

2008

An online support group intervention for Asian American lesbian and bisexual women

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An online support group intervention for Asian American lesbian and bisexual women

by

Robyn Alycia Zakalik Van Brunt

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Psychology (Counseling Psychology)

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2008

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ABSTRACT

The present study used a latent growth curve modeling approach to examine the effectiveness of online support group intervention on depressive symptoms and life satisfaction over time. A total of 83 Asian American lesbian and bisexual women were randomly assigned to participate in either a four-week online support group intervention or a no-intervention control group. Participation in the online support group intervention was found to predict higher levels of life satisfaction at post-intervention and those levels were maintained over the follow-up period. No differences were found for level or rate of change for depressive symptoms.

Three exploratory moderators were tested for the relations between internalized homophobia or ethnic identity and depressive symptoms or life satisfaction over time. The first moderator was group condition. For depressive symptoms, group condition failed to be a significant moderator of either ethnic identity or internalized homophobia on depressive symptoms at the post-intervention and over time. When internalized homophobia is low, the mean levels of life satisfaction at post-intervention were similar between two groups, but life satisfaction significantly increased over the one-month follow-up period only for support group participants.

The second moderator was perceived support from the online group. Perceived support failed to be a significant moderator of internalized homophobia on depressive symptoms or life satisfaction at the post-intervention and over time. However, ethnic identity was found to interact with perceived support. For depressive symptoms, when ethnic identity is high and support is high, participants reported the highest levels of depressive symptoms at post-intervention and over the follow-up period. Conversely, those with low ethnic identity

and high support reported the lowest levels of depressive symptoms at the post-intervention, with increasing levels over the follow-up period.

The third moderator was comfort with distress disclosure. For life satisfaction, when internalized homophobia is high, those with low comfort with distress disclosure reported similar levels of life satisfaction to other participants at the post-intervention, but levels decreased over time. When internalized homophobia is low, those with low comfort with distress disclosure reported similar levels of life satisfaction to other participants at the post-intervention and continued to maintain their life satisfaction level across the follow-up period.

CHAPTER 1: INTRODUCTION

It is well documented that having a homosexual orientation in the United States is not only stressful, but also associated with higher proportions of psychological distress (e.g., Diaz, Ayla, Bein, Henne, & Marin, 2001; Mays & Cochran, 2001; Meyer, 2003; Waldo, 1999). Same-sex attracted Asian American women (e.g., lesbian, bisexual, etc.) are particularly vulnerable to a range of stressors due to their triple minority status (i.e., gender, sexual orientation, and ethnicity) (e.g., Chan, 1987; Chan, 1989; Greene, 1994; Li & Orleans, 2001). Despite this, there is a dearth of empirical and clinical research related to mental health issues for Asian American women who are attracted to women (e.g., romantically, sexually, etc.). Thus, the goal of this study was to explore the effectiveness of an online support group to alleviate distress for Asian American women who are attracted to women (e.g., lesbian, bisexual, pansexual, queer, questioning, etc.).

A common theme shared by ethnic identity (Sue & Sue, 2003) and lesbian, gay, and bisexual (LGB) identity development (e.g., McCarn & Fassinger, 1996) is the process of transformation from a negative view of oneself as a racial or sexual orientation minority to a positive acceptance of oneself. In the LGB literature, internalized homophobia (sometimes referred to as internalized homonegativity) can be defined as a set of internalized negative beliefs and attitudes towards homosexuals in general and about one's self as a homosexual, which results from living in a heterosexist and homophobic society (e.g., Shidlo, 1994; Szymanski, Chung, & Balsam, 2001). Homophobia in today's society is so pervasive that most LGB scholars believe that the internalization of these negative beliefs is part of a normative developmental process for most homosexual men and women. Thus, many models of LGB identity development view the process of coming out as the letting go of one's

internalized homophobia, while concurrently adopting a more positive and integrated LGB self-identity (e.g., Cass, 1979, 1984, 1996; McCarn & Fassinger; Sophie, 1985/1986; Shidlo, 1994; Szymanski & Chung, 2001).

In the Asian identity literature, a strong ethnic identity can be defined as one's attainment and maintenance of a positive self-concept regarding one's Asian characteristics and cultural heritage, within the context of a dominant society (Phinney, 1990, 1992; Sue, Mak, & Sue, 1998). In general, those earlier in the identity development process are likely to experience an increasing awareness of being different from the majority culture, feelings of self depreciation, group inferiority, isolation, a sense of responsibility for negative treatment based on ethnicity, a negative self image, and/or a negative body image (e.g., Kim, 2001; Sue et al., 1998). At this stage, individuals may try to blend in or merge with the White majority culture, while simultaneously denying their own cultural and ethnic heritage or the individual may struggle between group appreciating and group depreciating aspects of their self. Those later in the identity achievement process are likely to experience a positive sense of self as an Asian American, a more balanced view of the self and others of various ethnicities, a blending of one's ethnic identity with other various self identities, and a greater clarity about one's place within a greater socio-political context (e.g., Kim, 2001; Sue et al., 1998; Sue & Sue, 2003; Phinney, 1992). Thus, similar to homosexual identity, ethnic identity development involves a complex process involving the movement from a negative or diffuse sense of one's ethnic identity to a positive and more integrated self identity as an ethnic minority.

Although desirable, letting go of one's negative beliefs about oneself as an ethnic or sexual orientation minority can be difficult. It is well documented that both ethnic and sexual orientation minorities are vulnerable to discrimination and oppression from others (e.g.,

Chan, 1989; Kessler, Mickelson, & Williams, 1999; Meyer, 2003, Sue & Sue, 2003). Thus, it makes sense that those with a strong ethnic identity and/or less internalized homophobia would be less vulnerable to negative mental health outcomes. In general, the extant body of literature supports this trend. More specifically, a strong Asian ethnic identity has been associated with a positive sense of psychological well-being, high self-esteem, and resilience to life change and stressors (e.g., Crocker, Luhtanen, Blaine, & Broadnax, 1994; Yoo & Lee, 2005). Additionally, ethnic identity has been positively associated with social connectedness and a greater sense of community in Asian Americans (Lee, 2003). Similarly, levels of internalized homophobia have been positively associated with levels of depression (Shidlo, 1994; Szymanski, Chung, & Balsam, 2001), loneliness, and self-esteem (Shidlo; Szymanski & Chung, 2001). Additionally, Luhtanen (2003) found that the reduction of depression in lesbian and bisexual women was predicted by a rejection of negative LGB stereotypes and a positive LGB identity.

Although the process of releasing internalized homophobia and embracing one's homosexual identity as positive is stressful for many women (e.g., Fassinger, 1991; Gonsiorik & Rudolph, 1991), the process of accepting a homosexual identity and lifestyle for same-sex attracted Asian American women may involve the added risk of shaming one's family and making their family "lose face" (Hom, 1994). This is because Asian parents may see the success of their children as a reflection of their successful parenting or discipline. If their child is a lesbian, bisexual, queer, etc., they may question whether they did something wrong in raising their child. Moreover, family and friends may view accepting a homosexual identity as a rejection of the traditional Asian value that women should become a wife to a man and mother in order to carry on the family line (Chan, 1989). Thus, by coming out they

face the risk of not only experiencing rejection from their family but also the added layer of social pressure from extended family and one's ethnic community (Li & Orleans, 2001). In addition to the isolation from Asian family members and the community, Chan reported that most Asian American lesbians felt invisible or stereotyped within the gay community. More specifically, many reported being seen as "exotic" or feeling unaccepted by the majority of white lesbians and gay men. An added stressor is that most LGB agencies are geared toward white clients and many Asian American lesbians and bisexual women feel that a large number of counselors fail to understand their unique concerns (Poon & Ho, 2002). Such reports are disheartening, since it appears that traditional methods of support are unavailable for many Asian American women who are attracted to women.

Online Support Groups as an Intervention

Studies have shown that Asian Americans tend to under utilize psychological services in the United States (e.g., Leong, 1986, U.S. Department of Health and Human Services, 2001). Due to the Asian cultural value of emotional self-control (Kim, Atkinson, & Yang, 1999), Asian Americans may feel uncomfortable in disclosing their distress feelings to others or mental health providers. Fortunately, research suggests that online support groups may reduce psychological barriers to receiving help due to increased anonymity and accessibility (Davidson, Pennebaker, & Dickerson, 2000; King & Moreggi, 1998). Research has also found that communication with others over the Internet has been linked to decreased loneliness, increased self-esteem, and greater levels of perceived support (e.g., Guo, Bricout, & Huang, 2005; McKenna & Bargh, 1998, 1999; Shaw & Gant, 2002). Chang, Yeh, and Krumboltz (2001) explored the effectiveness of an online support group for Asian American men to discuss the topic of ethnic identity and found that participants felt supported, self-

disclosed often, and were connected to other members. Moreover, 94% of participants felt that online support groups should exist for Asian American men.

The lack of available support systems for Asian American women who are attracted to women is particularly concerning because social support has been found to be an important predictor of mental well-being in the lesbian and bisexual community (Beals & Peplau, 2005; Kurdek, 1988; Oetjen & Rothblum, 2000; Szymanski, Chung, & Balsam, 2001; Zea, Reisen, & Poppen, 1999). Indeed, higher levels of social support have been linked to fewer personal problems (D'Augelli, Collins, & Hart, 1987), greater life satisfaction (Luhtanen, 2003), and lower levels of depression (e.g., Oetjen & Rothblum; Szymanski, Chung, & Balsam,) in samples of adult homosexual and bisexual women. Moreover, Beals and Peplau found that perceived lesbian identity support predicted levels of life-satisfaction, self-esteem, depression, and overall well-being. Additionally, it seems that support specifically from the LGB community is particularly important for developing a sense of well-being. In her review, Luhtanen reported that the “most robust empirical finding with regard to predicting self-esteem in studies of LGB samples is that social support in the form of affiliation with other LGBs is positively related to self-esteem and psychological well-being” (p. 87). Thus, it appears that perceived social support in general, social support from the LGB community, and support for one’s homosexual identity in particular may play important roles in the mental well-being of Asian American women who are attracted to women.

McKenna and Bargh (1999) argued that the Internet provides a unique opportunity for those who have concealable stigmatized identities (e.g., lesbian or bisexual identity) to find and connect with others who have the same identity. This is particularly important for same-

sex attracted women because their identity may not be readily identifiable to others of the same identity. Therefore, online support groups for women who are attracted to women may provide an important opportunity for them to connect with similar others. In a study, McKenna and Bargh (1998) found that online members of stigmatized groups (e.g., homosexuals and people who use drugs) valued their group membership more than those in non-stigmatized groups (e.g., politics and economics discussion board, parents of teens). In addition, for those in stigmatized groups, greater frequency of participation in the groups was negatively related to levels of depression and feelings of estrangement from society. Participation in the stigmatized groups was also related to a greater self-acceptance. Additionally, 50% of members reported that participation in the stigmatized groups was directly related to their decision to come out to friends and family members. In sum, it appears that online groups for both Asian American and sexual orientation minorities have been linked to positive outcomes including greater feelings of support and connectedness with others, as well as lower levels of depressive symptoms and feelings of isolation. Thus, it is likely that an online support group would be an alternative way of receiving support for same-sex attracted Asian American women to discuss their concerns or stress related to their ethnic identity and sexual orientation. Therefore, the first purpose of this study was to evaluate the effectiveness of the online support group intervention for same-sex attracted Asian American women. More specifically, it was hypothesized that at post-intervention the average level of depressive symptoms in the support group would be lower than that in the control group; the slope of depressive symptoms would decrease over time (i.e., from post-intervention through 2 week follow-up to 1-month follow-up) for the support group but there would be no change for the control group. In addition, it was hypothesized that at the post-

intervention the average level of life satisfaction in the support group would be higher than that in the control group; the slope of life satisfaction would increase over the follow-up period for the support group but there would be no change for the control group.

Group Condition (Online Support vs. Control Group) as a Moderator between Ethnic Identity or Internalized Homophobia and Mental Health Outcomes

It appears from the above research that ethnic identity and internalized homophobia are key variables impacting mental health outcomes for both Asian Americans and sexual orientation minorities. Moreover, intervention and outcome research with in-person and online groups has suggested that group participation is particularly important for those with a stigmatized or minority identity. Liu, Tsong, and Hayashino (2007) reported from their experiences of leading short-term “Asian American Women’s Groups” that participation led the women to feel less alone in their struggles and a desire to continue the group at termination. In the LGB literature, Dietz and Dettlaff (2007) explored the impact of participation in an LGB support group on a college campus. Before attending the group, participants who were “in the closet” reported holding negative views of themselves, endorsing negative stereotypes about the LGB community, and feeling loneliness, fear, shame, and hopelessness. At the end of the support group, these members reported feeling “normal”, more connected to others, greater confidence, and a more positive sense of self. Although it was not directly explored, these studies suggest that feelings about one’s identity might interact with group participation to affect mental health outcomes for group participants. Therefore the second aim of the study was to explore group condition (i.e., online support group or no-intervention control group) as a moderator between ethnic identity or internalized homophobia and mental health outcomes. It is likely that participation

in an online group would reduce the negative effects of negative identity beliefs (i.e., ethnic identity and internalized homophobia) on mental health outcomes (i.e., depressive symptoms and life satisfaction) over time. However, due to the limited availability of prior research linking these variables, it is difficult to precisely predict the nature of this three-way interaction (i.e., ethnic identity [or internalized homophobia] x group condition x time).

Thus, this research question is exploratory in nature.

Perceived Group Support as a Moderator between Ethnic Identity or Internalized Homophobia and Mental Health Outcomes

A current trend in empirical research on the effectiveness of a clinical intervention is to explore not only what interventions will be useful for a specific minority population (e.g., ethnic or sexual orientation minority), but also who will benefit more from a specific intervention. As described earlier, those who hold higher levels of internalized homophobia are more likely to experience feelings of fear, isolation, and depression (e.g., McCarn & Fassinger 1996; Szymanski & Chung, 2001; Szymanski, Chung, & Balsam, 2001), while those who feel more positively about or connected to their identity (i.e., Asian or lesbian) are likely to experience greater levels of psychological well-being (e.g., Beals & Peplau, 2005; Crocker, Luhtanen, Blaine, & Broadnax, 1994; Luhtanen, 2003; Yoo & Lee, 2005). In an exploration of support groups for LGB clients, Chojnacki and Gelberg (1995) suggested that these groups might be particularly important in earlier stages of homosexual identity development. The reason is that a LGB homogeneous group can be helpful in providing a safe environment for decreasing feelings of isolation. Also, those who hold more positive feelings about their identity can act as role models for those who are still struggling.

Although no studies could be located that directly explored perceived group support

as a moderator between identity beliefs and mental health outcomes, McKenna and Bargh's (1998) study described earlier, provided some support for this possible moderation. More specifically, they found that when members in the stigmatized group received positive feedback from other group members, they were more likely to participate in the online group in the future. This effect was only present for the stigmatized group. Also, the more frequently members participated in the online group (i.e., stigmatized group), the more important participants felt the group was to their social identity and their levels of self-acceptance.

From the above results, it seems that those who perceive more support from similar others regarding their identity concerns are more likely to feel connected to others and less estrangement due to their identity struggles. These supportive interactions are likely to reduce identity related struggles by increasing self-acceptance of one's ethnic identity and decreasing levels of internalized homophobia. This in turn, is likely to lead to a decreased vulnerability to negative mental health outcomes. Therefore, the third purpose of this study was to explore whether perceived support acts as a moderator between ethnic identity or internalized homophobia at the post-intervention levels and rate of change in mental health outcomes, after controlling for initial levels of depressive symptoms and life-satisfaction. It seems reasonable to expect that higher levels of perceived support in the online support group is likely to reduce the strengths of the association between negative ethnic identity or internalized homophobia and negative mental health outcomes at post-intervention and over time. Similarly, the hypotheses regarding this three-way interaction (i.e., ethnic identity [or internalized homophobia] x perceived online support x time) were exploratory in nature due to the lack of available previous research. Therefore, no specific hypotheses were given for

the nature of this three-way interaction.

Distress Disclosure as a Moderator between Ethnic Identity or Internalized Homophobia and Mental Health Outcomes

Research on distress disclosure suggests that comfort with disclosing distressing feelings is predictive of improvement in counseling, in a sample of college counseling center clients (Kahn, Achter, & Shambaugh, 2001), as well as a reduction of depressed feelings and loneliness in college students (Wei, Russell, & Zakalik, 2005). Lumley, Tojek, and Macklem (2002) also stated that, “people whose expression is hindered by inhibition are most likely to benefit from disclosure” (p. 88). This may imply that those who have psychological barriers to self-disclosure (e.g., inhibition) may actually benefit from disclosing their distress to others if a safe or anonymous environment is provided for them to do so. In the Internet support group literature, Amichai-Hamburger, Wainapel, and Fox (2002) reported that those who were more introverted (e.g., reserved in interactions, well controlled in their feelings) were more likely to find their “real me” (i.e., by revealing more about their true self to others) when communicating with supportive others on the Internet, as compared with their more extroverted counterparts (i.e., highly social, likes to communicate with others). On the other hand, those who are more extroverted were more likely to report finding their “real me” through face-to-face interactions.

Similar to the results from Internet communication interventions, an online support group intervention may provide an anonymous outlet for same-sex attracted Asian American women to express their thoughts, feelings, and reactions related to their identity concerns. Relative to those who are more comfortable with distress disclosure, an online support group may be more likely to lessen the impact of ethnic identity and internalized homophobia on

negative mental health outcomes for those who are less comfortable with disclosing their distress. The reason is that an online support group may be one of a very few options available to provide a private and safe way for those who are less comfortable with distress disclosure to be open about their distressing feelings regarding identity concerns to others. Perhaps, those who are more comfortable disclosing distress may be more likely to have more options or other options available where they can be open to others about their feelings of distress.

From the above literature review and reasoning, it makes sense that those who hold weaker levels of ethnic identity or more internalized homophobia are more likely to experience distress. Moreover, those who are hesitant to disclose distressing feelings have fewer chances to release their distress by sharing it with supportive others. In contrast, those who are comfortable with disclosure may be less likely to carry distress about their identity due to their available social resources (e.g., sharing distress with supportive others). However, no study could be located that has directly explored the moderation role of distress disclosure on the negative impacts of ethnic identity or internalized homophobia on mental health outcomes. A relevant study of a writing intervention on sexual orientation has indirectly provided some support for the moderation role of distress disclosure. Lewis et al. (2005) found that writing their feelings and thoughts about traumatic events related to their sexual orientation decreased identity confusion and the levels of perceived stress for lesbians who were less open about their sexual orientation. Therefore, the fourth purpose of this study was to investigate, among those in the support group, whether comfort level with distress disclosure would moderate the strength of the association between ethnic identity or internalized homophobia and mental health outcomes (i.e., depressive symptoms and life

satisfaction) at post-intervention and over time, after controlling for the initial level of depressive symptoms or life satisfaction. While it was hypothesized that comfort with distress disclosure would moderate the relationships, the exact nature of this three-way interaction (i.e., ethnic identity [or internalized homophobia] x distress disclosure x time) was difficult to predict because of the lack of prior research. Thus, these hypotheses were exploratory in nature.

CHAPTER 2: LITERATURE REVIEW

The present literature review first discusses Asian identity theory, followed by the history of the measurement of Asian identity, and a discussion of the measure of Asian identity chosen in the present study. Next, concepts, background, and grounding theory of lesbian identity development and internalized homophobia are explored. Then the measurement of internalized homophobia is explored as well as a rationale for the internalized homophobia measure chosen for this study. This section is followed by a discussion of the empirical relationships between ethnic identity and mental health outcomes as well as the relationships between internalized homophobia and mental health outcomes found in the extant literature. Next, social support is discussed in terms of its relevance to both same-sex attracted Asian Americans and mental health outcomes. Then the use of online support groups is explored both in previous literature and in the present study. Finally, the relationships between ethnic identity or internalized homophobia; mental health outcomes; and three possible moderating variables: online group participation (vs. control group), perceived support from the online group, and comfort level of distress disclosure are discussed. These variables are reviewed in terms of how they have been linked in previous literature and how they are linked in theory in the present study.

Asian Ethnic Identity

Ethnic identity has been defined as an aspect of an individual's social identity and self-concept that "derives from his or her knowledge of membership in a social group (or groups), together with the values and emotional significance attached to that membership (Tajfel, 1981, p. 225, as cited in Phinney, 1990). It is theorized that ethnic identity is achieved through a thoughtful process involving self-evaluation and decisions about one's

ethnic identification (Phinney, 1990). Before continuing, ethnic identity must be distinguished from acculturation. Although the terms are often used interchangeably, they are distinct concepts. Acculturation largely focuses on groups or individuals (Sue, Mak, & Sue, 1998), and the changes in cultural attitudes, values, and behaviors as a result of the contact between two cultures (Berry, Trimble, & Olmedo, 1986). Ethnic identity is one aspect of acculturation, which focuses on how an individual relates to his or her own ethnic group in the context of a larger society. For Asian Americans, the awareness of being a minority in an oppressive society is of particular importance in defining one's own ethnic identity (e.g., Sue, Mak, et al.).

The first attempts to conceptualize Asian ethnic identity were typologies, which were largely created for heuristic value (e.g., Kitano, 1989; Sue & Sue, 1971). Sue and Sue described a three-type ethnic identity model they developed for Chinese Americans. These types included Traditional (i.e., identify with traditional Asian values), Marginal (i.e., reject own group in favor of dominant culture), and Asian American (i.e., self-defined pride in Asian ethnicity and mainstream values). Although the model was created for the Chinese Americans, Sue and Sue believed the model would apply to the broader Asian American community. The authors also recognized that the model was limited in its ability to describe the immense variability in Asian Americans. Moreover, typological models describe only one's current state of ethnic identity rather than the process of ethnic identification.

Given the limitations of the previous model, Sue and Sue (1990) created the Racial/Cultural Identity Model, which was developed to apply to any cultural minority. This model included five stages: Conformity, Dissonance, Resistance and Immersion, Introspection, and Integrative Awareness. Each stage is distinct and distinguished by

attitudes towards self, attitudes towards others of the same minority, attitudes toward others of a different minority, and attitudes toward the dominant group (see Figure 1). This model is also presumed to be linear, in that one must begin at the first stage and move through each stage, by resolving stage associated conflicts before proceeding on to the next one.

