discipline, and peer delinquency. *Crime & Delinquency*, 51(2), 220–237.
- Gong, L. (2007). Ethnic identity and identification with the majority group: Relations with national identity and self-esteem. *International Journal of Intercultural Relations*, 31, 503-523.
- Gonidakis, F. F., Lembesi, E. E., Kontaxakis, V. P., Havaki-Kontaxaki, B. J., Ploumpidis, D. D., Madianos, M. M., & Papadimitriou, G. N. (2013). A study of acculturation in psychotic

- and non-psychotic immigrants living in Athens. *International Journal Of Social Psychiatry*, 59(2), 157-164. doi:10.1177/0020764011430031
- Gordon, M. M. (1964). *Assimilation in American life*. New York: Oxford University.
- Hanssen, M., Bak, M., Bijl, R., Vollebergh, W., & van Os, J. (2005). The incidence and outcome of subclinical psychotic experiences in the general population. *British Journal Of Clinical Psychology*, 44(2), 181-191. doi:10.1348/014466505X29611
- Hogg, M. A., Terry, D. J., & White, K. M. (1995). A tale of two theories: A critical comparison of identity theory with social identity theory. *Social psychology quarterly*, 255-269.
- Hogg, M. A., van Knippenberg, D., & Rast III, D. E. (2012). The social identity theory of leadership: Theoretical origins, research findings, and conceptual developments. *European Review of Social Psychology*, 23(1), 258-304.
- Huynh, Q., Devos, T., & Goldberg, R. (2014). The role of ethnic and national identifications in perceived discrimination for Asian Americans: Toward a better understanding of the buffering effect of group identifications on psychological distress. *Asian American Journal Of Psychology*, 5(3), 161-171. doi:10.1037/a0031601
- Kaymaz, N., Drukker, M., Lieb, R., Wittchen, H., Werbeloff, N., Weiser, M., & ... van Os, J. (2012). Do subthreshold psychotic experiences predict clinical outcomes in unselected non-help-seeking population-based samples? A systematic review and meta-analysis, enriched with new results. *Psychological Medicine*, 42(11), 2239-2253. doi:10.1017/S0033291711002911
- Kelly, C. (1989). Political identity and perceived intragroup homogeneity. *British Journal of Social Psychology*, 28(3), 239-250.

- Kiang, L., Witkow, M. R., & Champagne, M. C. (2013). Normative changes in ethnic and American identities and links with adjustment among Asian American adolescents. *Developmental psychology, 49*(9), 1713.
- Kirkbride, J. B., Barker, D., Cowden, F., Stamps, R., Yang, M., Jones, P. B., & Coid, J. W. (2008). Psychoses, ethnicity and socio-economic status. *The British Journal of Psychiatry, 193*(1), 18-24.
- Lewis-Fernández, R., Horvitz-Lennon, M., Blanco, C., Guarnaccia, P. J., Cao, Z., & Alegria, M. (2009). Significance of endorsement of psychotic symptoms by US Latinos. *The Journal of nervous and mental disease, 197*(5), 337.
- Lincoln, T. M., Mehl, S., Ziegler, M., Kesting, M., Exner, C., & Rief, W. (2010). Is fear of others linked to an uncertain sense of self? The relevance of self-worth, interpersonal self-concepts, and dysfunctional beliefs to paranoia. *Behavior Therapy, 41*(2), 187-197.
doi:10.1016/j.beth.2009.02.004
- Loewy, R. L., Bearden, C. E., Johnson, J. K., Raine, A., & Cannon, T. D. (2005). The prodromal questionnaire (PQ): preliminary validation of a self-report screening measure for prodromal and psychotic syndromes. *Schizophrenia research, 79*(1), 117-125.
- Loewy, R. L., Johnson, J. K., & Cannon, T. D. (2007). Self-report of attenuated psychotic experiences in a college population. *Schizophrenia research, 93*(1), 144-151.
- Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159– 187). New York: Wiley.
- Miller, M. J. (2007). A bilinear multidimensional measurement model of Asian American acculturation and enculturation: Implications for counseling interventions. *Journal of Counseling Psychology, 54*, 118-131.