Another stage model, proposed by Kim (1981; 2001), is the Asian American Identity Development Model (AAID). The AAID is based on three underlying assumptions (Kim, 2001). First, White racism is an integral element of Asian identity development due to the pervasiveness of racism in today's society. White racism in the social environment affects one's public self, which in turn affects how Asian Americans define their private selves. This is particularly salient for the Asian American community since Asian cultural norms are centered on collective values. Thus, individuals are encouraged to try to fit in with their social circle to increase group harmony. Second, the discarding of internalized racist attitudes must occur through a conscious process involving an awareness of the social reality and a purposeful rejection of previously unquestioned beliefs and stereotypes about themselves as Asian Americans. Third, a condition of psychological well-being for Asian Americans is their ability to adopt a positive racial identity, through the process of identity conflict, to replace one's negative racial identity.

The AAID has five distinct stages: Ethnic Awareness, White Identification, Awakening to Social Political Consciousness, Redirection to an Asian American Consciousness, and Incorporation (see Figure 2; Kim, 2001). The model assumes a negative racial identity in the initial stages of the model and a positive racial identity in the final stage. Five key features distinguish each stage: social environment, critical factor, self-concept, ego identity, primary reference group, and hallmark of the stage. Thus, each stage is composed of

a self-concept, which includes evaluation and meaning attribution, and specific behaviors that lead to a greater social consciousness of being Asian American. Kim proposes that although the stages are sequential, the process of each individual is not necessarily linear or automatic. Although Asian Identity Development Theory proposes a face valid process model with strong heuristic value, there has been little empirical research to support these distinct stages.

Although this and other similar stage models (e.g., Atkinson, Morten, & Sue, 1989; Cross, 1991; Helms, 1990) were advances over the more simplified typologies, such models have been largely criticized. A major draw back to most stage models is that they assume a linear process that is standard across all individuals. Such models do not account for variability in coping resources, situational variables, cultural orientations, generational status, age, sexual orientation, gender, education, language proficiency, and available social support systems (Berry et al., 1986; Sue, Mak, et al., 1998). Another limitation is that these models may not account for recent immigrants who come to the United States with a strong ethnic identity already intact. Third, Meyers et al., (1991) suggested that stage models may be of limited utility, since many of them were developed during the civil rights movement, and may describe a historical characteristic rather than a universal process. Finally, the vast majority of stage and typological models show scant attention to the diversity of Asian American populations. According to the US Commission on Civil Rights (1992) there are 32 separate Asian groups in the United States, each with their own language, cultural values, and traditions (as cited in Sue, Mak, et al.).

Due to the tremendous diversity within the Asian American community and other ethnic groups, Phinney (1990) conducted an extensive literature review and found three

dimensions of ethnic identity that were common to all ethnic groups represented in the extant empirical literature; self-identification as a group member, sense of belonging, and attitudes towards one's group. Self-identification describes one's ethnic label for oneself that may be distinct from one's actual ethnic heritage. Ethnic behaviors and practices include one's involvement in ethnic social activities and participation in cultural traditions. Affirmation and belonging describes attitudes towards one's own group, including feelings of pride and connection. More specifically, the model suggests that an Asian American who self-labels as Asian, has positive feelings toward other Asians, and participates in Asian cultural activities will have a strong Asian ethnic identity. However, an Asian American who describes oneself as something other than Asian (e.g., American), feels separate from the Asian community, and is unaware or disengaged from Asian cultural has a weak or diffuse Asian ethnic identity. Moreover, Phinney and colleagues (Phinney, 1990, 1992; Phinney & Alipuria, 1990; Roberts, Phinney, Masse, Chen, & Roberts, 1999) have reported evidence to suggest that their model reliably described the process of ethnic identity formation from diverse groups.

In sum, typological and stage models of ethnic identity have been widely criticized for their limited ability to represent the vast diversity of Asian American and other ethnic minorities. Thus, the dimensional approach proposed by Phinney (1990, 1992) provides several advantages over previous models including greater flexibility and the ability to include a greater diversity of ethnic development experiences. Due to the numerous advantages of this model, it has been selected as the conceptual base for ethnic identity development in the present study.

Measurement of Asian Ethnic Identity

In a comprehensive literature review of the 60 empirical studies of ethnic identity available at that time, Phinney (1992) reported that less than 1/5th of the articles provided any reliability information on the ethnic identity measures used in the studies. Furthermore, the reliability coefficients widely ranged between .35 and .90. Additionally, very few of the measures were used more than once, which prevented test-retest reliability information to be gathered. Phinney's review clearly demonstrated the need for reliable and valid measures in the study of ethnic identity.

One of the most frequently used measures of ethnic identity is the Racial Identity Attitudes Scale (RIAS; Parham & Helms, 1981) which was based on Cross's (1978) stage model of Black identity development. This measure was originally designed for an African American population but is typically altered to reflect the ethnic sample being measured (i.e., replace "Black" with "Asian", "Hispanic", etc.). The RIAS generally assesses the participant's attitudes toward their own minority ethnic group as well as their positive or negative attitudes toward the majority White culture. Attitudes are believed to change as one moves through the stages of ethnic identity development. Although the measure is widely used, the RIAS and the Cross model of identity development have received mixed reviews. For instance, Ponterotto and Wise (1987) found that the RIAS provided support for only three of the four stages. A second study by Liu, Sue, and Dinnel (1992, as cited in Sue, Mak, et al., 1998), which used the RIAS with an Asian sample, found that the items did not cluster according to the proposed stages of the model.

Due to the numerous limitations to stage models, as described earlier, it is not surprising that a measure based on a stage model has received mixed reviews. In response to these limitations, Phinney (1992) created the Multigroup Ethnic Identity Measure (MEIM).

The MEIM was created based on the assumption that ethnic identity is a universal phenomenon that is relevant to all cultures. The 12-item measure is composed of two subscales, Affirmation/Belonging and Ethnic Identity Achievement. The first version of the measure included 14-items; however, two were subsequently dropped by the authors. The measure assumes that ethnic identity is a continuous variable that ranges from a lack of exploration and commitment to a deep commitment and a clear understanding of one's own ethnic identity.

Since the release of the MEIM, it has become one of the most widely used ethnic identity measures in the extant literature. Phinney (1992) provided validity support for the measure with a sample of 417 high school students and 138 college students from various ethnic backgrounds. Cronbach's alpha for the full scale were .81 and .90, respectively for the two samples. Validity was supported through greater levels of ethnic identity achievement in the college sample and positive correlations with self-esteem and academic grades. Due to the wide applicability of this measure to various Asian American groups and strong reliability and validity support, this measure was chosen to represent Asian ethnic identity in the present study

Lesbian Identity Development and Internalized Homophobia

In 1969, a Dutch psychiatrist made the first known reference to a gay and lesbian identity development process, which he termed "self-acceptance" (Sengers, as cited in Gonsiorek & Rudolf, 1991). In America and other Western cultures (e.g., Great Britain and Australia), similar discussions were taking place among clinicians and other psychologists who observed a comparable pattern of struggles for gays and lesbians who were trying to come to terms with their homosexuality. These clinicians and theoreticians called this

process “coming-out” (as reported in Gonsiorek & Rudolf, 1991), a reference to a political call to action. However, it wasn’t until 1979 that Vivienne Cass proposed the first structured model of homosexual identity formation.

Cass’s model, which was patterned after Cross’s model of nigrescence (1971), is perhaps the most widely cited sexual identity formation theory in the extant literature. It is also the foundation upon which many future models were built. Cass (1979, 1984, 1996) developed her model to apply to both men and women and included cognitive, affective, and behavioral components of the identity development process. The entire model included six stages, with each progressive stage marked by a different level of understanding about oneself as a lesbian or gay person. Additionally, each stage is associated with seven changes:

- 1) increasing use of the concept of homosexual, lesbian, or gay to account for and understand self; 2) use of the terms “lesbian” or “gay” as an explanation of self with an increasingly wider number of interpersonal interchanges; 3) development of increasingly positive feelings about *being* a lesbian or gay man; 4) increasing belief that one belongs to the lesbian or gay social group and strengthening social ties with other lesbians or gay men; 5) gradual acceptance of positive values about homosexuals as a social group; 6) increasing independence from heterosexual values; and 7) a gradual shift in the use of the concept of homosexual, lesbian, or gay from a means of labeling self to description of an inner belief in self. (Cass, 1996, p. 232)

Based on Cass’s model, the first stage, Identity Confusion, is marked by a beginning internal awareness that one’s thoughts, feelings, and actions may be classified as “homosexual.” Individuals in this stage often experience fear about this awareness and seek

to resolve their discomfort, often by denial. The second stage, Identity Comparison, is marked by an exploration of the risks involved with adopting a homosexual lifestyle and identity. Thus, this stage is often associated with a fear of discovery and feeling alienated and estranged from others. Those in the third stage, Identity Tolerance, begin to acknowledge that they are “probably” gay, lesbian, or bisexual and begin to seek support for their developing identity. This may lead to some self-disclosure as well as experimentation with fulfilling their social, sexual, and emotional needs. However, this stage often involves the risk of rejection not only from heterosexuals but also from developing relationships with other homosexuals. Individuals in the fourth stage, Identity Acceptance, have come to see themselves as homosexuals but have not yet fully accepted the “inner self” as a gay or lesbian. However, the increased exposure to other gays, lesbians, and bisexuals in this stage and the increased disclosure to heterosexuals help to reinforce this internal identity over time. This stage is also characterized by an increasingly positive view of homosexuals and homosexuality. Stage five, Identity Pride, is marked by a prominent attitude of us versus them. That is, these individuals have a strong awareness not only of their own self-acceptance but also of other’s non-acceptance of homosexuality. In reaction, a lesbian or gay account of the self becomes the preferred identity and these individuals therefore immerse themselves in the homosexual community. This stage is also marked by great feelings of pride in their homosexual identity and loyalty to the homosexual community. The final stage is Identity Synthesis. In this stage individuals become aware that not all heterosexuals are “bad” or rejecting of homosexuality. This leads to a more open view of others, which then allows for more open honest interactions with a greater range of people. Levels of anger and opposition to others are subsequently reduced and a greater sense of belonging to the world in more ways than as a

homosexual being emerges. Moreover, gay, lesbian, or bisexual persons begin to feel more self-integrated, independent, and in control of their lives.

Cass's 6-stage model provided both a standard progression as well as a basic framework for many future models, particularly for stage models. Although models tend to vary in the number of stages and their specific description, most have the following developmental progress: 1) a recognition of homosexual feelings, which is associated with defensiveness and tendency to reject those feelings; 2) a gradual recognition of homosexual feelings and homosexuality; 3) a gradual toleration of the homosexual self and others; 4) behavioral experimentation and an increasing sense of normalcy (some include a second crisis stage here where other homosexuals are viewed negatively); and 5) a successful integration and acceptance of the self as positive (Gonsiorek & Rudolf, 1991).

Despite its popularity, Cass's model has been widely criticized. One concern has been that this model, as well as other stage models, asserts a linear process and progress to an eventual self-acceptance of one's sexual orientation (e.g., Gonsiorek & Rudolph, 1991; McCarn & Fassinger, 1996; Sophie, 1985/1986). That is, things happen in a particular order and one must fully experience a particular stage and then resolve the conflicts of that stage before moving on to the next one. This is particularly problematic in Cass's model because it assumes that individuals must experience a stage where they are politically involved, out to others, and active in the LGB community. Moreover, one must move through this stage to advance to the next stage of integration and wholeness. This model also asserts that individuals must actively disclose their identity to a wide range of people. These aspects of the model do not address the reality that self-disclosure of one's homosexuality may make one vulnerable to hate crimes and discrimination (e.g., McCarn & Fassinger). Thus, it may be

unwise to self-disclose even if individuals are comfortable with their identity. Moreover, being active in a community assumes that a LGB community is available, which may not be the case in many areas of the United States

Taking these criticisms into consideration, Troiden (1989) developed a model including four-stages: 1) sensitization, 2) identity confusion, 3) identity assumption, and 4) identity commitment. This model stressed the importance of a supportive LGB environment in the process of self-acceptance to combat the prevalence of social stigma regarding homosexuality. Another difference in this model is that self-disclosure of one's homosexual orientation is described as an option rather than a necessary step. Troiden also included the role of gender socialization formation in identity development, noting the different social contexts to which lesbian women and gay men are subject. Unfortunately, as with many identity models, little empirical evidence is available to support this theoretical model.

Sophie (1985/1986) developed the first known model specifically for women. This model included four stages: 1) first awareness, 2) testing and exploration, 3) identity acceptance, and 4) identity integration. Sophie then tested her model by interviewing 14 women who were experiencing identity confusion. Her results showed some support for her model but also showed some unexpected variations. More specifically, four inconsistencies were noted. First, in some cases awareness did not precede contact with gay and lesbians. Second, a negative view of homosexuality and one's homosexual identity did not always precede a positive identity. Third, self-disclosure levels varied widely in the later stages, particularly in the third stage. Finally, little support was provided for an "integrated" worldview of lesbianism or a lesbian identity as a stable one. For instance, two women who at one point embraced their lesbian identity and expressed great pride later rejected it

altogether. Given these results, Sophie concluded that a linear approach to lesbian identity development (e.g., stage models) is not likely to accurately reflect the complexity this process.

In response to this need to go beyond the limitations of stage models, McCarn and Fassinger (1996) developed a phase model, which allowed for more fluidity in the identity development process. This model included four phases and two parallel branches of identity development. The first branch, individual sexual identity, focuses on one's self-identity. The second branch, group membership identity, focuses on group membership and group meaning. The four phases, awareness, exploration, deepening/commitment, and internalization/synthesis, are conceptualized as continuous and circular. Moreover, it is assumed that new relationships and new social contexts reawaken old identity conflicts and create new ones, so that the identity development process is ongoing and ever changing.

Despite the popularity and prevalence of stage and phase models in the extant literature these models often fail to account for the vast diversity of experiences in coming to accept one's homosexual identity. First, many of these models were developed with small and/or primarily Caucasian samples in mind. Thus, these models do not take into account those who are negotiating multiple identities (e.g., ethnic, racial, gender, etc). Next, these models also fail to account for differences in environmental factors such as location, socio-economic status, laws affecting the LGB community, and available support systems. Finally, as described earlier, some evidence suggests that the developmental process can vary greatly between individuals, even within a relatively homogeneous sample and in a manner that is inconsistent with a linear process (e.g., Sophie 1985/1986).

Nungesser (1983) observed that the central issue both implicitly and explicitly raised by theoretical models of sexuality is the distinction between homosexuals who feel positive about themselves and the homosexual community and those who do not. Internalized homophobia, which is sometimes referred to as internalized homonegativity, is the degree to which an LGB individual has internalized negative attitudes and beliefs regarding homosexuality and is theorized to be a key factor distinguishing those who feel good about themselves and their identity and those that do not (Nungesser; Shidlo, 1994; Sophie, 1987; Szymanski, Chung, & Balsam, 2001). Moreover, institutionalized homophobia is considered to be so widespread in today's society that many believe the internalization of homophobia to be a normal developmental process that nearly all gay men and women experience at a very young age (e.g., Gonsiorek; Malyon, 1982; Shidlo; Sophie, 1988). Thus, it makes sense that many models of homosexual identity development view the process of coming out as the letting go of one's internalized homophobia, while concurrently adopting a more positive and integrated LGB self-identity (e.g., Cass, 1979, 1984, 1996; Kahn, 1991; McCarn & Fassinger; Sophie, 1985/1986; Shidlo;).

Homophobia was first described by Weinberg (1972) as heterosexuals' dread of being physically close to homosexuals or a feeling of self-loathing in homosexuals. This definition of the term is quite limiting and does not reflect the wider array of negative and prejudicial stances regarding homosexuals such as religious beliefs, cultural values, and legal differences. Thus, the term homonegativism was proposed (Hudson & Ricketts, 1980) to refer to the entire possible range of negative attitudes toward homosexuality and homosexuals. Although homonegativism and homophobia are slightly different in their original meaning, much of the extant literature uses these terms interchangeably. However, in

reviewing the extant literature the term internalized homophobia appears to be used more frequently than the broader term of internalized homonegativism. Thus, in an effort to be consistent with much of the supporting literature for this study the term internalized homophobia was chosen for the present research.

Internalized homophobia has been conceptualized as being composed of both conscious and unconscious dimensions, consisting of a number of defense mechanisms such as rationalization, denial, projection, and identification with the aggressor (Margolies, Becker, & Jackson-Brewer, 1987, as cited in Shidlo, 1994). Empirically, it has been found to consist of a number of factors including self-disclosure of sexual orientation, perceptions of social stigma toward homosexuals, attitudes toward other homosexuals, connection to the LGB community, feelings about being lesbian or gay, and moral or religious acceptability of being gay (Ross & Rosser, 1996; Szymanski & Chung, 2001). Moreover, internalized homophobia has been negatively linked to self-esteem (Szymanski & Chung, 2001), overall social support, support from the gay community (Szymanski, Chung, & Balsam, 2001), and relationship quality (Balsam & Szymanski, 2005), in lesbian and bisexual female samples as well as positively linked to self-hatred (Neisen, 1993; Pharr 1988), isolation (e.g., Gartrell, 1984; Lowenstein, 1980, Sophie 1982), loneliness (Szymanski & Chung, 2001), negative attitudes about other lesbians (Pearlman, 1987; Pharr), and depression (Szymanski, Chung, et al.), in lesbian and bisexual female samples. Thus, it appears that internalized homophobia is an important variable to explore related to mental health outcomes in the lesbian community.

In sum, past research has shown that stage and phase models of lesbian identity development are too constricting to accurately reflect the course of identity development for many lesbians. Moreover, such models have often been developed using small and largely

Caucasian samples that may not accurately reflect the diversity of lesbians in the United States (e.g., Gonsiorek & Rudolph, 1991; McCarn & Fassinger, 1996). However, internalized homophobia appears to be an important aspect of lesbian identity development that has been both conceptually and empirically supported. Moreover, internalized homophobia has been consistently linked to both positive and negative mental health outcomes. Thus, internalized homophobia may be an important predictor of mental health outcomes for women who are attracted to women (i.e., lesbian, bisexual, queer, etc.) in the present study.

Measurement of Internalized Homophobia

The Nungesser Homosexuality Attitudes Inventory (NHAI; Nungesser, 1983) marked one of the earliest attempts to measure LGB identity through a dimensional approach. The 39-item NHAI was designed to assess one's own reactions to their homosexual identity, general attitudes regarding homosexuality, and fear of disclosure. Although evidence provided some support for the validity of the measure, the measure has been criticized for including fear of disclosure as a key component. As described earlier, fear of disclosing to others may be a sign of a rational response to hostile views of homosexuality rather than a sign of negative identity. Another concern is the limited empirical data available regarding the measure's validity with lesbian samples.

Noting the limited availability of empirically supported internalized homophobia measures, Ross and Rosser (1996) created the Internalized Homophobia Scale. This 26-item scale was designed for homosexual men and was found to be composed of four factors including public identification as gay, perception of stigma associated with being a homosexual, social comfort with gay men, and moral and religious acceptability of being gay. Cronbach's's alpha for the four scales and negative correlations with measures of

relationship satisfaction, outness, and attraction to men provided empirical support for this measure. However, critics of the measure have pointed out that several of the measure's items such as "I prefer to have anonymous sexual partners" and "I do not feel confident about making an advance to another man" confounds internalized homophobia with other variables such as self-esteem and intimacy difficulties (Szymanski & Chung, 2001).

Taking the previous limitations into consideration, Szymanski and Chung (2001) designed the 52-item Lesbian Internalized Homophobia Scale (LIHS) to assess the degree of internalized homophobia in lesbian and bisexual female samples. Their scale included five subscales to reflect the five dimensions of internalized homophobia presented in the extant literature. The first subscale, Connection with the Lesbian Community, describes a lesbian's degree of connection or separation to the lesbian community and can range from isolation to social embeddedness. The second subscale, Public Identification as a Lesbian, assess how an individual manages other's awareness of her lesbian identity. An individual can range from taking steps to avoid other's awareness of her identity, to passively allowing others to assume heterosexuality, to a willingness to disclose one's homosexuality. The third subscale, Personal Feelings about being a Lesbian measures one's own feelings about one's lesbian identity. Feelings can range between self-hatred and self-acceptance. The fourth subscale, Moral and Religious Attitudes Towards Lesbianism refers to more general attitudes about lesbians or lesbianism, and can range from condemnation to tolerance and acceptance. The fifth and final subscale, Attitudes Toward Other Lesbians, assesses one's attitude toward members of their own group. These attitudes can range between oppression and hostility to group appreciation.

The LIHS has shown to have statistically significant correlations with a number of identity and mental health related variables including negative correlations with self-esteem ($r = -.26$; Szymanski & Chung, 2001), relationship quality ($r = -.26$; Balsam & Szymanski, 2005), overall social support ($r = -.28$), satisfaction with social support ($r = -.25$), and overall gay social support ($r = -.36$; Szymanski, Chung, et al., 2001). The measure has also evinced positive relationships with loneliness ($r = .41$; Szymanski & Chung), domestic violence in lesbian relationships ($r = .22$; Balsam & Szymanski), depression ($r = .33$), and “passing” for straight ($r = .66$; Szymanski, Chung, et al.). Thus, due to its design and strong support for empirical validity the LIHS was chosen to measure internalized homophobia in the present study.

Ethnic Identity, Internalized Homophobia, and Mental Health Outcomes

A vast body of research has shown that ethnic and sexual orientation minorities are vulnerable to oppression and discrimination from others (e.g., Chan, 1989; Kessler, Mickelson, & Williams, 1999; Meyer, 2003; Sue, 1991). Research has also shown that having a homosexual orientation is associated with higher proportions of psychological distress (e.g., Diaz, Ayla, Bein, Henne, & Marin, 2001; Mays & Cochran, 2001; Meyer, 2003; Waldo, 1999). Thus, same-sex attracted Asian American women (e.g., lesbian, bisexual, queer, etc.) are particularly vulnerable to psychological distress due to their triple minority status (i.e., gender, sexual orientation, and ethnicity) (e.g., Chan, 1987; Chan, 1989; Greene, 1994; Li & Orleans, 2001). However, recent evidence suggests that one’s ethnic identity or internalized homophobia may be an important variable for mental health outcomes in Asian American women who are attracted to women. In the Asian identity literature, Yoo and Lee (2005) reported that a strong ethnic identity was correlated with positive affect ($r =$

.31, $p < .05$), negative affect ($r = -.21$, $p < .05$), satisfaction with life ($r = .29$, $p < .05$), and using social support systems to cope with stress ($r = .26$, $p < .05$), in a sample of 150 Asian American college students. Additionally, in a separate sample of Asian American college students, greater levels of ethnic identity were found to significantly predict higher levels of self-esteem, social connectedness, and sense of community (Lee, 2003).

In the LGB literature, Luhtanen (2003) reported that a positive LGB identity and a rejection of negative stereotypes were robust predictors of levels of depression in a lesbian and bisexual female sample. More specifically, in a sample including 158 women, Luhtanen found that a rejection of negative LGB stereotypes was positively correlated with self-esteem ($r = .28$, $p < .001$) and life satisfaction ($r = .28$, $p < .001$), as well as negatively related to depression ($r = -.22$, $p < .001$). Additionally, Shidlo (1994) reported positive correlations between internalized homophobia and levels of depression ($r = .37$, $p < .01$), psychological distress ($r = .43$, $p < .001$), and loneliness ($r = .62$, $p < .001$), as well as negative relationships with self-esteem ($r = -.59$, $p < .01$) and stability of self ($r = -.35$, $p < .01$). Although these studies included gay male samples, it makes sense that that internalized homophobia might be an important variable for homosexual women as well. Syzmanski and Chung (2001) showed support for this link in a study including 303 lesbian and bisexual women, which reported associations between measured levels of internalized homophobia and measures of loneliness ($r = .41$, $p < .01$) and self-esteem ($r = -.26$, $p < .01$).

In sum, prior research supports the relationships between ethnic identity and mental health outcomes, as well as internalized homophobia and mental health outcomes. However, no empirical literature could be located that specifically explores these connections in same-sex attracted Asian American women. Thus, the present study seeks to extend current

literature by exploring the relationships among ethnic identity or internalized homophobia and mental health outcomes in a sample of same-sex attracted Asian American women.

Social Support and Same-sex Attracted Asian American Women

An important aspect of Asian American culture is duty to family and obedience to one's parents. This pressure is particularly strong for women whose roles are traditionally drawn strictly in relation to their family (e.g., Chan, 1989; Greene, 1994). Chan (1987) commented that the acceptance of a lesbian lifestyle would be a revolutionary action because it would mean giving up the traditional identity and role as a wife and mother. Such values are representative of the collectivistic stance at the forefront of most Asian cultures (e.g., Gudykunst, 2001; Sue & Sue, 2003). Accepting a lesbian or bisexual identity stands in stark contrast to this, in that it is primarily motivated by an individual's own sexual orientation identity.

Another difficulty faced by same-sex attracted Asian American women is the fear that by coming out to others they will shame their family by making their family lose face. According to Yeh and Huang (1996, as cited in Sue, Mak, et al., 1998), face "includes the positive image, interpretations, or social attributes that one claims for oneself or perceives others to have accorded one. If one does not fulfill one's own expectation of the self, then one loses face" (p. 651). Asian parents may lose face if their child is gay or lesbian because they are likely to view their child's identity as a reflection of their parenting skills. Asian parents may believe that they did something wrong in raising their child to create lesbian or gay tendencies. Thus, by coming out to one's parents same-sex attracted Asian American women risk rejection from a key source of support. In addition, Li and Orleans (2001) found that coming out also brought rejection from the larger Asian American community. Several

participants stated that they were fearful that other Asian families would gossip and pass judgment not only about themselves but on their families as well.

Another difficulty faced by the Asian American homosexual community is the reported lack of available social support resources in the heterosexual and homosexual communities. Nearly all of the Asian American lesbian participants in a qualitative study by Poon and Ho (2002) reported feeling socially isolated from their straight peers. Moreover, participants reported that the available LGB support agencies provided limited support for homosexual Asian Americans, focusing largely on older gay men. Participants also reported that many of the counselors they had seen failed to understand their unique concerns. Unfortunately, the larger LGB community has also been found to provide limited support. Chan (1989) reported that most Asian American lesbians felt overlooked, stereotyped, or unaccepted by the vast majority of the gay community.

In sum, the Asian American homosexual community (e.g., LGB, queer, questioning) faces a wide range of negative social pressures, including potential rejection from friends and family. Moreover, traditional sources of support available to others (e.g., LGB agencies, LGB peers, family, heterosexual friends, etc.) are not consistently available to this community. Thus, it appears there is a great need for specific support systems for same-sex attracted Asian American women.

Social Support and Mental Health Outcomes

The lack of available social support systems for same-sex attracted Asian American women is particularly problematic because research has shown social support to be an important predictor of mental health outcomes in the lesbian community. One such study by D'Augelli, Collins, and Hart (1987) found that for lesbians living in rural communities,

involvement with social groups was significantly related to fewer personal problems ($r = -.50, p < .001$). In another study including 167 lesbian women, ratings of general perceived social support from friends and from family were negatively related to levels of depression ($r = -.30, p < .001$ and $-.24, p < .01$, respectively) (Oetjen & Rothblum, 2000).

Along with social support in general, support for one's lesbian identity appears to play an important role for many lesbian women. Beals and Peplau (2005) reported that ratings of perceived levels of support for one's lesbian identity was significantly related to life satisfaction ($r = .44, p < .001$), self-esteem ($r = .52, p < .01$), depression ($r = -.69, p < .001$), and overall well-being ($r = .66, p < .001$) on a daily basis. Aggregate scores over a two-week period showed similar results. Conversely, ratings of identity devaluation were related to poorer end-of-the day self-esteem and lower life satisfaction, as well as poorer life satisfaction, lower self-esteem, higher levels of depression, and lower overall well-being, aggregated over a two-week period.

Moreover, research has consistently shown that involvement with other LGB individuals is an important factor in the prediction of psychological well-being (Luhtanen, 2003). For example, Luhtanen found that involvement with other LGB individuals was a significant predictor of life satisfaction in a sample of lesbian and bisexual women. Additionally, D'Augelli et al. (1987) reported that not only did lesbian women rate other lesbians as their most valued source of help, but also that lesbians who were involved with lesbian social activities reported significantly fewer social problems ($r = -.47, p < .001$).

In conclusion, a vast body of research shows that social support in general, social support from the LGB community, and support for one's lesbian or bisexual identity in particular are important factors in the psychological well-being of lesbian and bisexual

women. However, no research could be located that specifically explored social support in a sample of same-sex attracted Asian American women. Moreover, because these women are particularly vulnerable to having few social support systems, perceived social support from other same-sex attracted Asian American women may be a particularly important variable in the mental health of Asian American women who are attracted to women.

Online Support Groups as an Intervention

Empirical research has shown that adherence to traditional Asian cultural values is negatively correlated with favorable attitudes towards seeking help through counseling (Liao, Rounds, & Klien, 2005). Not surprisingly, Asian Americans have also been found to consistently underutilize mental health services in the United States (e.g., Atkinson, Lowe, & Matthews, 1995; Zhang, Snowden, & Sue, 1998). One reason for this may be that Asian cultural values dictate that self-disclosure of emotion and emotional expression is a sign of weakness (Kim, Atkinson, & Yang, 1999; Kim, Li, & Ng, 2005; Sue & Sue, 2003). However, some recent evidence suggests that online support groups may reduce psychological barriers to receiving help due to increased anonymity and accessibility (Davidson, Pennebaker, & Dickerson, 2000; King & Moreggi, 1998).

A review of the literature failed to locate any studies that specifically explored the use of online support groups for same-sex attracted Asian American women. However, Chang, Yeh, and Krumboltz (2001) explored the effectiveness of an online support group for Asian American men. This group consisted of 16 Asian American men who communicated with each other about topics of ethnic identity for a period of one month. Participants reported that they felt supported by other members, self-disclosed often, and felt connected to the other members. Furthermore, the 94% of participants reported that they believed such groups

should be available to Asian American men.

Online support groups may be particularly important for Asian American lesbians because disclosing one's identity to others in their environment can invite the potential for physical or psychological harm (e.g., D'Augelli, 1992; Herek, 1993; Hershberger & D'Augelli, 1995). McKenna and Bargh (1999) argued that online support options are important for homosexuals and other stigmatized minorities because they provide a safe mechanism to connect with similar others. This is especially relevant to same-sex attracted Asian American women because others with a similar ethnic background and a homosexual or bisexual identity in particular may not be readily identifiable.

McKenna and Bargh (1998) compared mainstream online groups (e.g., politics and economic discussion board, parents of teens) and marginalized online groups (e.g., homosexuals, people who enjoy bondage) with regard to a number of outcome variables. Results showed that members of stigmatized groups had more posts per member as well as more frequent posters than those in non-stigmatized groups. Additionally, positive feedback from the group to an individual was found to positively correlate with an increase in posting activity from that individual, for marginalized groups only ($r = .38$ $p < .001$). Further, structural equation modeling found that participation in the online group was positively related to stronger feelings of how important the group was to their social identity, which then led to greater feelings of self-acceptance, likelihood of disclosing their stigmatized identity or stigmatized interest to others, and fewer feelings of estrangement.

In short, it appears that online groups for both Asian Americans and sexual orientation minorities have been linked to numerous positive outcomes including greater feelings of support and connectedness with others. Thus, it is likely that an online support

group would be an alternative way to receive support and help for same-sex attracted Asian American women to discuss their concerns related to ethnic and sexual orientation identity. Therefore, the first purpose of this study was to evaluate the effectiveness of the online support group intervention for same-sex attracted Asian American women. More specifically, it was hypothesized that at post-intervention the average level of depressive symptoms in the support group would be lower than that in the control group; the slope of depressive symptoms would decrease over time (i.e., from post-intervention through 2 week follow-up to 1-month follow-up) for the support group but there would be no change for the control group. In addition, it was hypothesized that at the post-intervention the average level of life satisfaction in the support group would be higher than that in the control group; the slope of life satisfaction would increase over the follow-up period for the support group but there would be no change for the control group.

Group Condition (Online Support vs. Control Group) as a Moderator between Ethnic Identity or Internalized Homophobia and Mental Health Outcomes

Prior research has indicated links between ethnic identity or internalized homophobia and mental health outcomes. Prior research has also suggested that participation in an online group may be one way to relieve distress for same-sex attracted Asian American women. Thus, it is possible that an online group intervention may act to specifically buffer the relationship between ethnic identity stress or internalized homophobia and mental health outcomes. Although there have been few studies linking these variables in online groups, examples from in-person support groups have provided some evidence for this moderation. Specifically, Liu, Tsong, and Hayashino (2007) reported on their experiences of leading two short-term support groups for Asian American women on college campuses. The group

members met once a week for 90 minutes per session for about one semester. The authors noted the central themes of the groups included discussions regarding: members' identities; the impact of these identities on interpersonal and familial relationships; conflict between the values of their ethnic origin and Western/American values; and experiences with racism, sexism, and discrimination. Participants also discussed aspects of their internalized racism such as discomfort with their skin color, ethnic features, or rejection of similar others. Although outcomes were not specifically measured, group members indicated that the group was meaningful, helped them to feel more open and less shame toward help-seeking, increased connection and socialization with others, and decreased loneliness through a sense of universality. Group members also shared that they wished for more time when the group ended. This study suggests that discussing issues related to ethnic identity stress is particularly important for Asian American women and that doing so with a homogeneous group is one way to provide support for these women to improve mental health outcomes.

In the LGB literature, Dietz and Dettlaff (2007) explored the impact of participation in an LGB support group at a small church-affiliated university. This study was qualitative in nature and involved in-depth interviews with 11 gay, lesbian, and bisexual students. Approximately half of these students considered themselves "in the closet" and the other half felt they could openly share their identity with others. The participants who identified as "in the closet" reported that their participation in the group was vital to their sense of safety and development of a positive identity. One member reported, "Just being there [her first meeting] for ten minutes, my views were starting to change . . . Now I can say, 'its ok to be gay.'" (p. 64). Overall, the closeted members shared that the group helped them to feel "normal", supported, less shame, less alone, to reject negative stereotypes about

homosexuals, and reconcile the conflicts between their gay identity and their religious beliefs. Thus, it appears that groups for LGB individuals are particularly important for those struggling with internalized homophobia to receive support and improve mental health.

Although the above studies were in-person groups rather than online groups, they suggest that homogeneous groups for both Asian American women and LGB individuals provide an important mechanism to decrease stress related to ethnic identity or internalized homophobia. Therefore the second aim of the study was to explore group condition (i.e., online support group or no-intervention control group) as a moderator between ethnic identity or internalized homophobia and mental health outcomes. It is likely that participation in an online group would reduce the negative effects of negative identity beliefs (i.e., ethnic identity and internalized homophobia) on mental health outcomes (i.e., depressive symptoms and life satisfaction) over time. However, due to the limited availability of prior research linking these variables, it is difficult to precisely predict the nature of this three-way interaction (i.e., ethnic identity [or internalized homophobia] x group condition x time). Thus, this research question is exploratory in nature.

Perceived Group Support as a Moderator between Ethnic Identity or Internalized Homophobia and Mental Health Outcomes

Although perceived support from others has been linked to a number of positive outcomes in lesbian and bisexual female samples and Internet support networks, no study could be located that specifically explored perceived support from an online group as a moderating variable to lessen the negative impact of internalized homophobia or ethnic identity on levels of mental well-being. As discussed earlier, research has shown that those with a strong ethnic identity are more likely to report positive mental health outcomes (e.g.,

Lee, 2003; Phinney, 1990; Yoo & Lee, 2005). Similarly, those with higher levels of internalized homophobia are more likely to experience psychological distress (e.g., McCarn & Fassinger 1996; Szymanski & Chung, 2001; Szymanski, Chung, et al., 2001). Using their experience in leading LGB support groups, Chojnacki and Gelberg (1995) suggested that homogenous LGB support groups might be particularly important in earlier stages of gay identity development, where high levels of internalized homophobia are likely to be present. This is because a homogeneous group can be helpful in providing a safe environment to provide and receive support from others who share common experiences. Moreover, it makes sense that those who hold more negative beliefs or distant feelings toward their identity (i.e., Asian ethnic identity or internalized homophobia) are likely to be more vulnerable to distress, but may also benefit more from support received by others who have faced similar struggles, than those who feel positively about themselves as homosexuals. That is, it is likely that perceived group support might buffer the relationship between internalized homophobia and mental health outcomes.

Although no empirical research could be located that directly explored this link, McKenna and Bargh (1998) provided some support for this moderating relationship. In their study of online groups for those with stigmatized identities (e.g., homosexuality) and marginalized interests (e.g., drug use), members of marginalized groups were more likely to participate in the online group after receiving positive feedback from other group members. Additionally, the more frequently members participated in the online group the more important they felt the group was to their social identity; this in turn positively affected subsequent levels of self-acceptance. From the above conceptualization and relevant empirical study review, it appears that those who perceive a greater level of support from an

online support group are likely to have decreases in the negative impact of ethnic identity and/or internalized homophobia on mental health outcomes. Therefore, the third purpose of this study was to explore whether perceived support acts as a moderator between ethnic identity or internalized homophobia at the post-intervention levels and rate of change in mental health outcomes, after controlling for initial levels of depressive symptoms and life-satisfaction. It seems reasonable to expect that higher levels of perceived support in the online support group is likely to reduce the strengths of the associations between negative ethnic identity or internalized homophobia and negative mental health outcomes at post-intervention and over time. Similarly, the hypothesis regarding this three-way interaction (i.e., ethnic identity [or internalized homophobia] x perceived online support x time) was exploratory in nature due to the lack of available previous research. Therefore, no specific hypotheses were given for the nature of this three-way interaction.

Comfort Level with Distress Disclosure as a Moderator between Ethnic Identity and Internalized Homophobia and Mental Health Outcomes

Although research supports the potential benefits of an online support group intervention for same-sex attracted Asian American women, it is also important to explore who might benefit most from such an intervention. Research suggests that one's comfort with distress disclosure may be an important variable to consider in an online intervention. More specifically, comfort with distress disclosure has been shown to be associated with a range of mental health outcomes. One such study including a college sample found that comfort with self-disclosure of distress was correlated with concurrent levels of depression ($r = -.31$, $p < .01$), levels of depression 5-months later ($r = -.27$, $p < .01$), and predicted concurrent levels of loneliness (Wei, Russell, & Zakalik, 2005). In another study using a sample of college

counseling center clients, Kahn, Achter, and Shambaugh (2001) found that willingness to disclose distress upon intake was positively related to current levels of perceived social support ($r = .45, p < .001$) and positive affect ($r = .26, p < .05$), as well as negatively related to negative affect ($r = -.24, p < .05$), and levels of perceived stress at termination ($r = -.41, p < .01$). Thus, it appears that there are significant connections between comfort with distress disclosure and mental health outcomes.

Lumley, Tojek, and Macklem (2002) stated that, “people whose expression is hindered by inhibition are most likely to benefit from disclosure” (p. 88). This may imply that those who have psychological barriers to disclosing their distress feelings may benefit more from a more private or anonymous way (e.g., communicating on Internet vs. face-to-face interaction) to disclose to others. A study comparing face-to-face and online interactions has provided some support for this assumption. Amichai-Hamburger, Wainapel, and Fox (2002) found that those who were more introverted (e.g., reserved in interactions, well controlled in their feelings) were more likely to report finding their “real me” (i.e., by revealing more about their true self to others) when communicating with supportive others on the Internet. Conversely, those who were more extroverted (i.e., highly social, likes to communicate with others) were more likely to report finding their “real me” through face-to-face interactions.

Expanding from the above finding, an online support group intervention may provide a private outlet for same-sex attracted Asian American women to express their thoughts, feelings, and reactions related to their identity concerns. In particular, relative to those who are more comfortable with self-disclosure about distress feelings, an online support group may be more likely to lessen the impact of a weak ethnic identity or negative homosexual

identity on negative mental health outcomes for those who are less comfortable in disclosing their distress. The reason is that an online support group may be one of a very few options available to provide a private and safe way for those who are less comfortable with self-disclosure of their distress feelings to be open about themselves. Perhaps, those who are more comfortable self-disclosing their distress feelings are likely to have more options available where they can be open to others about their feelings of distress. In Lewis et al.'s (2005) study, lesbian women were asked to either write about "some of the most difficult recurring problems you have had related to your sexual orientation" (p. 153) (experimental group) or to write about how they spent their time that day (control group). Results indicated that writing about their traumatic sexual orientation experiences reduced identity confusion and decreased perceived stress over a 2-month follow-up period for those who were less open about their sexual orientation. There was no effect for the control group. These results suggest that writing about difficulties related to one's sexual orientation may act as a buffer against negative mental health outcomes for those who are less likely to talk about their identity difficulties to others.

From the previous relevant literature review and reasoning, it is possible that an online support group intervention may provide a greater benefit for those who are less comfortable self-disclosing feelings of distress than those who are more comfortable self-disclosing distress feelings. However, no study could be located that has directly explored the moderation role of comfort levels of distress disclosure on the association between ethnic identity or internalized homophobia and mental health outcomes (i.e., depressive symptoms and life satisfaction). Therefore, the fourth purpose of this study was to investigate, among those in the support group, whether comfort level with distress disclosure would moderate

the strength of the association between ethnic identity or internalized homophobia and mental health outcomes (i.e., depressive symptoms and life satisfaction) at post-intervention and over time. While it was hypothesized that comfort with distress disclosure would moderate the relationships, the exact nature of this three-way interaction (i.e., ethnic identity [or internalized homophobia] x distress disclosure x time) was difficult to predict because of the lack of prior research. Thus, these hypotheses were exploratory in nature.

CHAPTER 3: METHOD

Participants

Participants were 83 self-identified Asian American “women who are romantically attracted to women,” over the age of 18, and able to identify a concern or difficulty related to their sexual orientation or ethnic identity. Participants were recruited from a variety of sources related to the Asian American lesbian, bisexual, and queer community including: listservs, Yahoo groups, university clubs and organizations, professional organizations, community resources, political action groups, and support groups. Attempts were made to contact a variety of organizations to attract members of different age ranges, ethnicities, and Asian sub-cultural backgrounds.

The vast majority of participants identified their sexual orientation as Lesbian (46%), followed by Bisexual (25%), Queer (18%), Gay (4%), Pansexual (2%), Other (2%), Fluid (1%), and Questioning (1%). In response to the question, “How do you express and/or describe your gender?” most participants indicated Feminine (59%), followed by Transgender (23%), Genderneutral (5%), Genderqueer (5%), Masculine (4%), Other (2%), and did not indicate (2%). Participants were asked to indicate whether they were “out” to friends, family, and/or co-workers. The vast majority of participants indicated that they were out to their friends (87%). Participants indicated lower rates of being out to their co-workers (61%) and members of their family (50%).

The reported residences of the participants by state and geographic region are listed in Table 1. The largest percentage of participants was from the West (39%), followed by the South (23%), Northeast (20%), Midwest (12%), Currently Residing Outside the U.S. (5%), and Pacific (1%). Participants’ Asian ethnic origin included: China (27%), India (17%),

Vietnam (13%), Korea (12%), Multiethnic (11%), Philippines (8%), Taiwan (6%), Japan (1%), Laos (1%), Pakistan, (1%), Sri Lanka, (1%), and Thailand (1%). Regarding generational status: 6% indicated first generation (i.e., “you were born outside of the U.S. and moved to the U.S when you were an adult”), 31% indicated 1.5 generation (i.e., “you were born outside of the U.S. but moved here when you were a child or adolescent”), 55% indicated second generation (i.e., “you were born in the U.S.; either parent born in country-of-origin”), 1% indicated third generation (i.e., “you and both parents born in U.S.; all grandparents born in country-of-origin”), 2% indicated fourth generation (i.e., “you and both parents born in U.S.; not all grandparents born in U.S.”), and 4% indicated that they were born in an Asian country and then adopted by U.S. citizens. Participants reported religion included: Buddhist (23%), Christian (16%), Agnostic (8%), Hindu (6%), Atheist (4%), Muslim (1%), Jewish (1%), Other (14%), and None (27%).

The age of participants range from 18 to 50 with a mean age of 28 (SD = 6.65). A majority of participants reported an income of less than \$25,000 (52%), followed by incomes ranging between: \$35,000 and \$50,000 (18%), \$50,000 and \$75,000 (12%), \$25,000 and \$35,000 (11%), and \$75,000 and \$100,000 (5%). One percent of participants reported an income of more than \$100,000 and the remaining 1% did not report their income.

Finally, participants were asked to indicate their past and present involvement with mental health resources. A majority of participants indicated they had participated in counseling at some point in the past (68%). Moreover, 35% of participants indicated they were “currently receiving help from a mental health counselor (e.g., psychologist, psychiatrist, counselor, social worker, etc.)” and nearly 10% of participants indicated they were currently participating in a support group that met on a regular basis.