- Miller, T. J., McGlashan, T. H., Rosen, J. L., Somjee, L., Markovich, P. J., Stein, K., & Woods, S. W. (2002). Prospective diagnosis of the initial prodrome for schizophrenia based on the Structured Interview for Prodromal Syndromes: preliminary evidence of interrater reliability and predictive validity. *American Journal of Psychiatry*, *159*(5), 863-865.
- Miramontez, D. R., Benet-Martínez, V., & Nguyen, A. D. (2008). Bicultural identity and self/group personality perceptions. *Self And Identity*, *7*(4), 430-445.
doi:10.1080/15298860701833119
- Mok, A., Morris, M., Benet-Martínez, V., & Karakitapoglu-Aygun, Z. (2007). Embracing American culture: Structures of social identity and social networks among first-generation biculturals. *Journal of Cross-Cultural Psychology*, *38*, 629-635.
- Morgan, C., & Hutchinson, G. (2010). Letter to the editor: Prevention is better than cure: a reply to McKenzie, March et al. and Selten & Cantor-Graae. *Psychological medicine*, *40*(05), 876-877.
- Nguyen, A.- M. D., & Benet-Martínez, V. (2007). Biculturalism unpacked: Components, individual differences, measurement, and outcomes. *Social and Personality Psychology Compass*, *1*, 101-114.
- Nguyen, A. D., & Benet-Martínez, V. (2013). Biculturalism and adjustment: A meta-analysis. *Journal Of Cross-Cultural Psychology*, *44*(1), 122-159.
doi:10.1177/0022022111435097
- Park, I. K., Schwartz, S. J., Lee, R. M., Kim, M., & Rodriguez, L. (2013). Perceived racial/ethnic discrimination and antisocial behaviors among Asian American college students: Testing the moderating roles of ethnic and American identity. *Cultural Diversity And Ethnic Minority Psychology*, *19*(2), 166-176. doi:10.1037/a0028640

Phinney, J. S. (1989). Stages of ethnic identity development in minority group adolescents. *The Journal of Early Adolescence*, 9(1-2), 34-49.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of research. *Psychological Bulletin*, 108(3), 499 – 514.

Phinney, J. S. (1992). The multigroup ethnic identity measure a new scale for use with diverse groups. *Journal of adolescent research*, 7(2), 156-176.

Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist*, 51, 918-927.

Phinney, J. S. (2003). Ethnic identity and acculturation. In K. M. Chun, P. B. Organista, & G. Marín (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 39-60). Washington, DC: American Psychological Association.

Phinney, J. S., & Devich-Navarro, M. (1997). Variations in bicultural identification among African American and Mexican American adolescents. *Journal of Research on Adolescence*, 7, 3-32.

Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of social issues*, 57(3), 493-510.

Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, 54, 271–281.

Poulton, R., Caspi, A., Moffitt, T. E., Cannon, M., Murray, R., & Harrington, H. (2000). Children's self-reported psychotic symptoms and adult schizophreniform disorder: a 15-year longitudinal study. *Archives of General Psychiatry*, 57(11), 1053-1058.

- Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum for the study of acculturation. *American anthropologist*, 38(1), 149-152.
- Reininghaus, U., Craig, T. J., Fisher, H. L., Hutchinson, G., Fearon, P., Morgan, K., & ... Morgan, C. (2010). Ethnic identity, perceptions of disadvantage, and psychosis: Findings from the ÆSOP study. *Schizophrenia Research*, 124(1-3), 43-48.
doi:10.1016/j.schres.2010.08.038
- Rhea, D. J., & Thatcher, W. (2013). Ethnicity, ethnic identity, self-esteem, and at-risk eating disordered behavior differences of urban adolescent females. *Eating Disorders: The Journal Of Treatment & Prevention*, 21(3), 223-237. doi:10.1080/10640266.2013.779177
- Roberts, R. E., Phinney, J. S., Mase, L. C., Chen, Y. R., Roberts, C. R., & Romero, A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. *Journal of Early Adolescence*, 19, 301-322.
- Romero, A. J., Edwards, L. M., Fryberg, S. A., & Orduña, M. (2014). Resilience to discrimination stress across ethnic identity stages of development. *Journal Of Applied Social Psychology*, 44(1), 1-11. doi:10.1111/jasp.12192
- Rudmin, F. W. (2003). Critical history of the acculturation psychology of assimilation, separation, integration, and marginalization. *Review of General Psychology*, 7, 3-37.
- Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, 79, 49-65.
- Sabatier, C. (2008). Ethnic and national identity among second-generation immigrant adolescents in France: The role of social context and family. *Journal Of Adolescence*, 31(2), 185-205. doi:10.1016/j.adolescence.2007.08.001