Instruments

Ethnic identity. The Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) is a 12-item measure designed to assess the strength of identification with one's own ethnic group. Factor analyses have found that the measure is comprised of two factors, ethnic identity search and affirmation, belonging, and commitment. The latter factor, composed of 7-items (e.g., "I am happy that I am a member of the group I belong to."), is a measure of affective components, while the former is a measure of developmental and cognitive components (e.g., "I think a lot about how my life will be affected by my ethnic group."). Each item is responded to on a 5-point Likert scale ranging from (1) *Strongly disagree* to (5) *Strongly agree*. Scores can range between 1 and 60 with higher scores indicating a stronger ethnic identity. Roberts et al. (1999) reported relatively high reliability with coefficient alphas ranging between .83 and .89 in an Asian American sample. Validity has also been supported through correlations with measures of self-esteem (Phinney, 1992) in an ethnic minority sample. Yoo and Lee (2005) provided additional validity support through positive correlations with positive affect and life satisfaction in an Asian American sample, using a 14-item version of this measure.

Internalized Homophobia. The Lesbian Internalized Homophobia Scale (LIHS; Szymanski & Chung, 2001) is a 52-item measure of the degree to which a participant has internalized negative beliefs about homosexuality. The measure is comprised of five subscales. The first subscale, Connection with the Lesbian Community (13-items), describes a lesbian's degree of connection or separation to the lesbian community and can range from isolation to social embeddedness (e.g., "I am familiar with lesbian music festivals and conferences."). The second subscale, Public Identification as a Lesbian (16-items), assess

how an individual manages others' awareness of her lesbian identity. An individual can range from taking steps to avoid others awareness of her identity, to passively allowing others to assume heterosexuality, to a willingness to disclose one's homosexuality (e.g., "I wouldn't mind if my boss knew I was a lesbian."). The third subscale, Personal Feelings about being a Lesbian subscale (8-items) measures one's own feelings about her lesbian identity. Feelings can range between self-hatred and self-acceptance (e.g., "I believe female homosexuality is a sin."). The fourth subscale, Moral and Religious Attitudes Toward Lesbianism (7-items) refers to more general attitudes about lesbians or lesbianism, and can range from condemnation to tolerance and acceptance (e.g., "I have respect and admiration for other lesbians."). The fifth and final subscale, Attitudes Toward Other Lesbians (8-items), assesses one's attitude toward members of one's own group. These attitudes can range between oppression and hostility to group appreciation (e.g., "Lesbians are too aggressive."). Participants are asked to respond on a 7-point scale ranging from (1) *Strongly disagree* to (7) *Strongly agree*. A total score was used to measure internalized homophobia in the present study. Scores can range from 52 to 364 with higher scores indicating greater levels of internalized homophobia. Coefficient alpha for the full scale has been reported at .94 in two prior studies (Szymanski, 2005; Szymanski & Chung, 2001). Validity has been supported through negative correlations with social support (Szymanski, Chung, & Balsam, 2001) and negative relationships with loneliness (Szymanski & Chung) and depression (Szymanski, Chung et al., 2001) among adult same-sex attracted women.

Depressive symptoms. The Center for Epidemiological Studies – Depression Mood Scale, short version (CESD-short version: Kohut, Berkman, Evans, & Cornoni-Huntley, 1993) is an 11-item self-report scale that assesses current levels of depressive symptoms.

Each item utilizes a 3-point Likert-type scale ranging from (0) *Hardly ever or never* to (2) *Much or most of the time*, measuring the frequency with which participants have experienced that item in the past week. Total scores can range from 0 to 22 with higher scores indicating higher levels of depressive symptoms. The measure has a high internal consistency with Cronbach's alphas between .71 and .87 (Kohut et al., 1993). Zakalik and Wei (2006) provided validity evidence for the CESD short version in homosexual populations through positive associations with depressive symptoms, levels of insecure attachment, and self-reported discrimination in a gay male sample. Although literature search was unable to locate the use of the CESD short version with an Asian lesbian or bi-sexual population, the full version has shown negative correlations with scores on Multigroup Ethnic Identity Measure ($r = -.34$; Lee, 2005) in an Asian American sample as well as with the score on Satisfaction with Life Scale ($r = -.57$; Beals & Peplau, 2005) in a lesbian sample. The CESD short version has shown strong correlations of .88 to .93 with the full version of CESD (Kohut et al.).

Life satisfaction. The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a 5-item measure designed to assess global cognitive judgments of one's life (e.g., "I am satisfied with my life."). Each item is rated on a 7-point scale ranging from (1) *Strongly disagree* to (7) *Strongly agree*. Scores range from 5 to 35, with higher scores indicating greater life satisfaction. Beals and Peplau (2005) reported a coefficient alpha of .89 in a sample of adult lesbians, and Yoo and Lee (2005) reported an alpha of .83 in a sample of Asian Americans. Validity has been supported through positive correlations with self-esteem and negative correlations with depressive symptoms in an adult lesbian sample

(Beals & Peplau). Additionally, Yoo and Lee reported positive correlations with ethnic identity and social support in an Asian American sample.

Comfort with distress disclosure. The Distress Disclosure Index (DDI; Kahn & Hessling, 2001) is a 12-item scale designed to assess the degree to which a person is comfortable talking to others about personally distressing information. A sample item is, “When I feel upset, I usually confide in my friends.” Participants are asked to respond on a 5-point Likert-type scale ranging from (1) *Strongly disagree* to (5) *Strongly agree*. Six of the items are reversed scored and then summed so that higher scores reflect a greater comfort in disclosing personal distress feelings. High and stable reliability has been shown ranging between .92 to .95 across studies (Kahn, Lamb, Champion, Eberle, & Schoen, 2002). The DDI has been found to contain a single factor and shown to correlate with scores on the Self-Disclosure Index ($r = .43$; Miller, Berg, & Archer, 1983) in an undergraduate sample and with scores on the Self-Concealment Scale ($r = .35$; Larson & Chastain, 1990) in a sample of adults, in expected directions. Wei, Russell, and Zakalik (2005) also found scores on DDI to be negatively correlated with loneliness in a college student sample.

Perceived group support. The Online Support Group Questionnaire (OSGQ; Chang, Yeh, & Krumboltz, 2001) is a 9-item measure designed to assess participant reactions to the online support group based on three subscale areas. The first subscale (2-items), Support, measures the degree to which members felt supported by others in the group (e.g., “I felt supported by other members of the support group”). The Relevance subscale (3-items) assesses the degree to which members felt the topics covered were relevant to them (e.g., “The discussion topics generated by the moderator were relevant”). The final subscale, Comfort-Connection (2-items), assesses the degree to which the participant felt connected to

the other members, and comfort in raising their concerns in the group. Participants are asked to respond on a 10-point Likert scale ranging from (1) *Not at all* to (10) *Very much*. A total score was used in the present study, with higher scores indicating more positive reactions to the group. The alpha for the total measure has been reported at .76 (Chang et al.). Chang et al. used this measure to assess reactions for an online support group for Asian American men.

Procedure

Participants were recruited from LGB affirmative organizations, university student groups, support groups, political action groups, and community centers designed to support Asian American women who are romantically attracted to women. Potential organizations were identified through a comprehensive Internet search with a focus on Yahoo groups; university student organizations; and general key word searches on Google.com (e.g., “Asian”, “lesbian”, “gay”, “queer”, “homosexual”, “lgbt”, etc.).

Once a potential group resource was identified, a group representative (e.g., group leader or group moderator) was contacted via email or web form to seek permission to distribute an advertisement for the study to their group members. After receiving permission, an invitation letter was sent electronically to the group representative to distribute. The invitation briefly explained the nature of the study and provided the researcher’s contact information. The invitation email also asked members to forward the invitation to other individuals or listservs as appropriate. Interested parties were asked to contact the primary investigator by email to indicate their interest in the study.

Once the participant had indicated her interest, the primary investigator assigned them to either the online support intervention group (i.e., experimental group) or no-intervention

control group. The participant was then sent an email including the informed consent that explained the nature of the study, including all risks and benefits. If participants were still interested they were asked to reply to the informed consent email indicating their continued interest. Participants were assigned to each group condition so that the total participant count in each condition (i.e., support or control) was approximately equivalent. For example, if the control group had four confirmed members and the support group had three confirmed members, the support group informed consent would be sent to interested participants until consent was received. Then the control group informed consent would be sent out until a participant slot was filled, and so on. Through this process a total of 127 potential participants were sent the informed consent. Due to interest response and consent rates, a greater number of support group informed consents ($n = 87$) were sent out than control group informed consents ($n = 40$).

Once consent was obtained, the participant was sent an email with a link to the first online survey as well as an assigned 3-digit code number (e.g., 100, 200, 300) that was used as their unique identifier for the duration of the study. Only the primary investigator had access to the master list linking the email address and code number of the participants. The survey began with another copy of the informed consent. Participants were given the option to continue by clicking “next”, which indicated their consent, or to discontinue by closing their web browser. If participants chose to continue they were then provided access to the first survey (Demographic questionnaire, MEIM, LIHS, DDI, CESD, and SWLS; see Appendix for study procedure). There were two different orderings of the measures in the survey to control for order effects. This survey and all future online surveys for this study were hosted by surveymonkey.com. A total of 83 participants consented and completed the

initial survey. The support group had a total of 45 participants and the control group included 38 participants.

After completing the initial survey, participants in the online support group participated in a 4-week online support group. Each support group, composed of 11 to 12 members, was created through Yahoo groups. To accommodate all participants, four separate groups were formed and each group began as soon as enough participants were entered into the group. The online support group functioned like an electronic bulletin board. Only the group members, group facilitator (i.e., the primary investigator), and faculty supervisor were allowed to access the group website to read and write messages. In order to ensure the privacy of the group, the primary investigator created a unique login and password for each member, which was emailed to each participant along with instructions on how to access the group. Group members were allowed to change the password at anytime without informing the primary investigator. The members were also asked to use aliases (most members chose to use their 3-digit identifier) to ensure anonymous participation. Additionally, participants were asked to refrain from sharing identifying information with other the group members (e.g., email address, real name, etc.).

Each week, participants in the online support group were asked to reflect and respond to a new question posted by the group facilitator (i.e., the primary investigator), who is graduate level counselor with specific training in group therapy. The posted questions were related to identity issues of Asian American women who are romantically attracted to women (i.e., “What has it been like for you to be a woman who is romantically attracted to women”, “What has it been like for you to be a South Asian or Asian American woman”, “What has it been like for you to be a South Asian or Asian American woman who is romantically

attracted to other women,” and “What do you like about being a South Asian or Asian American woman who is romantically attracted to other women?”). Participants were required to post a response at least once during the week, but were encouraged to respond to other participants’ posts as well. Participants were specifically instructed that the group was not a therapy group and that it was “not appropriate to discuss 1) a desire to harm yourself or others, 2) a case of apparent current child abuse, or 3) a case of apparent current dependent adult abuse.” Participants were also asked to complete a short online survey at the end of each week (i.e., OSGQ). After the 4-week group intervention, including the final weekly survey, the participants were asked to complete a post-intervention survey, a 2-week follow-up survey, and a 1-month follow-up survey (i.e., CESD, SWLS).

Those in the no-intervention control group filled out a total of four surveys (the last three included the CESD and SWLS only). The second survey for this group was completed one month after completing the pre-test survey. The third survey was completed six weeks from the initial survey and the fourth survey was completed two weeks after that (i.e., eight weeks from the first survey). A total of four control groups, ranging from 8 to 12 members, ran concurrently with each of the four online support groups.

Participants in the online support group were eligible to earn up to a total of \$60. If participants chose to discontinue participation they would receive money for each task completed. That is, they would receive: \$15 for the Pre-test survey; \$10 each for the post intervention survey, 2-week follow-up survey, and 1-month follow-up survey; and \$5 for the first three weekly postings to the group in addition to the completion of the end-of-the-week survey. Participants in the no-intervention control group were eligible to earn a total of \$45. If participants choose to discontinue participation they received \$15 for the pre-test survey,

and \$10 each for the 1-month follow-up, 6-week follow-up survey, and 8-week follow-up survey.

Participants were offered two choices for compensation, (a) they could send their name and address to the group facilitator for a check to be sent or (b) the participants could elect to donate their money to a charity of their choice by providing the name of the organization and its address. Both options were designed to maximize the anonymity of the participant. That is, no social security numbers were requested from any participants. If the participant chose to donate the money to charity no identifying information was requested at all. After participants had indicated their payment choice they were thanked for their participation and given the researcher's contact information.

CHAPTER 4: RESULTS

Attrition Analyses

Among a total of 83 participants, 14 participants produced incomplete data; 12 participants provided data for the pre-test only (10 from the support group and 2 from the control group) and two did not complete the final post-test (one from each group). Thus, there were 69 participants who had complete data: 35 participants in the control group and 34 participants in the support group. A one-way ANOVA was conducted to determine if there were any significant differences between the five main variables (i.e., ethnic identity, internalized homophobia, comfort with self-disclosure about distress, depressive symptoms, and life satisfaction) on the pre-test survey for those with missing post-tests, completed post-tests (i.e., post and two follow-up time points), and one-missing post-test (i.e., completed the post-intervention and 2-week follow-up but not the 1-month follow-up). No significant differences were found suggesting that attrition can be considered as random. Thus, all 83 participants were included in the analyses for associations among variables.

Pretest Equivalence and Descriptive Statistics

A series of independent samples t-tests were performed to determine whether there were any significant differences in the main variables (i.e., MEIM, LIHS, DDI, CESD, and SWLS) at the time of the pre-test between the support and control groups. No significant differences ($t_s = .56, -.38, .46, .22, \text{ and } .33, p_s > .05$, respectively) were found. Thus, the groups were approximately equivalent at the beginning of the study on the key measured variables. This suggests that the random assignment of participants into the support and control groups was successful.

A series of chi-square tests (for the categorical variables: gender, sexual orientation,

income, religion, generational status, past participation in counseling, current participation in counseling, current involvement with a support group, and outness to friends, family, and co-workers) and an independent samples t-test (for the continuous variable, age) were conducted to determine whether there were any significant differences between the support and control groups on any of the demographic variables. Only participant generational status (i.e., 1st generation, 1.5 generation, etc.) initially reached significance ($p = .03$). The vast majority of the participants in the support group indicated that they were in the 2nd generation, while those in the control group were nearly equally divided between 1.5 and 2nd generations. However, after a Bonferroni adjustment was made to adjust for the significance level for multiple tests, this variable no longer reached the significance threshold ($p = .01$). It can therefore be concluded that there were no significant differences in demographic characteristics between the support and control groups.

To examine if an order effect was present, independent samples t-tests were conducted to determine if there were any significant differences on the five main variables at the pre-test between the two different orders. No significant differences were found (t s: MEIM = 1.0, LIHS = -1.75, DDI = .02, CESD = -.46, and SWLS = -1.34, p s > .05). Thus, the two orders produced approximately equivalent results.

Item means, standard deviations, Cronbach's alphas, and zero-order correlations for the 12 measured variables for the support group and 11 measured variables for the control group are shown in Tables 2 and 3, respectively.

Latent Growth Curve Measurement Models

A latent growth curve model (LGCM), using LISREL 8.80, was used to examine the research questions proposed in this study, due to its advantages over other means of

longitudinal analyses (e.g., repeated measures ANOVA; Branstetter, Bower, Kamien, & Amass, 2008). The main advantage is that LGCM analyses use changes in variance, mean values, and correlations over time, as opposed to solely group mean changes (as in other methods; Hess, 1999, as cited in Branstetter et al., 2008). This allows for the examination of individual variations in starting points (i.e., intercept) and developmental outcomes across time points (i.e., slope). LGCM also accommodates both continuous data (e.g., LIHS, MEIM, and DDI) and dichotomous data (e.g., control vs. support group; Duncan, Duncan, & Strycker, 2006).

The full-information maximum likelihood method (FIML) was used to deal with missing data within the LGCM analyses. FIML method has been found to produce more efficient and less biased results than other methods where cases are deleted (Muthen, Kaplan, & Hollis, 1987; Trudeau, Spoth, Randall, & Azevedo, 2007; Wothke, 2000). Thus, it has become the favored statistical method for dealing with missing data (Allison, 2003; Schafer & Graham, 2002). FIML assumes that the missing data is random, which is supported by earlier attrition analyses. Although no differences were found among pre-test scores on the key variables between those who completed the post-test measures and those who did not, the participants with no completed post-test results ($n = 12$) were removed from the LGCM analyses to produce a more conservative estimate of intervention effects. Thus, a total n of 71 (36 participants in the control group and 35 participants in the support group) was included in the following analyses.

When the FIML method was used in the LISREL program, only the Root Mean Square Error of Approximation (RMSEA) fit index would report in addition to the chi-square value. RMSEA values of .06 and below indicate a good fit to the data (Hu & Bentler, 1999)

and values ranging between .08 and .10 generally indicate a marginal fit of the data (MacCullum, Browne, & Sugawara, 1996). However, Hu and Bentler have suggested that the RMSEA is likely to over-reject models when the sample size is small (i.e., less than 250), as in the present study.

Figure 3 illustrates the proposed model, wherein ethnic identity or internalized homophobia are set as predictors, group condition (i.e., support or control) as a moderator, and the interaction terms (i.e., predictor x moderator) predicts the intercept (i.e., mean levels at post-intervention) and slope (growth rate from post-intervention through 2-week follow-up to 1-month follow-up), after controlling for initial levels of the dependent variable (i.e., depressive symptoms or life satisfaction). The time variable is incorporated into the model through assigned factor loadings of 1 for the paths from the intercept latent factor to the dependent variables as well as 0, 1, and 2 for each path from the slope latent factor to the dependent variables at post-intervention, 2-week follow-up, and 1-month follow-up, respectively. A dummy code approach was used to compare the group means and slopes on the dependent variables between the online support group (dummy code = 1) and the control group (i.e., reference group; dummy code = 0).

The first step in the LGCM was to standardize all the covariate variables (i.e., CESD and SWLS at the pre-test time point) and predictors (i.e., MEIM and LIHS at the pre-test time point) to control for possible multicollinearity among them (Aiken & West, 1991). Next, two interaction terms were created by calculating the products of each predictor variable with the moderator. Thus, the two interaction terms are (a) ethnic identity (MEIM) x group condition and (b) internalized homophobia (LIHS) x group condition. A total of two LGCMs were created to explore the moderation effects on depressive symptoms and life satisfaction

over time. Each model included the covariate variable (i.e., CESD or SWLS at the pre-test time point), the predictor variables (i.e., MEIM and LIHS at the pre-test time point), the moderator variable (i.e., group condition), and the interaction terms (i.e., MEIM x group condition and LIHS x group condition), each of which was set to predict the intercept and slope factors of CESD and SWLS over time (i.e., post-intervention, 2-week follow-up, and 1-month follow-up).

For depressive symptoms, the latent growth curve measurement model result indicated a good fit to the data, $\chi^2(7, N = 71) = 5.96, p > .05$, RMSEA = 0.0 (90% confidence interval [CI]: .00, .13). The average mean level (i.e., intercept) was significant ($b = 7.49, Z = 11.29, p < .001$) but the average linear slope was not significant ($b = 0.31, Z = 1.25, p > .05$). Also, the variance of the intercept ($b = 27.74, Z = 4.98, p < .001$) was significant and the variance of the linear slope approached significant ($b = 2.57, Z = 1.94, p = .052$). These results indicated that there are individual variations for the initial level and for the growth curve. This model was used to test the latent growth curve structural model.

For life satisfaction, the latent growth curve measurement model result indicated a poor to marginal fit to the data, $\chi^2(7, N = 71) = 18.46, p < .01$, RMSEA = .15 (90% confidence interval [CI]: .07, .24). The average mean level (i.e., intercept) was significant ($b = 24.97, Z = 34.89, p < .001$) but the average linear slope was not significant ($b = -0.07, Z = -0.37, p > .05$). Also, the variance of the intercept ($b = 30.92, Z = 4.39, p < .001$) was significant but the variance of the linear slope was not significant ($b = 0.78, Z = 0.40, p > .05$). These results indicated that there are individual variations for the initial level but not for the growth curve. This model was used to test the latent growth curve structural model later.

Latent Growth Curve Structural Models

Treatment Effects. The first hypothesis was to evaluate the effectiveness of the online support group intervention on depressive symptoms and life satisfaction, as compared with the control group. For depressive symptoms, the result of latent growth curve structural model indicates a good fit to the data, $\chi^2(7, N = 71) = 5.96, p > .05$, RMSEA = 0.0 (90% confidence interval [CI]: .00, .13). The results further showed that group condition was not a significant predictor of the intercept ($\Delta b = -1.01, Z = -1.31, p > .05$) or the linear slope ($\Delta b = -0.13, Z = -0.26, p > .05$). Therefore, there were no differences between the online support group and the control group on the mean level of depressive symptoms at the post-intervention or the rate of linear change of depressive symptoms across the three follow-up time points (see Figure 4). The average mean level was not significantly different from zero for the online support group ($b = 0.93, Z = 0.61, p > .05$) but was significantly different from zero for the control group ($b = 1.93, Z = 2.54, p < .05$). The average linear slope was not significant for both online support ($b = 0.70, Z = 1.31, p > .05$) and control group ($b = 0.83, Z = 1.70, p > .05$).

For life satisfaction, the result of latent growth curve structural model indicated a poor to marginal fit to the data, $\chi^2(7, N = 71) = 18.46, p < .01$, RMSEA = .15 (90% confidence interval [CI]: .07, .24). However, as described earlier, the RMSEA is likely to over-reject models when sample sizes are small, as in this study. Group condition was a significant predictor of the intercept ($\Delta b = 2.01, Z = 2.15, p < .05$) but was not a significant predictor of the linear slope ($\Delta b = -0.18, Z = -0.48, p > .05$). Thus, indicating that the online support group had higher mean levels of life satisfaction as compared with the control group at the post-intervention, but there were no differences on the linear rate of change between the two groups. The mean levels in the online support and control groups at the 2-week and

1-month follow-up time points were also examined. The results (see Figure 5) show a maintained elevation in support group means above those of the control group at the 2-week follow-up ($\Delta b = 1.83, Z = 2.12, p < .05$) and the 1-month follow-up ($\Delta b = 1.66, Z = 1.77, p < .05$ at one-tailed level). Additionally, the average mean level was significant for both the online support group ($b = 12.68, Z = 7.45, p < .05$) and the control group ($b = 10.67, Z = 5.95, p < .05$). However, the average linear slope was not significant for the online support group ($b = 0.40, Z = 0.58, p > .05$) or the control group ($b = 0.23, Z = 0.35, p > .05$).

Group condition as a moderator. The second purpose of this study was to explore whether group condition (i.e., online support or control group) served as a moderator between ethnic identity or internalized homophobia and mental health outcomes (i.e., depressive symptoms or life satisfaction) over time. For depressive symptoms (see Figure 6 and Table 4), the interaction of ethnic identity and group condition was not significant in predicting the intercept ($\Delta b = -0.19, Z = 0.25, p > .05$) or the slope ($\Delta b = 0.07, Z = -0.13, p > .05$). Likewise, the interaction of internalized homophobia and group condition did not reach significance in predicting the intercept ($\Delta b = -0.23, Z = -0.29, p > .05$) or slope ($\Delta b = 0.18, Z = 0.35, p > .05$). Therefore, group condition failed to be a significant moderator of either ethnic identity or internalized homophobia on depressive symptoms at the post-intervention and over time.

For life satisfaction (see Figure 7 and Table 5), the interaction of ethnic identity and group condition was marginally significant in predicting the intercept ($\Delta b = 1.75, Z = 1.83, p = .07$) but not the slope ($\Delta b = -0.07, Z = -0.18, p > .05$). In order to know the mean levels for the online support and control group at the different levels of ethnic identity over time, simple effect analyses were conducted using Cohen, Cohen, West, and Aiken's (2003)

recommendation of one standard deviation below and above the mean. As seen in Figure 8, those with higher levels of ethnic identity in the online support group (see the top dashed line) had the highest levels of life satisfaction at post-intervention (average level = 13.39, $Z = 7.01$, $p < .001$). Conversely, those with higher levels of ethnic identity in the control group (see the bottom solid line in Figure 8) had the lowest levels of life satisfaction at post-intervention (average level = 9.63, $Z = 5.16$, $p < .001$). Those with lower levels of ethnic identity in both the support (average level = 11.97, $Z = 6.79$, $p < .001$) and control groups (average level = 11.72, $Z = 6.02$, $p < .001$) had similar levels of life satisfaction (see the middle two bolded lines in Figure 8). Since the interaction did not significantly predict the slope, it is not surprising that the slopes are parallel among those with higher vs. lower levels of ethnic identity in the online support and control groups.

The interaction of internalized homophobia and group condition predicting the intercept was marginally significant ($\Delta b = 1.79$, $Z = 1.87$, $p = .06$) and significant for predicting the slope ($\Delta b = -1.12$, $Z = -3.02$, $p < .01$) for life satisfaction. In order to know more about the nature of this interaction (i.e., internalized homophobia x group condition) over time, simple effect analyses were conducted. Similar to the above procedure, one standard deviation below and above the mean for internalized homophobia were computed in order to plot the nature of interaction over time (Cohen et al., 2003). As seen in Figure 9 (unbolded and dashed line), those who were higher in internalized homophobia in the support group had the highest mean levels of life satisfaction at post-intervention (average level = 13.61, $Z = 8.40$, $p < .001$), although the slope was not significant ($b = -0.80$, $Z = -1.27$, $p > .05$). Conversely, those with higher levels of internalized homophobia in the control group (unbolded and solid line) had the lowest mean level of life satisfaction at post-intervention

(average level = 9.81, $Z = 5.82$, $p < .001$) and a non-significant slope ($b = 0.50$, $Z = 0.76$, $p > .05$). Thus, life satisfaction at post-intervention for those higher in internalized homophobia varied based on group condition and those differences appeared to remain approximately stable over the follow-up period.

Moreover, at the lower levels of internalized homophobia (see the middle two bolded lines in Figure 9), those in the support (average level = 11.53, $Z = 5.30$, $p < .001$) and control (average level = 11.75, $Z = 5.78$, $p < .001$) groups had similar levels of life satisfaction at post-intervention. However, those in the control group had a non-significant rate of change (see middle bolded and solid line in Figure 9), while those in the support group showed a slope that is positive and close to significant at the one-tailed level ($b = 1.26$, $Z = 1.59$, $p < .06$, see the middle bolded and dashed line in Figure 9). This implies that life satisfaction continued to increase over time only for those with lower levels of internalized homophobia in the online support group.

Perceived online support as a moderator. The third purpose of the study is to explore whether perceived support from the online group is a moderating variable between ethnic identity or internalized homophobia and mental health outcomes (i.e., depressive symptoms or life satisfaction) over time. This hypothesis was designed to include only the support group participants; thus, the total sample for these analyses was 35. Due to the small sample size, each moderation hypothesis was run in a separate LGCM for ethnic identity and internalized homophobia with depressive symptoms and life satisfaction. To create the perceived online support variable (i.e., moderator variable), the OSGQ was first averaged across the four weeks to achieve the participants overall level of perceived online group support (OSAVG).

As in the previous LGCM model, the first step was to standardize all the covariate variables (i.e., CESD and SWLS at pre-test) and predictors (i.e., MEIM and LIHS at pre-test). The moderator was also standardized in this model since it is a continuous variable (i.e., OSAVG). Next, two interaction terms, (a) ethnic identity x group support and (b) internalized homophobia x group support, were created by calculating the products of each predictor variable with the moderator. Figure 10 illustrates the proposed model from which a total of four LGCMs were created to explore each of the four moderation hypotheses. That is, each model included a covariate variable (i.e., CESD or SWLS at pre-test), a predictor variable (i.e., MEIM or LIHS at pre-test), the moderator variable (i.e., OSAVG), and the interaction terms (i.e., ethnic identity x group support or internalized homophobia x group support), each of which was set to predict the intercept and slope of CESD or SWLS over time (i.e., post-intervention, 2-week follow-up, and 1-month follow-up).

For depressive symptoms, the interaction between ethnic identity and perceived online support (see Figure 11 and Table 6) reached significant levels in predicting the intercept ($b = 1.20, Z = 2.22, p < .05$) but not the slope ($b = -0.18, Z = -0.53, p > .05$). These results indicate that the mean levels of depressive symptoms at post-intervention were significantly different at different levels of perceived online support and ethnic identity but not the linear rate of change.

To further explore the nature of the interaction of ethnic identity and perceived online group support on depressive symptoms over time, the simple effects were analyzed in a similar manner as in hypothesis two, using one standard deviation below and above the mean (Cohen et al, 2003). As displayed in Figure 12, at the high levels of ethnic identity, the mean levels of depressive symptoms at post-intervention were highest for those reporting high

levels of support (average level = 2.22, $Z = 1.80$, $p < .05$ at one-tail level, see top unbolded dashed line) and those reporting low support showed the second lowest levels of depressive symptoms (average level = 0.10, $Z = 0.06$, $p > .05$, see unbolded solid line). At low levels of ethnic identity, those with low support had mean levels of depressive symptoms at post-intervention (average level = 0.96, $Z = 0.77$, $p > .05$, see bolded solid line) between those with high ethnic identity; however, those reporting low levels of ethnic identity and high support reported the lowest levels of depressive symptoms at post-intervention (average level = -1.72, $Z = -1.31$, $p > .05$, see the bottom bolded and dashed line). It is important to note that its significant positive slope ($b = 1.61$, $Z = 1.94$, $p = .05$) suggested that the levels of depressive symptoms slightly increased over time, reaching the similar levels at the 1-month follow-up to those reporting low ethnic identity and low support.

The interaction of internalized homophobia and group support on depressive symptoms (see Figure 13 and Table 7), did not reach significance in predicting the intercept ($b = -.31$, $Z = -0.65$, $p > .05$) or the slope ($b = -0.36$, $Z = -1.23$, $p > .05$). Thus, the mean levels and the slope of depressive symptoms were not significantly different at the different levels of perceived group support and internalized homophobia. A main effect was detected for perceived group support on the intercept, which reached significance at the one-tail level ($b = 0.62$, $Z = 1.75$, $p < .05$). This result indicates that those with higher levels of perceived group support had increasing levels of reported depressive symptoms over the one-month follow-up period

For life satisfaction (see Figure 14 and Table 8), the interaction between ethnic identity and perceived online support did not reach significant levels in predicting the intercept ($b = -0.20$, $Z = -0.41$, $p > .05$) but did reach significance for the slope ($b = 0.58$, $Z =$

1.96, $p > .05$). Thus, the mean levels at post-intervention were not significantly different at different levels of perceived online support and ethnic identity but were for the linear rates of change.

The simple effects were analyzed to further explore the nature of the interaction of ethnic identity and perceived online group support on life satisfaction over time (see Figure 15). As expected, given the non-significant interaction for the intercept, all four groups had similar post-intervention levels of life-satisfaction. Moreover, at the high levels of ethnic identity, both those reporting high levels of support ($b = -0.10$, $Z = -0.09$, $p > .05$, see top unbolded dashed line) and those reporting low levels of support ($b = -1.27$, $Z = -1.22$, $p > .05$, see unbolded solid line) showed levels of life satisfaction that remained approximately stable over time. However, at low levels of ethnic identity, those with low support showed a non-significant linear rate of change ($b = -0.88$, $Z = -1.03$, $p > .05$, see bolded solid line), while those with high support showed a significant negative linear rate of change at the one-tail level ($b = -2.05$, $Z = -1.91$, $p < .05$, see bolded dashed line). Thus, those reporting low ethnic identity and high support were the only group to show a change over time, and this pattern showed decreasing levels of life satisfaction over the follow-up period.

The interaction of internalized homophobia and perceived group (Figure 16 Table 9) support on life satisfaction was not significant in predicting the intercept ($b = 0.17$, $Z = 0.41$, $p > .05$) or the slope ($b = -0.11$, $Z = -0.49$, $p > .05$). These results indicate that the mean levels of life satisfaction at the post-intervention and the rate of change on life satisfaction were not significantly different at the different levels of perceived online group support and the different levels of internalized homophobia. A main effect was found for internalized homophobia on the slope ($b = -1.00$, $Z = -3.16$, $p < .05$), indicating that higher levels of

internalized homophobia were significantly associated with linear decreases in life satisfaction over time.

Comfort level with distress disclosure as a moderator. The fourth purpose of the study was to explore whether level of distress disclosure moderated the relationship between ethnic identity or internalized homophobia and mental health outcomes (i.e., depressive symptoms or life satisfaction) after controlling for the initial level of depressive symptoms and life satisfaction, for those in the online support group. LGCM analyses were conducted following a similar procedure to the previous hypotheses, using only support group participants ($n = 35$).

As in the prior model, each moderation hypothesis was run in a separate LGCM for ethnic identity and internalized homophobia with depressive symptoms and life satisfaction (see Figure 10), due to the small sample size.

The first step in these analyses was to standardize the covariate variables (i.e., CESD and SWLS at pre-test), predictors (i.e., MEIM and LIHS at pre-test), and the moderator (i.e., DDI). Next, two interaction terms, (a) ethnic identity x distress disclosure and (b) internalized homophobia x distress disclosure, were created by calculating the products of each predictor variable with the moderator. Next, a total of four LGCMs were created to explore each of the four moderation hypotheses. That is, each model included a covariate variable (i.e., CESD or SWLS at pre-test), a predictor variable (i.e., MEIM or LIHS at pre-test), the moderator variable (i.e., DDI), and an interaction term (i.e., ethnic identity x distress disclosure or internalized homophobia x distress disclosure), each of which was set to predict the intercept and slope of CESD or SWLS over time (i.e., post-intervention, 2-week follow-up, and 1-month follow-up).

For depressive symptoms, the interaction between ethnic identity and distress disclosure (see Figure 17 Table 10) did not reach significant levels in predicting the intercept ($b = -0.04, Z = -0.07, p > .05$) or the slope ($b = -0.05, Z = 1.00, p > .05$). These results indicate that the mean levels at post-intervention and linear rate of change of depressive symptoms were not significantly different at different levels of distress disclosure and ethnic identity. Moreover, the interaction of internalized homophobia and distress disclosure (see Figure 18 Table 11) was marginally significant in predicting the intercept ($b = 0.98, Z = 1.57, p = .06$ at one-tail level) and not significant in predicting the slope ($b = -0.52, Z = -1.32, p > .05$). The simple effects were then analyzed using one standard deviation below and above the mean (Cohen et al, 2003) to better understand the nature of this interaction. As seen in Figure 19, at the high levels of internalized homophobia, the mean levels of depressive symptoms at post-intervention were similar for those with high disclosure (average level = 2.24, $Z = 1.56, p < .06$ at one-tail level) and low disclosure (average level = 1.24, $Z = 0.77, p > .05$). At low levels of internalized homophobia, those with low disclosure had similar mean levels of depressive symptoms at post-intervention (average level = 2.02, $Z = 1.58, p < .06$ at one-tail level) to those with high homophobia. However, those reporting low levels of internalized homophobia and high disclosure reported the lowest levels of depressive symptoms at post-intervention (average level = -0.91, $Z = -0.81, p < .06$, see the bottom bolded and dashed line). It is important to note that its marginally significant positive slope at the one-tail level ($b = 1.26, Z = 1.78, p < .05$) suggested that the levels of depressive symptoms slightly increased over time, reaching the similar levels at the 1-month follow-up.

For life satisfaction, the interaction of ethnic identity and distress disclosure (see

Figure 20 and Table 12) was not significant in predicting the intercept ($b = -0.41, Z = -0.90, p > .05$) or the slope ($b = -0.10, Z = -0.34, p > .05$). These results indicate that the mean levels at post-intervention and linear rate of change of life satisfaction were not significantly different at different levels of distress disclosure and ethnic identity. The interaction of internalized homophobia and distress disclosure (see Figure 21 Table 13) did not significantly predict the intercept ($b = 0.23, Z = 0.40, p > .05$) but did significantly predict the slope ($b = 0.67, Z = 2.15, p < .05$). Thus, the mean levels of life satisfaction at the post-intervention were not significantly different at different levels of distress disclosure and internalized homophobia but the rates of change across the follow-up period were. This model also had a main effect of internalized homophobia on the slope ($b = -1.03, Z = -3.38, p < .001$), indicating that higher levels of internalized homophobia were significantly associated with linear decreases in life satisfaction over time.

As in the prior analyses the simple effects were analyzed to further explore the nature of the interaction of internalized homophobia and distress disclosure on life satisfaction over time. Because the interaction did not significantly predict the intercept, it is not surprising that the average levels of life satisfaction at the post-intervention are very similar for those at different levels of internalized homophobia and distress disclosure (As seen in Figure 22). However, there were different patterns in terms of the rate of change on life satisfaction. At higher levels of internalized homophobia, those with higher comfort levels with distress disclosure had a non-significant slope ($b = -0.50, Z = -0.57, p > .05$, see the top un-bolded and dashed line). Conversely, at higher levels of internalized homophobia, those with lower comfort levels with distress disclosure had a significant negative slope ($b = -1.84, Z = -1.94, p < .05$, see the bottom un-bolded and solid line). Thus, the pattern of the rate of change on

life satisfaction for those higher in internalized homophobia varies depending on comfort level with distress disclosure. Specifically, those who have higher comfort levels of disclosure about their distress appear to maintain their elevated levels of life satisfaction over the 1-month follow-up period, while those who have lower levels of comfort with disclosing distress showed a decrease in life satisfaction over the 1-month follow-up period.

At the lower levels of internalized homophobia, those with higher levels of disclosure showed a non-significant slope ($b = 0.23$, $Z = 0.18$, $p > .05$, see the middle bolded and dashed line) and the slope for those with low levels of disclosure approached significant at the one-tail level ($b = 1.57$, $Z = 1.50$, $p < .07$, see the middle bolded and solid line). This implies that changes in levels of life satisfaction over time may vary depending on levels of comfort with distress disclosure for those lower in internalized homophobia. Specifically, there is no change over time for those high in distress disclosure but those low in distress disclosure have an increasing trend in their levels of life satisfaction over the 1-month follow-up period.

CHAPTER 5: DISCUSSION

Research on same-sex attracted Asian American women suggests that these women are subject to a range of cultural stressors that are likely to result in higher levels of emotional distress (i.e., Chan, 1987, 1989; Li & Orleans, 2001; Poon & Ho, 2002). Research also suggests that these women are less likely to seek help from the mental health community (e.g., Leong, 1989, U.S. Department of Health and Human Services, 2001) and are more likely to report that traditional modes of support from the LGB community do not meet their specific needs (i.e., Chan, 1989; Poon & Ho, 2002). Prior studies have suggested that support via the Internet may be one way for these women to safely and anonymously receive support to decrease their levels of distress (i.e., Chang, Yeh, & Krumboltz, 2001; McKenna & Bargh, 1998). The present findings partially support the past literature and expand on it by exploring an online intervention designed for same-sex attracted Asian American women, as well as exploring perceived online group support and comfort with distress-disclosure as moderators between ethnic identity or internalized homophobia and mental health (i.e., life satisfaction and depressive symptoms).

Treatment Effects

The first purpose of the study was to evaluate the effectiveness of an online support group intervention. The current results indicate there were no differences in levels of depressive symptoms at the end of the intervention or rate of change during the 1-month follow-up period for participants in the online support group versus the control group. However, participants in the online support group did report a higher level of life satisfaction, as compared with those in the control condition at post-intervention and those levels were maintained over time (i.e. 2-week and 1-month follow-ups). These results partially support

past evidence suggesting that participation in an online support group is one way to effectively provide support for participants (i.e., Chang, Yeh, & Krumboltz, 2001; McKenna & Bargh, 1998). More specifically, an online support group intervention appears to be one way for same-sex attracted Asian American women to increase their levels of life satisfaction.

Group Condition as a Moderator

Another goal of this study was to explore several potential moderating variables of the relationship between ethnic identity or internalized homophobia and depressive symptoms or life satisfaction. The first moderating variable was group condition (i.e., online support or control group). Group condition was not found to be a significant moderator of ethnic identity or internalized homophobia on the intercept or linear rate of change of depressive symptoms. However, the results did indicate a significant moderation effect of ethnic identity and group condition on levels of life satisfaction. The result implied that those with high levels of ethnic identity who participated in the support group have significantly higher levels of life satisfaction than those in the control group at the post-intervention and continue to maintain this elevated level of life satisfaction at the 2-week and 1-month follow-ups. However, at the low levels of ethnic identity, there are no differences in terms of the level of life satisfaction for those in the support and control groups at post-intervention, 2-week, and 1-month follow-ups. Prior research has suggested that a strong ethnic identity is positively related to positive affect, life satisfaction (Yoo & Lee, 2005), and self-esteem (Lee, 2003) in Asian Americans. In the current study, this is the case only for those with high ethnic identity in the support group, but not in the control group. It is likely that those who have a strong Asian ethnic identity have a difficult time reconciling their homosexual

feelings with their Asian cultural values, which are generally inconsistent with a homosexual lifestyle (i.e., Chan, 1987, 1989; Li & Orleans, 2001; Poon & Ho, 2002). However, those who participated in the support group may have had the opportunity to explore and experiment with ways to reflect or integrate these seemingly divergent aspects of their identity, resulting in higher levels of reported life satisfaction. However, those in the control group did not have the opportunity to discuss this struggle and learn from with others who better manage this identity conflict, resulting in the lowest levels of life satisfaction. Those with a weaker ethnic identity are likely to have less internal struggle about their Asian and homosexual identities, thus it makes sense that their levels of life satisfaction were between those two groups described above.

Group condition was also found to moderate the effect of internalized homophobia on life satisfaction over time. Specifically, those with high levels of internalized homophobia in the online support group reported higher levels of life satisfaction at post-intervention than those in the control group and those levels remained approximately stable across the follow-up period. This result provides empirical support for suggestions from Chojnacki and Gelberg (1995) that LGB homogeneous groups might be particularly important for those who are struggling with their LGB identity. Moreover, right after the intervention, those indicating low levels of internalized homophobia in both the support and control conditions reported similar levels of life satisfaction that were between those reporting high internalized homophobia. However, those in the control group maintained their life satisfaction level over time, while those in the support group had increases in their life satisfaction in the 1-month follow-up period. This result indicates that those with fewer struggles related to their homosexual identity in the support group have the best result after intervention effects by

continuing to improve in life-satisfaction during the 1-month follow-up period. It is possible that those with lower levels of internalized homophobia are better able to implement the feedback and skills they learned from the group (e.g., self-affirmation, feeling of universality, advice on ways of coping with distress, ability to help others with similar struggles) and continue to build on these benefits outside of the online group, to increase levels of life satisfaction to the highest levels over time.

Perceived Online Support as a Moderator

The next purpose of this study was to explore perceived support from the online group as a moderator between ethnic identity or internalized homophobia and depressive symptoms or life satisfaction. Moderation analyses showed that perceived online support did interact with ethnic identity to impact levels of depressive symptoms at post-intervention. Specifically, those reporting high levels of ethnic identity and high support had the highest level of depressive symptoms at post-intervention and those levels were maintained over the one-month follow-up period. Conversely, those reporting low levels of ethnic identity and high support had the lowest overall levels of depressive symptoms at post-intervention, although the lower level of depression was not maintained over the follow-up period. This result is quite surprising given previous research suggesting high ethnic identity is associated with positive mental health outcomes (Crocker, Luhtanen, Blaine, & Broadnax, 1994; Yoo & Lee, 2005). However, this finding is similar to Yoo and Lee's (2008) findings in the racial discrimination context. They found that determining whether a strong ethnic identity will intensify or buffer the association between racial discrimination and mental health outcomes is a very complex topic and may depend on the Asian Americans' generational status. They found that in the face of racial discrimination, Asian American immigrants with a stronger

ethnic identity did report lower negative affect; while U. S. born Asian Americans (i.e., 2nd generation) with a stronger ethnic identity reported higher negative affect. As noticed earlier, in the present study, most of participants in the support group are 2nd generation Asian Americans. It is possible that those with stronger ethnic identity might take greater offense and feel more upset about others' rejection of their ethnic identity and sexual identity than those with weaker ethnic identity. Therefore, they reported the highest depressive symptoms. Conversely, those with lower ethnic identity levels appear to have initially benefited from the perceived support, perhaps by allowing them to feel a sense of inclusion and connection with similar others; however, they were not able to maintain this benefit after the group. This finding is consistent with a recent study of in-person support groups for Asian Americans, suggesting that participants with a more diffuse ethnic identity felt a sense of inclusion and pride in their ethnicity by the end of the group (Johnson, Takesue, & Chen, 2007), thereby increasing their overall sense of well-being.

A positive main effect for the slope of perceived online group support on depressive symptoms was also found. This result indicates that higher levels of support were associated with slight increases in depressive symptoms over the one-month follow-up period. One possible explanation is, after the support group ends, the absence of continuous support and connection may reduce the gains from support group.