- Sam, D. L., & Berry, J. W. (Eds.). (2006). *The Cambridge handbook of acculturation psychology*. Cambridge University Press.
- Sam, D. L., & Berry, J. W. (2010). Acculturation: When individuals and groups of different cultural backgrounds meet. *Perspectives On Psychological Science*, 5(4), 472-481. doi:10.1177/1745691610373075
- Schwartz, S. J., Park, I. J., Huynh, Q. L., Zamboanga, B. L., Umana-Taylor, A. J., Lee, R. M., ... & Agocha, V. B. (2012). The American Identity Measure: development and validation across ethnic group and immigrant generation. *Identity*, 12(2), 93-128.
- Smith, T. B., & Silva, L. (2011). Ethnic identity and personal well-being of people of color: a meta-analysis. *Journal of Counseling Psychology*, 58(1), 42.
- St. Louis, G. R., & Liem, J. H. (2005). Ego Identity, Ethnic Identity, and the Psychosocial Well-Being of Ethnic Minority and Majority College Students. *Identity: An International Journal Of Theory And Research*, 5(3), 227-246. doi:10.1207/s1532706xid0503_1
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. CUP Archive.
- Tajfel, H., & Turner, I. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds.), *Psychology of intergroup relations* (pp. 33-48). Chicago: Nelson-Hall.
- Tajfel, H., & Turner, J. (2001). Intergroup relations: Essential readings. *Key Readings in Social Psychology*.
- Umaña-Taylor, A. J. (2004). Ethnic identity and self-esteem: Examining the role of social context. *Journal of Adolescence*, 27, 139-146

- Umaña-Taylor, A. J. (2011). Ethnic identity. In *Handbook of identity theory and research* (pp. 791-809). Springer New York.
- Umaña-Taylor, A. J., Yazedjian, A., & Bámaca-Gómez, M. Y. (2004). Developing the ethnic identity scale using Eriksonian and social identity perspectives. *Identity: An International Journal of Theory and Research*, 4, 9–38.
- Van Os, J., Linscott, R. J., Myin-Germeys, I., Delespaul, P., & Krabbendam, L. (2009). A systematic review and meta-analysis of the psychosis continuum: evidence for a psychosis proneness–persistence–impairment model of psychotic disorder. *Psychological medicine*, 39(02), 179-195.
- Veling, W., Hoek, H. W., Wiersma, D., & Mackenbach, J. P. (2010). Ethnic identity and the risk of schizophrenia in ethnic minorities: A case-control study. *Schizophrenia Bulletin*, 36(6), 1149-1156. doi:10.1093/schbul/sbp032
- Veling, W., Selten, J. P., Susser, E., Laan, W., Mackenbach, J. P., & Hoek, H. W. (2007). Discrimination and the incidence of psychotic disorders among ethnic minorities in The Netherlands. *International Journal of Epidemiology*, 36(4), 761-768.
- Veling, W., Susser, E., Van Os, J., Mackenbach, J. P., Selten, J. P., & Hoek, H. W. (2008). Ethnic density of neighborhoods and incidence of psychotic disorders among immigrants.
- Velthorst, E. E., Nieman, D. H., Veling, W. W., Klaassen, R. M., Dragt, S. S., Rietdijk, J. J., &... van der Gaag, M. M. (2012). Ethnicity and baseline symptomatology in patients with an At Risk Mental State for psychosis. *Psychological Medicine*, 42(2), 247-256. doi:10.1017/S0033291711001486

- Vivero, V. N., & Jenkins, S. R. (1999). Existential hazards of the multicultural individual: Defining and understanding “cultural homelessness.” *Cultural Diversity & Ethnic Minority Psychology*, 5, 6-26.
- Williams, M., Chapman, L., Wong, J., & Turkheimer, E. (2012). The role of ethnic identity in symptoms of anxiety and depression in African Americans. *Psychiatry Research*, 199(1), 31-36. doi:10.1016/j.psychres.2012.03.049
- Yoon, E. (2011). Measuring ethnic identity in the Ethnic Identity Scale and the Multigroup Ethnic Identity Measure-Revised. *Cultural Diversity and Ethnic Minority Psychology*, 17(2), 144.
- Wiles, N. J., Zammit, S., Bebbington, P., Singleton, N., Meltzer, H., & Lewis, G. (2006). Self-reported psychotic symptoms in the general population: Results from the longitudinal study of the British National Psychiatric Morbidity Survey. *The British Journal Of Psychiatry*, 188(6), 519-526. doi:10.1192/bjp.bp.105.012179
- Yoon, E. (2011). Measuring ethnic identity in the Ethnic Identity Scale and the Multigroup Ethnic Identity Measure-Revised. *Cultural Diversity and Ethnic Minority Psychology*, 17(2), 144.
- Yuh, J. (2005). Ethnic identity and its relation to self-esteem and ego identity among college students in a multiethnic region. *Journal Of Applied Social Psychology*, 35(6), 1111-1131. doi:10.1111/j.1559-1816.2005.tb02162.x
- Zamboanga, B. L., Raffaelli, M., & Horton, N. J. (2006). Acculturation status and heavy alcohol use among Mexican American college students: Investigating the moderating role of gender. *Addictive Behaviors*, 31, 2188–2198.
- Zane, N., & Mak, W. (2003). Major approaches to the measurement of acculturation among ethnic minority populations: A content analysis and an alternative empirical strategy. In