The interaction of ethnic identity and perceived online group support was found to predict the rate of change in life satisfaction but not post-intervention levels. That is, those with both high and low levels of ethnic identity and perceived group support had similar post-intervention levels of life satisfaction; however, those reporting low ethnic identity and high support showed a decreasing pattern of life satisfaction over the follow-up period, while

the remaining slopes showed approximately stable levels over time. As in the prior interaction, one possible explanation for this is that those with low ethnic identity and high support initially benefit from the support, but are unable to maintain these levels. Perhaps these individuals are unable to find similar support systems outside of the group. Perhaps there is a need to have a longer online support group for those with low ethnic identity to maintain their gains from the support group. It is interesting to note that at the one-month follow-up, those reporting high ethnic identity and high support show the highest levels of life satisfaction. This finding appears to be in direct contrast to the finding in the previous moderation analysis that these individuals have the highest levels of depressive symptoms. It is possible that life satisfaction is a reflection of the pride these individuals feel in their ethnic identity (e.g. Phinney & Ong, 2007) while depressive symptoms represents their sadness regarding their struggles as a same-sex attracted Asian Americans. Future studies will need to be conducted to further explore these trends.

Comfort Level with Distress Disclosure as a Moderator

The final purpose of the study was to explore self-disclosure as a moderator between ethnic identity or internalized homophobia and mental health outcomes (i.e., life satisfaction and depressive symptoms) for those who participated in the support group. The interaction of internalized homophobia and distress disclosure was found to marginally predict levels of depressive symptoms at post-intervention but not the linear rate of change. Further simple effect analyses showed that when internalized homophobia is high, the mean level of depressive symptoms for those with high distress disclosure is similar to the level for those with low distress disclosure. However, when internalized homophobia is low, those with high disclosure showed the lowest level of depressive symptoms at post-intervention. However,

the significant slope implied that the low level of depressive symptoms is not maintained during the follow-up period. One possible explanation is that those lower in internalized homophobia and more willing to disclose their distress felt they were able to help others by disclosing their past struggles. It is possible that this sense of altruism and expression of empathy enabled them to feel connected to the members, which initially helped them to feel fewer depressive symptoms. However, after the group ended, the low level of depressive symptoms was not maintained, perhaps because this source of connection was not available. This interpretation is consistent with a recent finding that both men and women expected helping behaviors to increase their mood, however, women in particular expected increases in positive emotions following: empathy and caring behaviors, support for a tough decision, and sticking up for a friend when attacked (Sprecher, Fehr & Zimmerman, 2007).

Another significant moderation effect is that internalized homophobia and distress disclosure significantly predicted the rate of change in life satisfaction over the follow-up period but not the mean level at post-intervention. Specifically, when levels of internalized homophobia are high, for those who are more comfortable with disclosing distress, levels of life satisfaction remained stable over time; however, for those who are less comfortable with disclosing distress, their levels of life satisfaction were initially similar to other participants but then decreased over the one-month follow-up period. One explanation for this result is that those with high internalized homophobia and less comfort with disclosing distress are likely to experience the highest levels of distress before the group, thus participation initially benefited these individuals as evidenced by post-intervention levels that are similar to the other participants. However, these individuals were not able to maintain the benefits received from the group so their levels of life satisfaction declined over time. This result might imply

that a longer intervention period may be necessary for those who have higher levels of internalized homophobia to maintain these benefits.

Moreover, when levels of internalized homophobia were low, for those who were more comfortable with distress disclosure, levels of life satisfaction remained stable over time; however, those who were less comfortable with distress disclosure showed an increase in life satisfaction across the follow-up period to the highest overall levels of any group. Perhaps, the support group also benefited those who were low in homophobia and less comfortable with disclosing distress. It is possible that those with low homophobia were able to maintain and build on the benefits of distress disclosure received from the group (e.g. increased sense of safety for future sharing, feel understood and connected to others). Also, these findings support previous research that those who do not normally disclose their distress would be more likely to benefit from an online intervention support group because this may be one a few options for them to share and receive support in a way that feels safe (i.e., Amichai-Hamburger, Wainapel, & Fox, 2002; Lumley, Tojek, Macklem, 2002).

In sum, of all the moderation effects (e.g., group condition, perceived online support, and comfort level of disclosing distress feelings) only two significant interactions were found for levels of depressive symptoms. One possible reason may be related to findings suggesting that Asian Americans are likely to replace psychological symptoms with somatic ones (Leong, 1987) due to Asian cultural values of emotional control, restraint of strong feelings, and avoidance of shame (e.g., Kim, Atkinson, & Yang, 1999; Leong; Sue & Sue, 2003). Thus, participants may have felt more comfortable in reporting their levels of life satisfaction than levels of depressive symptoms. Perhaps, future research could include measures of somatic complaints or other measures of mental well-being to further detect benefits received

from participating in the group. Another possibility is that the life satisfaction scale had a 7-point response range (i.e., ranging from strongly disagree to strongly agree), while the measure of depressive symptoms only had a 3-point response range (i.e., hardly ever or never, some of the time, or much or most of the time). It is possible that the narrow response range did not afford enough variance to detect changes in perceived levels of depressive symptoms. Thus, future research could include other measures of depressive symptoms with a greater sensitivity to changes in levels.

Clinical Implications

The present findings support several important clinical implications for same-sex attracted Asian American women. Most importantly, it appears that a homogeneous online support group intervention is one possible way to provide support to same-sex attracted Asian American women to increase levels of life satisfaction. Additionally, it appears that for those with low levels of internalized homophobia, participation in a short-term online support group (i.e., 1-month) may result in initial gains as well as continued improvement after their group participation. However, it is important to recognize that while an online support group intervention had the highest positive gains for those with high levels of internalized homophobia, these gains appear to recede over time. Thus, these individuals may need to participate over a longer time period or continue to receive support from mental health services to help them to maintain their elevated levels of life satisfaction.

The results also imply that the benefits of perceived online support on mental health outcomes (i.e., depression and life satisfaction) might take into account the level of ethnic identity. For example, those reporting high ethnic identity and high support showed mixed results. This group showed the highest levels of depressive symptoms over the 1-month

follow-up period as well as the highest level of life satisfaction at the 1-month follow-up period. While a combination of their own pride about their ethnic identity and perceived high support may contribute to their sense of life satisfaction, at the same time, their group experiences may trigger their sadness about their own past hurts or struggles or the struggles of others. Those reporting low levels of ethnic identity and perceiving higher levels of support received the greatest benefit, although those benefits were not maintained over time. Thus, a group may be helpful for those reporting low levels of ethnic identity but a longer group may be needed, to receive maximum benefit.

Likewise, the disclosure moderation suggested that an online intervention might also be an option for those who are less likely to disclose their feelings of distress to receive support and share in an anonymous fashion, particularly for those with low levels of internalized homophobia. However, these results also indicate that the increases in life satisfaction were not maintained for those with higher levels of internalized homophobia suggesting that a longer intervention may be warranted for these individuals.

Limitations

There are several important limitations that should be noted when interpreting the findings of this study. First, the sample size and the power to detect treatment and moderation effects were low in this study. Therefore, it is possible that some of the marginal and non-significant relationships would have reached significance with a higher sample size. Second, a relatively high proportion of the sample (i.e., 68%) indicated they had participated in counseling (past or present). This finding is in stark contrast to the large body of literature suggesting that Asian Americans underutilize mental health services (Leong, 1986; U.S. Department of Health and Human Services, 2001). However, recent studies have indicated

that the LGB community may be more likely to use mental health services than their heterosexual counterparts (Cochran, 2001). It is possible that same-sex attracted Asian American women are also more likely to utilize services. The question remains, however, regarding how these results may have been different if the sample consisted of those who were unwilling or unable to receive support from traditional mental health providers. Third, a fairly high proportion of the participants were out to friends (87%), family (50%), and co-workers (61%). It is possible that an online group intervention would have different outcomes for those who were still exploring their sexual orientation or were not yet out to significant others. Finally, the participants in this study were able to indicate their consent after discovering what each condition entailed. This resulted in a far greater frequency of potential participants agreeing to participate in the control condition than in the group support condition. Thus, it is possible that those who participated in the support group were qualitatively different in some way than those who participated in the control group. One difference found in this study was the generational status of the participants. Specifically, the vast majority of the participants in the support group were the 2nd generation Asian Americans, while those in the control group were equally mixed with the 1.5 and 2nd generations. Although the significant difference was not maintained after the correction for multiple tests, future studies might explore how generational status might impact participation and outcomes of online support groups.

Future Research Directions

Given the clinical implications as well as limitations reported in this study, there are a number of directions for future research to build on the present findings. First, Chang, Yeh, and Krumboltz (2001) reported that Asian American men who participated in a four-week

online support group highly valued their participation and recommended similar groups be made available for other Asian American men. Thus, future research may repeat this study for same-sex attracted Asian American men. Next, another emerging body of literature is the exploration of differences between those identifying as gay or lesbian and those identifying as bisexual. A recent study by Balsam and Mohr (2007) reported that bisexual participants indicated higher levels of identity confusion, lower levels of connection to the LGB community, and lower levels of self-disclosure. Thus, future research might apply a similar online intervention for this population. Furthermore, a recent study found that same-sex attracted minority youths of different racial/ethnic backgrounds were not equally at risk for negative mental health outcomes (Consolacion, Russell, & Sue, 2004). Specifically, African American and Caucasian same-sex attracted youths reported higher levels of suicidal thoughts and lower levels of self-esteem than did Asian or Hispanic same-sex attracted youths. Thus, future research might explore how different ethnicities might respond to an online support intervention either in racially homogeneous or heterogeneous groups.

Findings from this study also indicate that those with high levels of internalized homophobia and low levels of ethnic identity were not able to maintain the benefits of the group over the 1-month follow-up period. Perhaps, future studies can explore longer interventions or combined interventions to target this population. Likewise, although it is clear that those with lower levels of internalized homophobia were able to continue to show elevated levels of life satisfaction over time, it is not yet clear how these individuals were able to maintain their gains. It may be possible that those with lower levels of internalized homophobia were able to make changes outside of the group that helped them to continue to feel better. Perhaps future studies could explore factors such as perceived social support or

one's ability to self-affirm in response to negative feedback to better understand this relationship.

APPENDIX: PROCEDURE CHART

	Support Group	Control Group
Week 1	Pre-test (Demographic questionnaire, MEIM, LIHS, DDI, CESD, and SWLS). Begin Support Group – Week 1 End of the week Survey (OSGQ)	Pre-test (Demographic questionnaire, MEIM, LIHS, DDI, CESD, and SWLS).
Week 2	Support group Week 2 End of the week Survey (OSGQ)	
Week 3	Support group Week 3 End of the week Survey (OSGQ)	
Week 4	Support group Week 4 End of the week Survey (OSGQ) Complete 1 st Follow-up Survey (CESD, SWLS)	Complete 1 st Follow-up Survey (CESD, SWLS)
Week 5		
Week 6	Complete 2 nd Follow-up Survey (CESD, SWLS)	Complete 2 nd Follow-up Survey (CESD, SWLS)
Week 7		
Week 8	Complete 3 rd Follow-up Survey (CESD, SWLS) Debrief and Compensation arrangement	Complete 3 rd Follow-up Survey (CESD, SWLS) Debrief and Compensation arrangement

Table 1
Participant Residence by Geographic Region and State

<i>Region/ State</i>	<i>n</i>	<i>Region/ State</i>	<i>n</i>	<i>Region/ State</i>	<i>n</i>	<i>Region/ State</i>	<i>n</i>	<i>Region State</i>	<i>n</i>	<i>Region/ State</i>	<i>n</i>
<i>West</i>	32	<i>Midwest</i>	10	<i>South</i>	19	<i>Northeast</i>	17	<i>Pacific</i>	1	<i>Currently Reside</i>	4
California	26	Indiana	1	District of Columbia	2	Massachusetts	6	Hawaii	1	<i>Out side of U.S</i>	
Colorado	1	Iowa	4	Florida	1	New York	6				
Oregon	5	Kansas	2	Georgia	3	Pennsylvania	5				
Washington	2	Michigan	1	Louisiana	1						
		Minnesota	1	Maryland	3						
		Missouri	1	North Carolina	2						
		Ohio	1	Texas	4						
				Virginia	3						

Note. $N = 83$; Geographic regions as indicated by US Census Bureau

Table 2

Item Means, Standard Deviations, Alphas, and Correlations among the 12 Measured Variables for the Support Group

	Means	SD	Alpha	2	3	4	5	6	7	8	9	10	11	12
1. MEIM	3.69	.80	.93	-.14	.41**	.23	-.18	-.04	-.08	-.10	.26	.27	.32	.27
2. LIHS	2.29	.82	.96		-.08	-.21	.43**	.48**	.29	.42*	-.48**	-.36*	-.15	-.58**
3. DDI	3.74	.65	.90			.11	-.12	-.12	-.17	-.02	.18	.25	.43**	.20
4. OSAVG	7.31	1.49	.90				-.30	-.39*	-.28	-.21	.25	.31	.16	.22
5. CESD – Pre-test	.85	.68	.91					.84**	.75**	.72**	-.80**	-.68**	-.23	-.67**
6. CESD – Post 1	.65	.56	.92						.79**	.80**	-.74**	-.75**	-.34*	-.68**
7. CESD – Post 2	.69	.55	.91							.80**	-.55**	-.59**	-.30	-.63**
8. CESD – Post 3	.69	.57	.89								-.71**	-.61**	-.27	-.68**
9. SWLS – Pre-test	4.61	1.63	.93									.82**	.45**	.80**
10. SWLS – Post 1	5.16	1.02	.85										.57**	.81**
11. SWLS – Post 2	5.11	1.23	.92											.51**
12. SWLS – Post 3	5.11	1.26	.92											

Note. $N = 34-45$. MEIM = Multigroup Ethnic Identity Measure; LIHS = Lesbian Internalized Homophobia Scale; DDI = Distress Disclosure Index; OSAVG = Online Support Group Questionnaire, averaged over 4 time points; CESD pre-test, post 1, post 2, post 3 = Center for Epidemiological Studies – Depression Mood Scale at pre-test, post-intervention, 2-week follow-up, and 1-month follow-up time points, respectively; SWLS pre-test, post 1, post 2, post 3 = Satisfaction with Life Scale at pre-test, post-test, 2-week follow-up, and 1-month follow-up time points, respectively. Mean and SD are based on the item-level, not sum of the items. Alpha for OSAVG is the average alpha of the four weekly surveys (weekly alpha range = .82 to .95). * $p < .05$, ** $p < .01$

Table 3

Means, Standard Deviations, Alphas, and Correlations among the 11 Measured Variables for the Control Group

	<i>M</i>	<i>SD</i>	<i>Alpha</i>	2	3	4	5	6	7	8	9	10	11
1. MEIM	3.56	.92	.94	-.17	.08	-.16	-.07	-.06	-.11	-.04	-.12	.12	-.11
2. LIHS	2.35	.71	.94		-.35*	.24	.36*	.30	.29	-.48**	-.35*	-.28	-.35*
3. DDI	3.67	.76	.93			-.08	-.07	-.28	-.21	.20	.30	.24	.27
4. CESD – Pre-test	.82	.51	.85				.76**	.75**	.63**	-.58**	-.41*	-.43**	-.44**
5. CESD – Post 1	.70	.46	.83					.79**	.62**	-.58**	-.48**	-.56**	-.53**
6. CESD – Post 2	.78	.49	.84						.76**	-.40*	-.44**	-.55**	-.49**
7. CESD – Post 3	.75	.44	.82							-.36*	-.34*	-.38*	-.39*
8. SWLS – Pre-test	4.47	1.38	.90								.73**	.62**	.73**
9. SWLS – Post 1	4.84	1.42	.93									.81**	.91**
10. SWLS – Post 2	4.82	1.22	.88										.91**
11. SWLS – Post 3	4.86	1.27	.94										

Note. $N = 35-38$. MEIM = Multigroup Ethnic Identity Measure; LIHS = Lesbian Internalized Homophobia Scale; DDI = Distress Disclosure Index; CESD pre-test, post 1, post 2, post 3 = Center for Epidemiological Studies – Depression Mood Scale at pre-test, post-intervention, 2-week follow-up, and 1-month follow-up time points, respectively; SWLS pre-test, post 1, post 2, post 3 = Satisfaction with Life Scale at pre-test, post-intervention, 2-week follow-up, and 1-month follow-up time points, respectively. Mean and SD are based on the item-level, not sum of the items.

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

Table 4
Structural Paths for Latent Growth Curve Model of Ethnic Identity or Internalized Homophobia by Group Condition on Depression

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
CESD pre → Intercept	.66***	.06	10.41
MEIM → Intercept	.49	.53	.92
LIHS → Intercept	.84	.59	1.42
Group Condition → Intercept	-1.01	.77	-1.31
MEIM X Condition → Intercept	-.19	.78	-.25
LIHS X Condition → Intercept	-.23	.79	-.29
Linear Slope			
CESD pre → Linear Slope	-.05	.04	-1.20
MEIM → Linear Slope	-.18	.35	-.51
LIHS → Linear Slope	-.21	.38	-.54
Group Condition → Linear Slope	-.13	.50	-.26
MEIM X Condition → Linear Slope	-.07	.50	-.13
LIHS X Condition → Linear Slope	.18	.51	.35

Note. $N = 71$. CESD pre = Center for Epidemiological Studies – Depression Mood Scale at pre-test; MEIM= Multigroup Ethnic Identity Measure; LIHS = Lesbian Internalized Homophobia Scale; Group Condition = support group and control group (dummy coded as 1 and 0, respectively).

*** $p < .001$

Table 5
Structural Paths for Latent Growth Curve Model of Ethnic Identity or Internalized Homophobia by Group Condition on Life Satisfaction

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
SWLS pre → Intercept	.58***	.07	8.31
MEIM → Intercept	-1.04+	.65	-1.60
LIHS → Intercept	-.86	.75	-1.14
Group Condition → Intercept	2.01*	.94	2.15
MEIM X Condition → Intercept	1.75+	.96	1.83
LIHS X Condition → Intercept	1.79+	.96	1.87
Linear Slope			
SWLS pre → Linear Slope	-.02	.03	-.72
MEIM → Linear Slope	.06	.25	.24
LIHS → Linear Slope	.09	.29	.32
Group Condition → Linear Slope	-.18	.36	-.48
MEIM X Condition → Linear Slope	-.07	.37	-.18
LIHS X Condition → Linear Slope	-1.12**	.37	-3.02

Note. $N = 71$. SWLS = Satisfaction with Life Scale at pre-test; MEIM= Multigroup Ethnic Identity Measure; LIHS = Lesbian Internalized Homophobia Scale; Group Condition = support group and control group (dummy coded as 1 and 0, respectively).

*** $p < .001$, ** $p < .01$, * $p < .05$ (at two-tail level); + $p < .05$ (at one-tail level)

Table 6
Structural Paths for Latent Growth Curve Model of Ethnic Identity by Perceived Online Support on Depression

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
CESD pre → Intercept	.68***	.07	9.09
MEIM → Intercept	.77	.56	1.37
OSAVG → Intercept	-.14	.64	-.22
MEIM X OSAVG → Intercept	1.20*	.54	2.22
Linear Slope			
CESD pre → Linear Slope	-.02	.05	-.36
MEIM → Linear Slope	-.42	.36	-1.18
OSAVG → Linear Slope	.55	.40	1.37
MEIM X OSAVG → Linear Slope	-.18	.34	-.53

Note. $n = 35$. CESD pre = Center for Epidemiological Studies – Depression Mood Scale at pre-test; MEIM = Multigroup Ethnic Identity Measure; OSAVG = Online Support Group Questionnaire, averaged over 4 time points.

*** $p < .001$; * $p < .05$

Table 7
Structural Paths for Latent Growth Curve Model for Internalized Homophobia by Perceived Online Support on Depression

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
CESD pre → Intercept	.60***	.09	6.99
LIHS → Intercept	.60	.60	1.00
OSAVG → Intercept	-.61	.58	-1.05
LIHS X OSAVG → Intercept	-.31	.48	-.65
Linear Slope			
CESD pre → Linear Slope	-.03	.05	-.52
LIHS → Linear Slope	.03	.36	.09
OSAVG → Linear Slope	.62+	.35	1.75
LIHS X OSAVG → Linear Slope	-.36	.29	-1.23

Note. $n = 35$. CESD pre = Center for Epidemiological Studies – Depression Mood Scale at pre-test; LIHS = Lesbian Internalized Homophobia Scale; OSAVG = Online Support Group Questionnaire, averaged over 4 time points.

*** $p < .001$ (at two-tail level); + $p < .05$ (at one-tail level)

Table 8
Structural Paths for Latent Growth Curve Model of Ethnic Identity by Perceived Online Support on Life Satisfaction

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
SWLS pre → Intercept	.48***	.06	7.84
MEIM → Intercept	.51	.53	.96
OSAVG → Intercept	.24	.56	.42
MEIM X OSAVG → Intercept	-.20	.49	-.41
Linear Slope			
SWLS pre → Linear Slope	.04	.04	.99
MEIM → Linear Slope	.39	.32	1.23
OSAVG → Linear Slope	.00	.34	.00
MEIM X OSAVG → Linear Slope	.58*	.30	1.96

Note. $n = 35$. SWLS pre = Satisfaction with Life Scale at pre-test; MEIM = Multigroup Ethnic Identity Measure; DDI = OSAVG = Online Support Group Questionnaire, averaged over 4 time points.

*** $p < .001$; * $p < .05$

Table 9
Structural Paths for Latent Growth Curve Model for Internalized Homophobia by Perceived Online Support on Life Satisfaction

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
SWLS pre → Intercept	.51***	.07	7.36
LIHS → Intercept	.49	.57	.86
OSAVG → Intercept	.45	.51	.87
LIHS X OSAVG → Intercept	.17	.42	.41
Linear Slope			
SWLS pre → Linear Slope	-.01	.04	-.22
LIHS → Linear Slope	-1.00**	.32	-3.16
OSAVG → Linear Slope	-.30	.29	-1.05
LIHS X OSAVG → Linear Slope	-.11	.23	-.49

Note. $n = 35$. SWLS pre = Satisfaction with Life Scale at pre-test; LIHS = Lesbian Internalized Homophobia Scale; OSAVG = Online Support Group Questionnaire, averaged over 4 time points.