K. M. Chun, P. B. Organista, & G. Marín (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 39-60). Washington, DC: American Psychological Association.

Table 1. Demographic characteristics of the sample

	Overall Sample (<i>n</i> = 123)
Demographics	
Male, <i>n</i> (%)	49 (39.6)
Age (years), mean (SD) [range]	19.1 (1.64) [18-26]
Race, <i>n</i> (%)	
Black (non-US)	27 (20.0)
Hispanic	38 (30.9)
Asian	37 (30.1)
White	11 (8.9)
Other	10 (8.1)
Immigrant Status, <i>n</i> (%)	
First Generation	45 (36.6)
Second Generation	78 (63.4)
Ethnic Identity, mean (SD) [range]	3.4 (0.92) [1-5]
American Identity, mean (SD) [range]	3.2 (0.74) [1-5]
BIIS - Harmony VS Conflict, mean (SD) [range]	3.5 (0.65) [1-5]
BIIS - Blendedness VS Compartmentalization, mean (SD) [range]	3.5 (0.63) [1-5]
 APPS, mean (SD) [range]	 14.3 (9.3)[1-39]

Note: BIIS = Bicultural Identity Integration Scale; APPS = Attenuated Positive Psychotic Symptoms

Table 2. Correlations of APPS, age, ethnic identity, American identity, and BII (N=123)

Correlations						
	APPS	Age	MEIM	AIM	BIIS H vs. C	BIIS B vs. C
APPS	1	.004	-.063	-.128	-.260***	-.164
Age		1	.015	-.103	-.112	-.069
MEIM			1	.197**	.131	.217**
AIM				1	.111	.281***
BIIS H vs. C					1	.534***
BIIS B vs. C						1

Note: * p<0.10, ** p<0.05, *** p<0.01; MEIM = Multigroup Ethnic Identity Measure; AIM = American Identity Measure; BII H vs C = Bicultural Identity Integration Harmony vs. Conflict; BII B vs. C = Bicultural Identity Integration Blendedness vs. Compartmentalization

Table 3. Multiple Hierarchical Regression of APSS on Cultural Identity and BII (N=123)

	APPS b (se) [Beta]					VIF Step 5
	Step 1	Step 2	Step 3	Step 4	Step 5	
MEIM	-.63 (.91) [-.06]	-.39 (.93) [-.04]	-.45 (.92) [-.05]	-.17 (.90) [-.02]	-.14 (.91) [-.02]	1.07
AIM		-1.50 (1.15) [-.12]	-1.42 (1.14) [-.11]	-1.15 (1.11) [-.09]	-1.08 (1.15) [-.09]	1.12
MEIMxAIM			1.89 (1.02) [.17]*	1.88 (1.00) [.164]*	1.90 (1.01) [.17]*	1.015
BII H vs. C				-3.52 (1.26) [-.25]***	-3.33 (1.48) [-.23]**	1.41
BII B vs. C					-.40 (1.62) [-0.3]	1.56
Constant	14.23 (.84)***	14.20 (.84)***	13.95 (.84)***	13.95 (.82)***	13.94 (.82)***	
Adj. R ²	-.004	.001	.021	.074	.067	
F-Value	.48	1.09	1.88	3.45**	2.75**	

Note: * p<0.10, ** p<0.05, *** p<0.01; MEIM = Multigroup Ethnic Identity Measure; AIM = American Identity Measure; BII H vs C = Bicultural Identity Integration Harmony vs. Conflict; BII B vs. C = Bicultural Identity Integration Blendedness vs. Compartmentalization; VIF = Variance Inflation Factor