*** $p < .001$, ** $p < .01$

Table 10
Structural Paths for Latent Growth Curve Model for Model of Ethnic Identity by Distress Disclosure on Depression

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
CESD pre → Intercept	.67***	.08	8.89
MEIM → Intercept	.48	.62	.78
DDI → Intercept	-.82	.64	-1.29
MEIM X DDI → Intercept	-.04	.53	-.07
Linear Slope			
CESD pre → Linear Slope	-.05	.05	-1.00
MEIM → Linear Slope	-.44	.37	-1.18
DDI → Linear Slope	.33	.39	.84
MEIM X DDI → Linear Slope	-.21	.32	-.64

Note. $n = 35$. CESD pre = Center for Epidemiological Studies – Depression Mood Scale at pre-test; MEIM = Multigroup Ethnic Identity Measure; DDI = Distress Disclosure Index
 *** $p < .001$ (at two-tail level)

Table 11
Structural Paths for Latent Growth Curve Model for Internalized Homophobia by Distress Disclosure on Depression

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
CESD pre → Intercept	.67***	.08	7.99
LIHS → Intercept	.59	.60	.98
DDI → Intercept	-.48	.53	-.90
LIHS X DDI → Intercept	.98++	.63	1.57
Linear Slope			
CESD pre → Linear Slope	-.03	.05	-.60
LIHS → Linear Slope	.00	.38	-.01
DDI → Linear Slope	.20	.34	.60
LIHS X DDI → Linear Slope	-.52	.39	-1.32

Note. $n = 35$. CESD pre = Center for Epidemiological Studies – Depression Mood Scale at pre-test; LIHS = Lesbian Internalized Homophobia Scale; DDI = Distress Disclosure Index
 *** $p < .001$ (at two-tail level); ++ $p < .06$ (at one-tail level)

Table 12
Structural Paths for Latent Growth Curve Model of Ethnic Identity by Distress Disclosure on Life Satisfaction

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
SWLS pre → Intercept	.48***	.06	8.14
MEIM → Intercept	.35	.53	.66
DDI → Intercept	.34	.55	.62
MEIM X DDI → Intercept	-.41	.45	-.90
Linear Slope			
SWLS pre → Linear Slope	.03	.04	.87
MEIM → Linear Slope	.16	.35	.47
DDI → Linear Slope	-.20	.36	-.56
MEIM X DDI → Linear Slope	-.10	.29	-.34

Note. $n = 35$. SWLS pre = Satisfaction with Life Scale at pre-test; MEIM = Multigroup Ethnic Identity Measure; DDI = Distress Disclosure Index

*** $p < .001$

Table 13
Structural Paths for Latent Growth Curve Model for Internalized Homophobia by Distress Disclosure on Life Satisfaction

Parameter	Raw <i>b</i> -weight	SE	Z
Intercept			
SWLS pre → Intercept	.51***	.07	7.23
LIHS → Intercept	.34	.57	.60
DDI → Intercept	.66	.49	1.34
LIHS X DDI → Intercept	.23	.58	.40
Linear Slope			
SWLS pre → Linear Slope	.00	.04	.00
LIHS → Linear Slope	-1.03***	.31	-3.38
DDI → Linear Slope	.00	.27	-.01
LIHS X DDI → Linear Slope	.67*	.31	2.15

Note. $n = 35$. SWLS pre = Satisfaction with Life Scale at pre-test; LIHS = Lesbian Internalized Homophobia Scale; DDI = Distress Disclosure Index

*** $p < .001$, * $p < .05$

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Figure 1: Stages of the Racial/Cultural Identity Development Model and Their Corresponding Attitudes (Sue, Mak, & Sue, 1998)

Stage	Attitude Toward Self	Attitude Toward Others Of the Same Minority	Attitude Toward Others of Different Minority	Attitude Toward Dominant Group
<i>Stage 1: Conformity</i>	Self-depreciating	Group-depreciating	Discriminatory	Group-appreciating
<i>Stage 2: Dissonance</i>	Conflict between self-depreciating and self-appreciating	Conflict between group-depreciating and group-appreciating	Conflict between dominant-held views of minority hierarchy and feelings of shared experience	Conflict between group-appreciating and group-depreciating
<i>Stage 3: Resistance and immersion</i>	Self-appreciating	Group appreciating	Conflict between feelings of empathy for other minority experiences and feelings of culturocentrism	Group depreciating
<i>Stage 4: Introspection</i>	Concern with basis of self-appreciation	Concern with nature of unequivocal appreciation	Concern with ethnocentric basis for judging others	Concern with basis of group depreciation
<i>Stage 5: Integrative awareness</i>	Self-appreciating	Group-appreciating	Group-appreciating	Selective appreciation

Figure 2: Stages of the Asian American Identity Development Model and Their Key Features (Kim, 2001)

Key Features	Stage 1: Ethnic Awareness	Stage 2: White Identification (Passive or Active)	Stage 3: Awakening to Social Political Consciousness	Stage 4: Redirection to an Asian American Consciousness	Stage 5: Incorporation
<i>Social Environment</i>	Mostly at home with family	Public arenas such as school systems	Social political movements and/or campus politics	Asian American community	General
<i>Critical Factor</i>	Extent of participation in Asian Ethnic Activities	Increased contact with White society which leads to acceptance of White values and standards	Gaining political consciousness related to being a racial/political minority and awareness of White racism	Immersion in Asian American experience	Clear and firm Asian American identity
<i>Self-Concept</i>	Greater participation leads to positive self-concept; less participation leads to neutral self-concept	Negative self-image, especially body image	Positive self-concept, identification as a minority in the United States	Positive self-concept, and identification as Asian American	Positive as a person
<i>Ego Identity</i>	Greater participation leads to clear sense as a person of Asian heritage, less participation leads to less clear meaning about being a person of Asian heritage	Being different, not fitting in, inferior to White peers, feel isolated and personally responsible for any negative treatment	Accepts being a minority but resists White values and White domination, feels oppressed but not inferior to Whites.	Proud of being Asian American, experience a sense of belonging	Whole person with race as only a part of their social identity
<i>Primary Reference Group</i>	Family	White people and dominant society	Individuals with similar political philosophy and antiestablishment perspective	Asian Americans, especially those at similar stage of identity development	People in general
<i>Hallmark of the Stage</i>	Discovery of ethnic heritage	Feelings of being different, alienation from self and other Asian Americans, and inability to make connections between personal experience and racism	Gaining new political perspective and sociological imagination, political alienation from Whites.	Focus on personal and Asian American experience, feel anger against Whites about treatment of Asian Americans	Blending of Asian American identity with the rest of an individual's identities

Figure 3: The Hypothesized Model

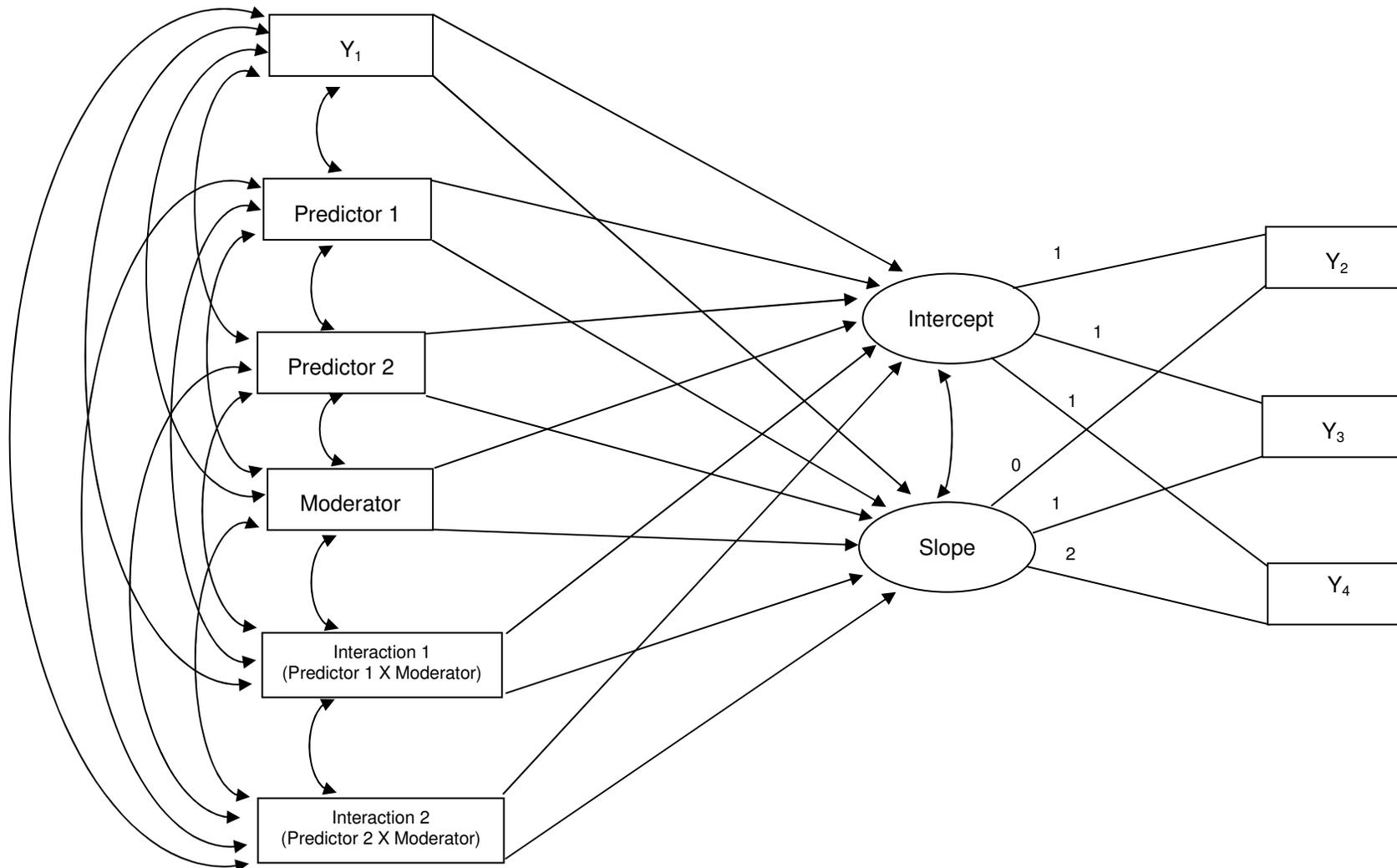


Figure 4

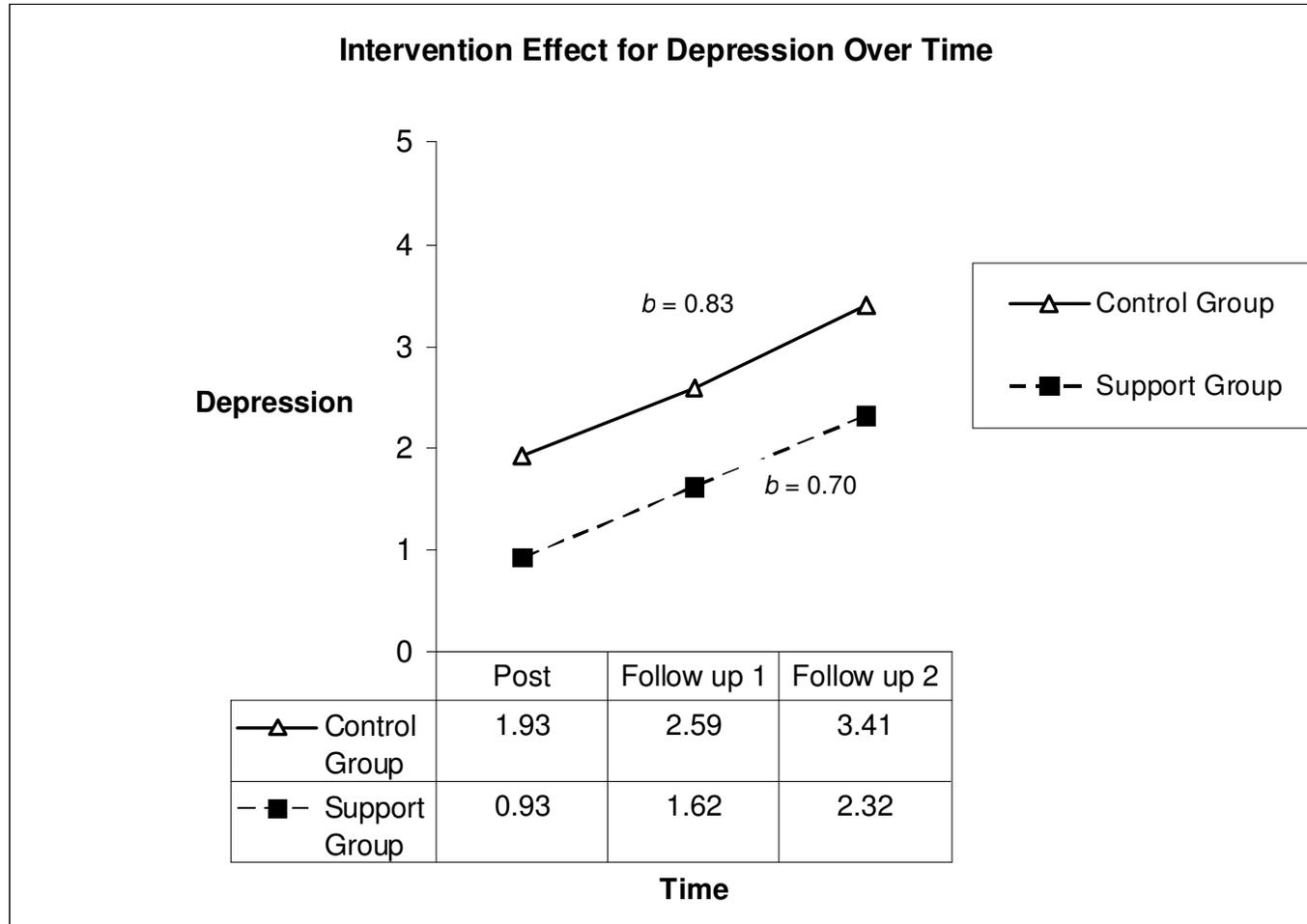


Figure 5

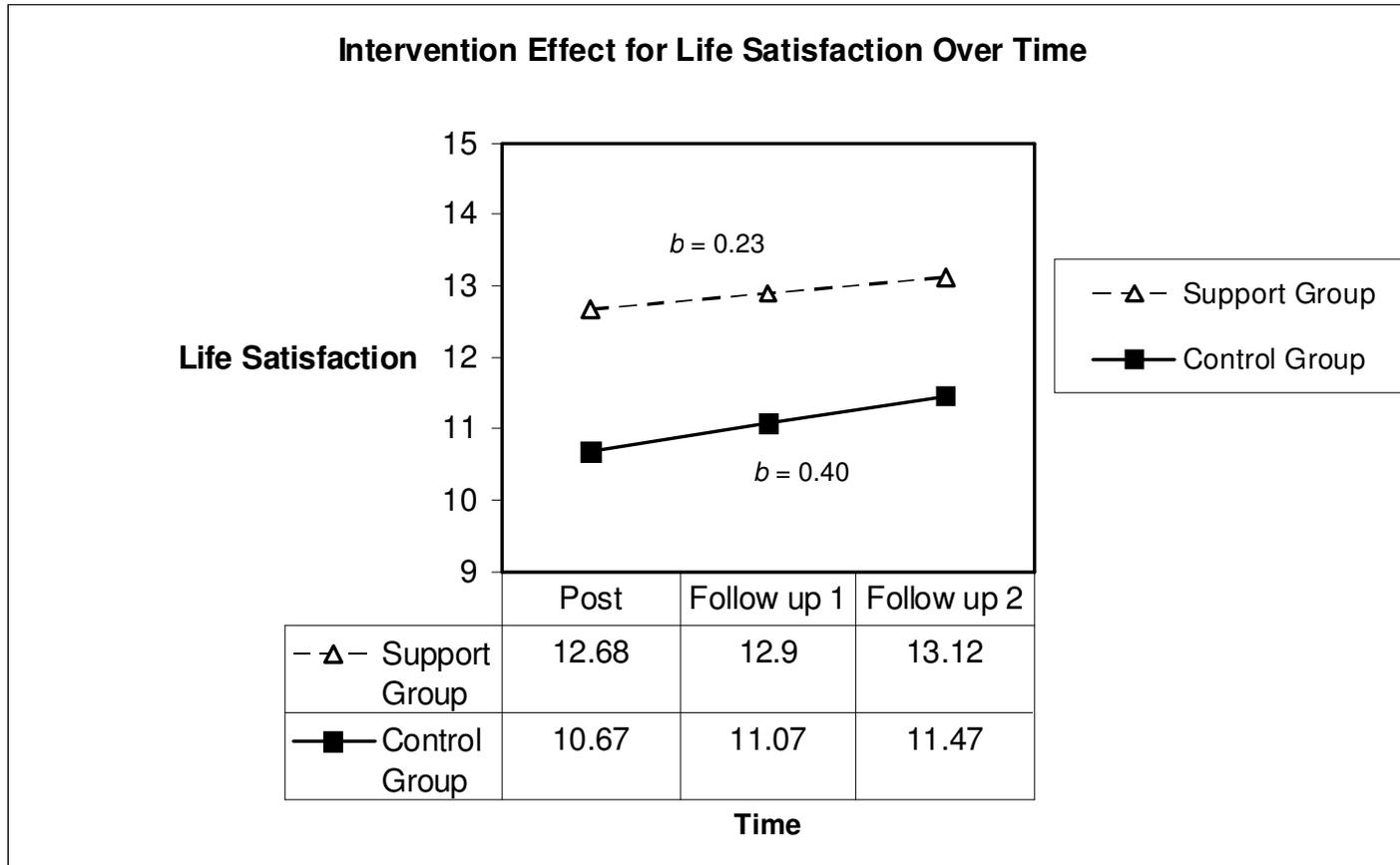
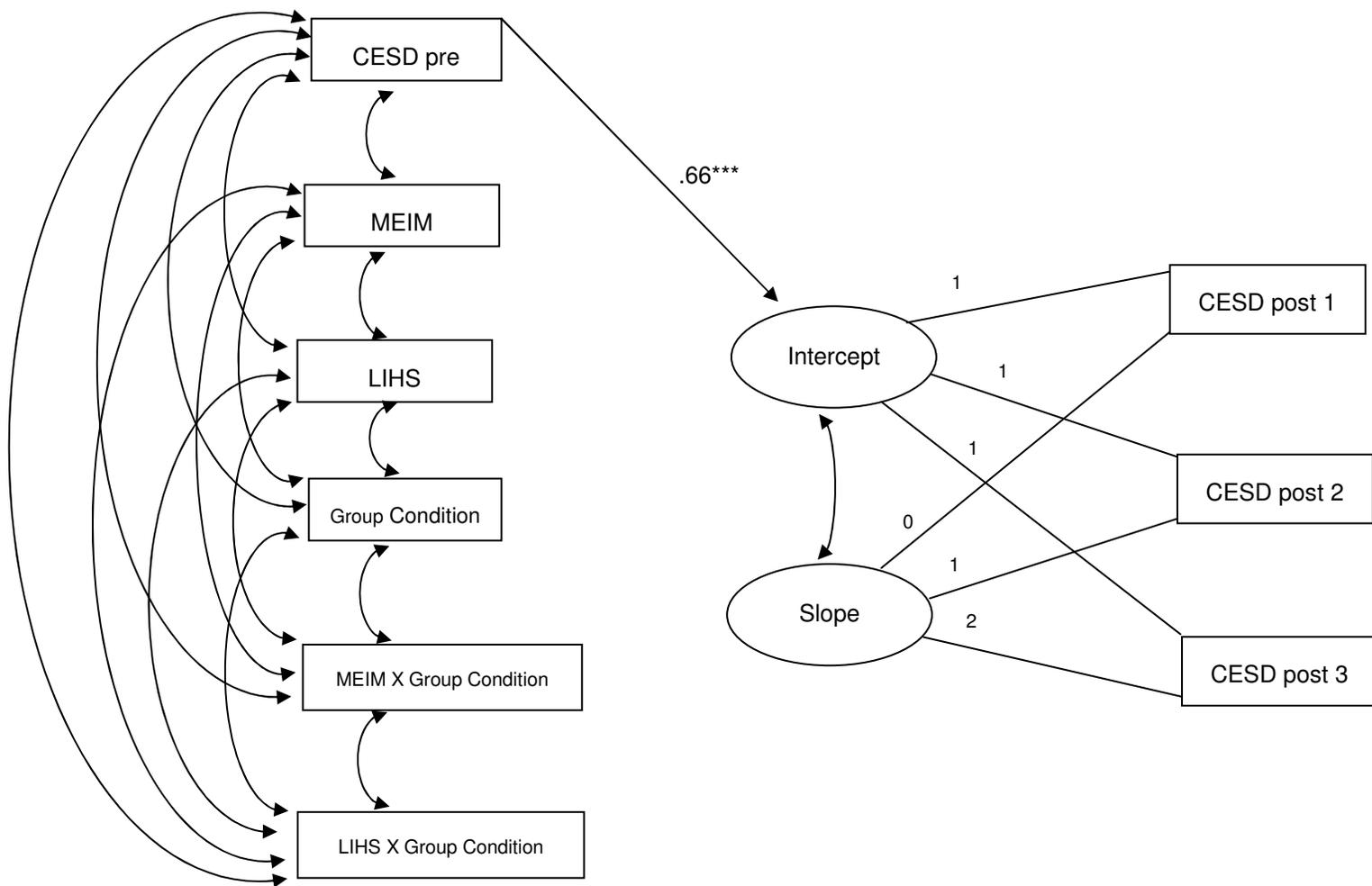
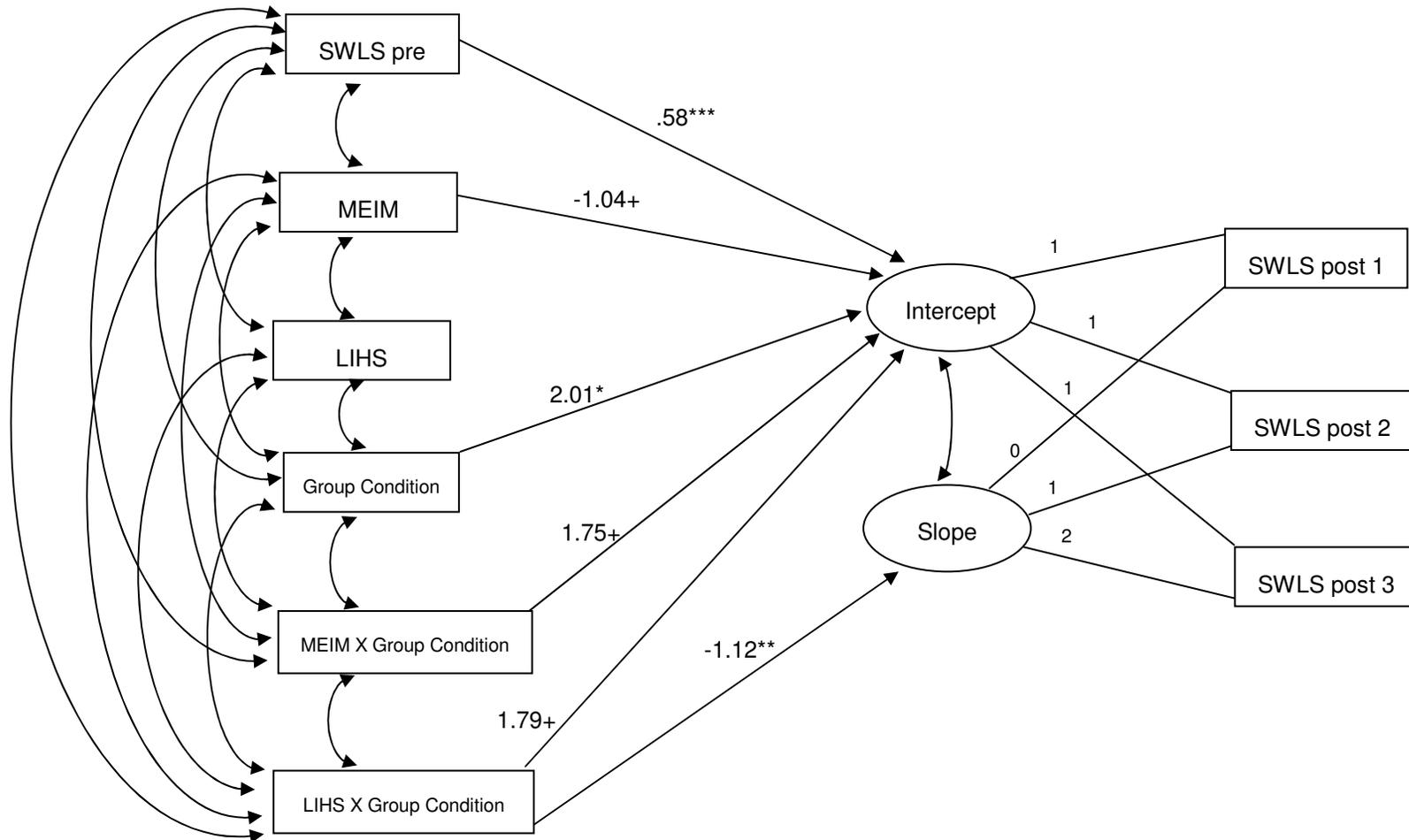