Figure 1. Interaction effect of American and Ethnic Identity on frequency APPS

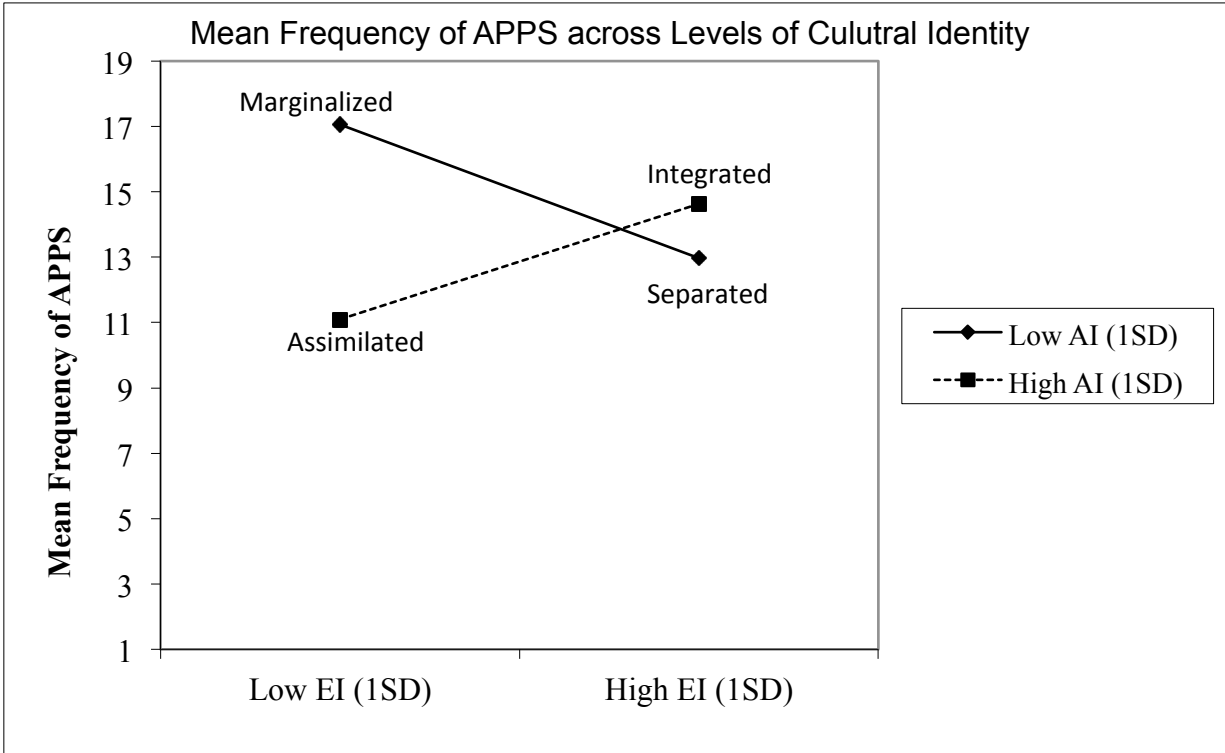


Table 4. Multiple Hierarchical Regression of APSS on Identity Category and BII (N=123)

	APPS b (se) [Beta]			
	Step 1	Step 2	Step 3	VIF Step 3
Assimilated	-5.58 (2.32) [-.25]**	-4.19 (2.36) [-.19]*	-4.13 (2.37) [-.19]*	1.47
Separated	-4.69 (2.32) [-.21]**	-3.68 (2.32) [-.17]	-3.73 (2.33) [-.17]	1.42
Integrated	-2.47 (2.2) [-.12]	-2.08 (2.17) [-.10]	-1.86 (2.25) [-.09]	1.52
BII H vs. C		-3.02 (1.3) [-.21]**	-2.7 (1.56) [-.19]*	1.55
BII B vs. C			-.62 (1.63) [-0.04]	1.56
Constant	17.14 (1.52)***	16.50 (1.52)***	16.43 (1.53)***	
Adj. R ²	.032	.067	.060	
F-Value	2.37*	3.19**	2.56**	

Note: * p<0.10, ** p<0.05, *** p<0.01; Marginalized identity was the reference group; BII H vs C = Bicultural Identity Integration Harmony vs. Conflict; BII B vs. C = Bicultural Identity Integration Blendedness vs. Compartmentalization; VIF = Variance Inflation Factor