Figure 6: Moderation Model for Ethnic Identity or Internalized Homophobia by Group Condition on Depression



Note. N =71. CEESD pre-test, post 1, post 2, post 3 = Center for Epidemiological Studies – Depression Mood Scale at time points 1, 2, 3, and 4, respectively; MEIM= Multigroup Ethnic Identity Measure; LIHS = Lesbian Internalized Homophobia Scale; Group Condition = support group and control group (dummy coded as 1 and 0, respectively). *** $p < .001$

Figure 7: Moderation Model for Ethnic Identity or Internalized Homophobia by Group Condition on Life Satisfaction



Note. N =71. SWLS pre-test, post 1, post 2, post 3 = Satisfaction with Life Scale at time points 1, 2, 3, and 4, respectively; MEIM= Multigroup Ethnic Identity Measure; LIHS = Lesbian Internalized Homophobia Scale; Group Condition = support group and control group (dummy coded as 1 and 0, respectively). $+ p < .05$ (at one-tail level) ; $* p < .05$, $** p < .01$, $*** p < .001$ (at two-tail level)

Figure 8

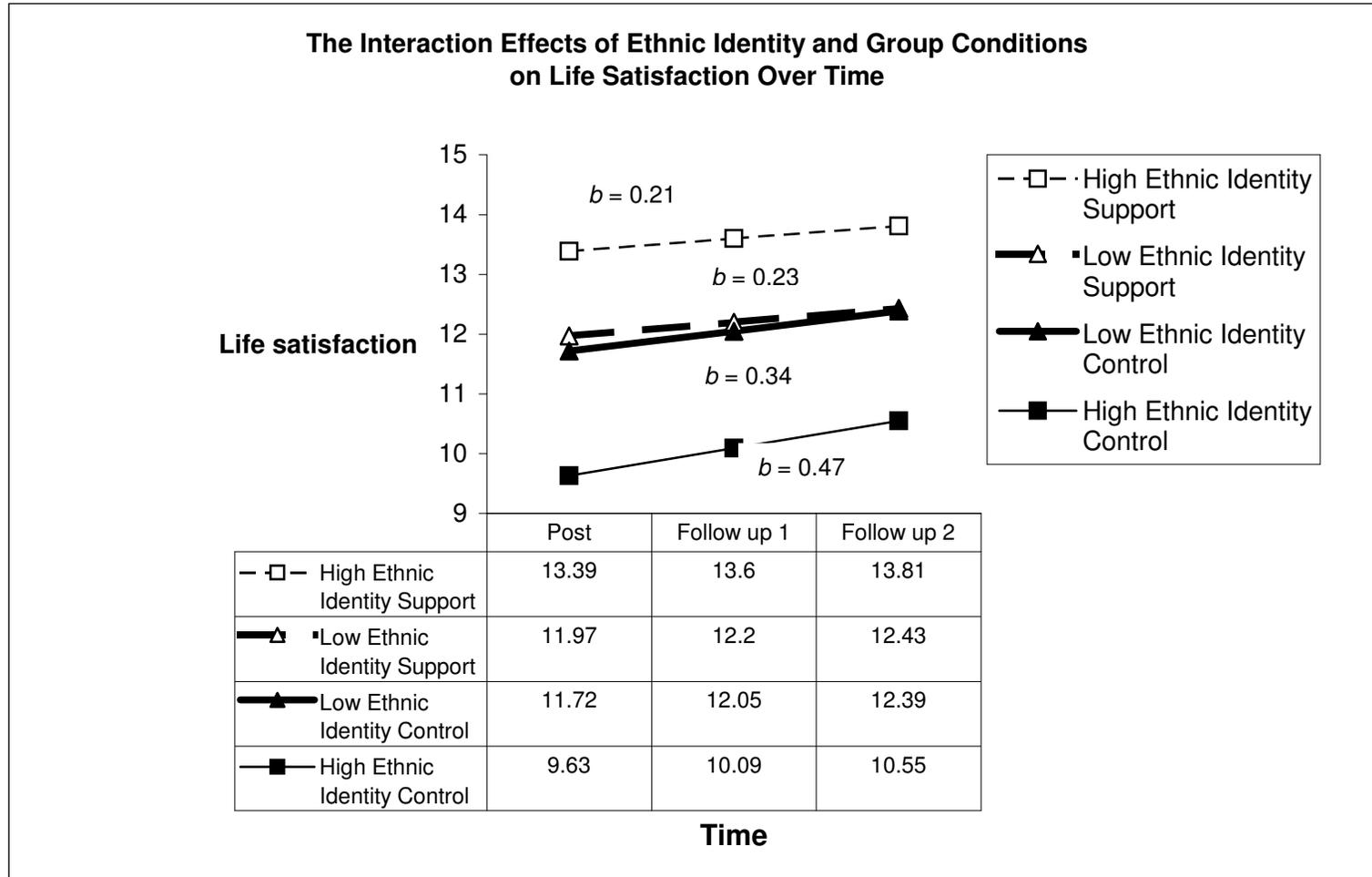
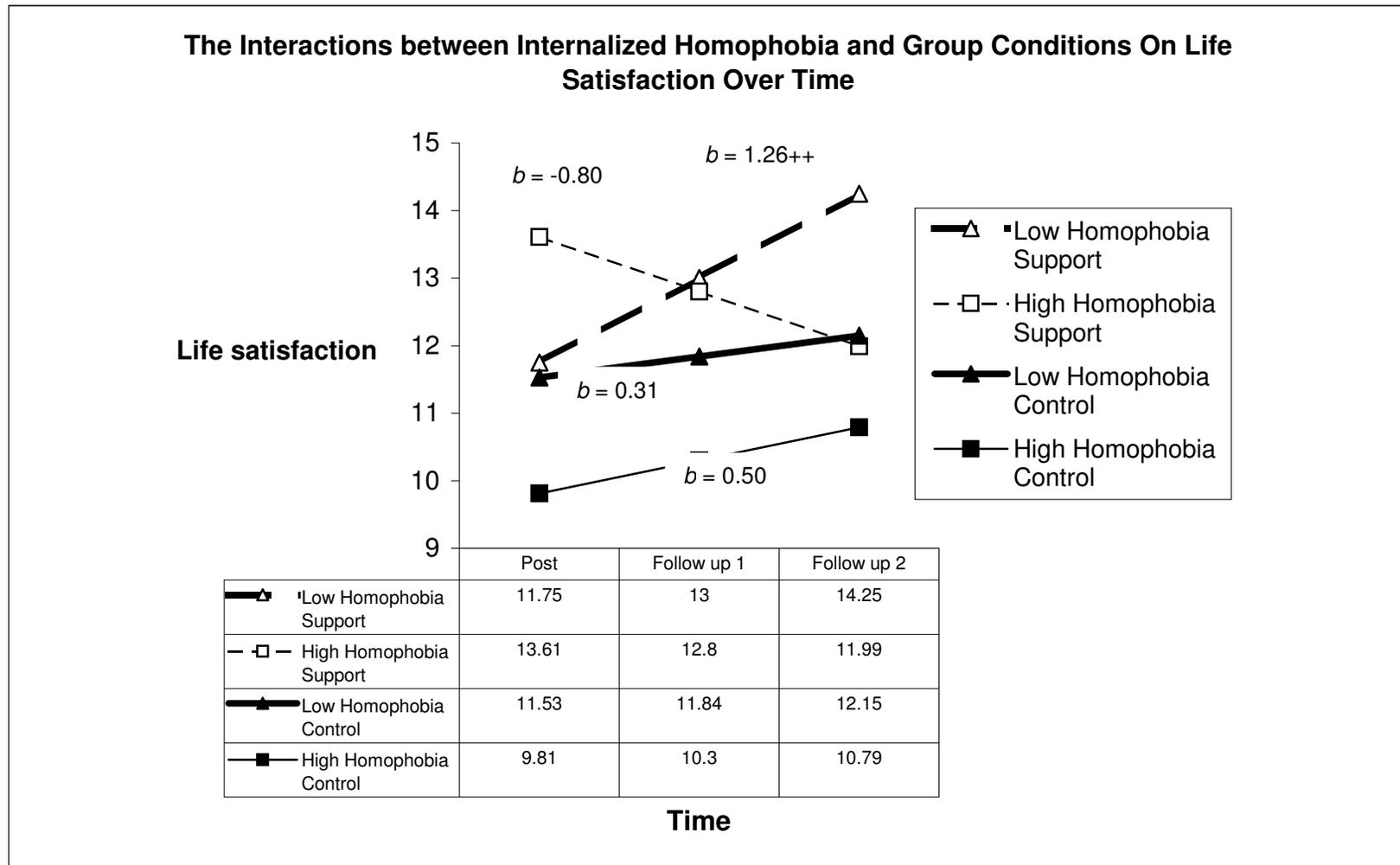


Figure 9



Note: ++ $p < .06$ at one-tail.

Figure 10: Hypothesized Model for Perceived Online Support or Distress Disclosure as a Moderator

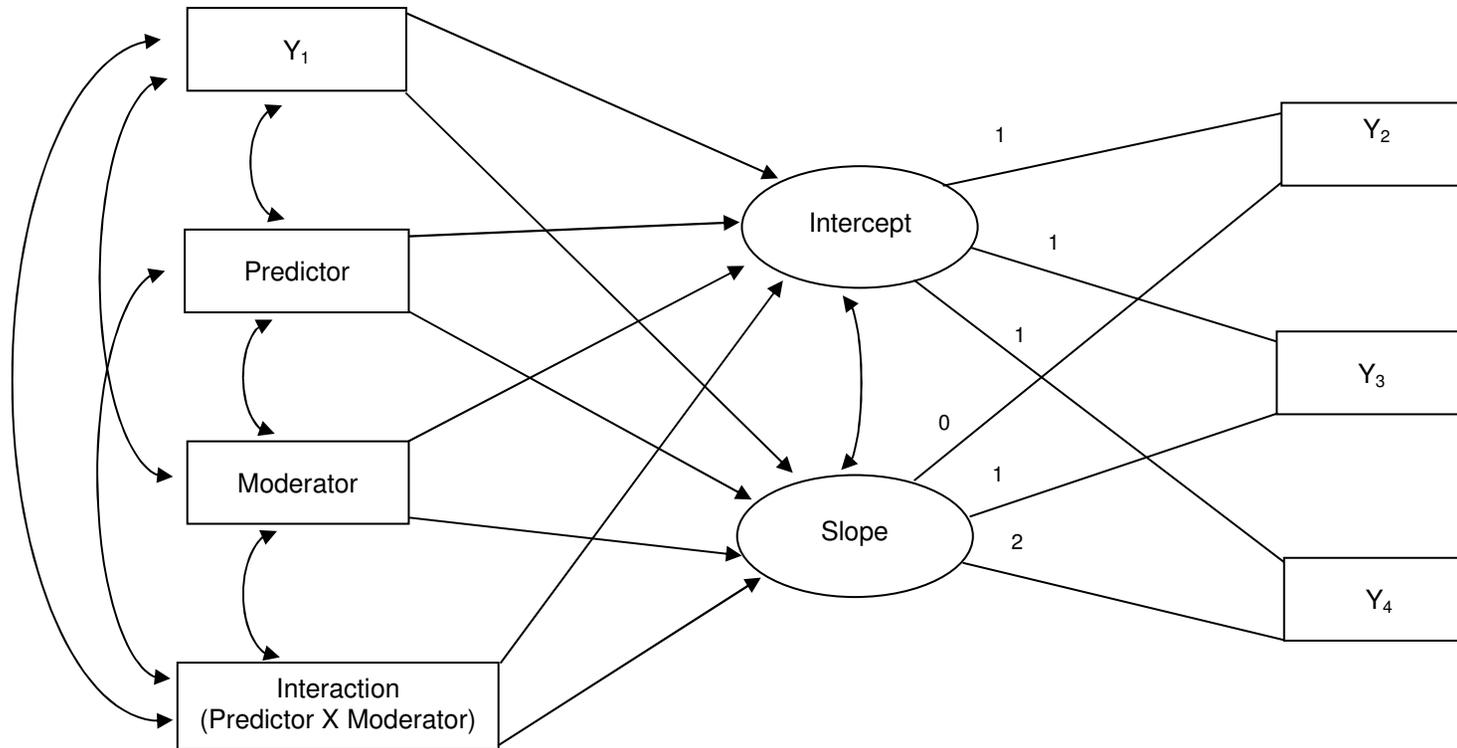
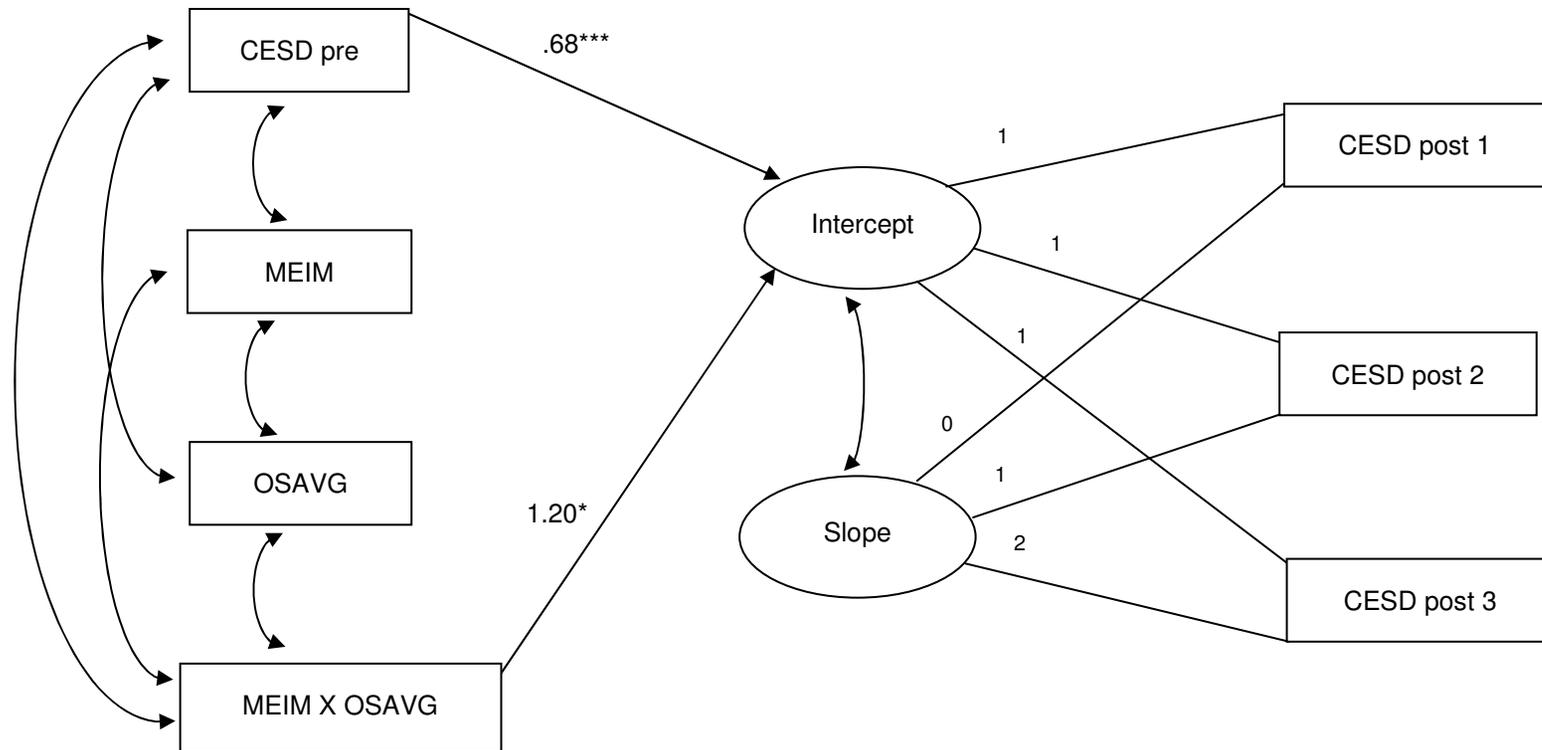


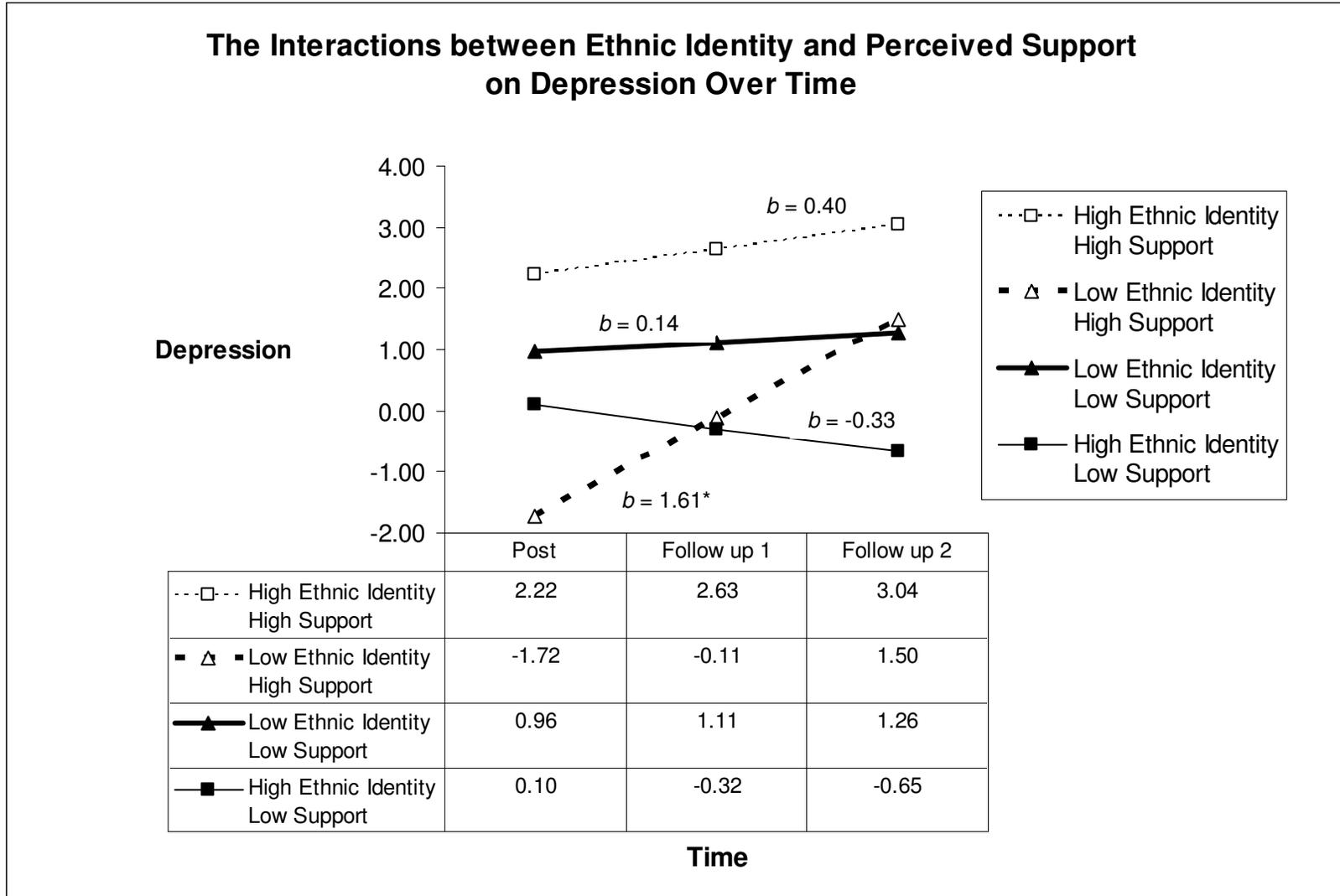
Figure 11: Moderation Model for Ethnic Identity by Perceived Online Support on Depression



Note. $n = 35$. CESD pre-test, post 1, post 2, post 3 = Center for Epidemiological Studies – Depression Mood Scale at time points 1, 2, 3, and 4, respectively; MEIM= Multigroup Ethnic Identity Measure; OSAVG = Online Support Group Questionnaire, averaged over 4 time points.

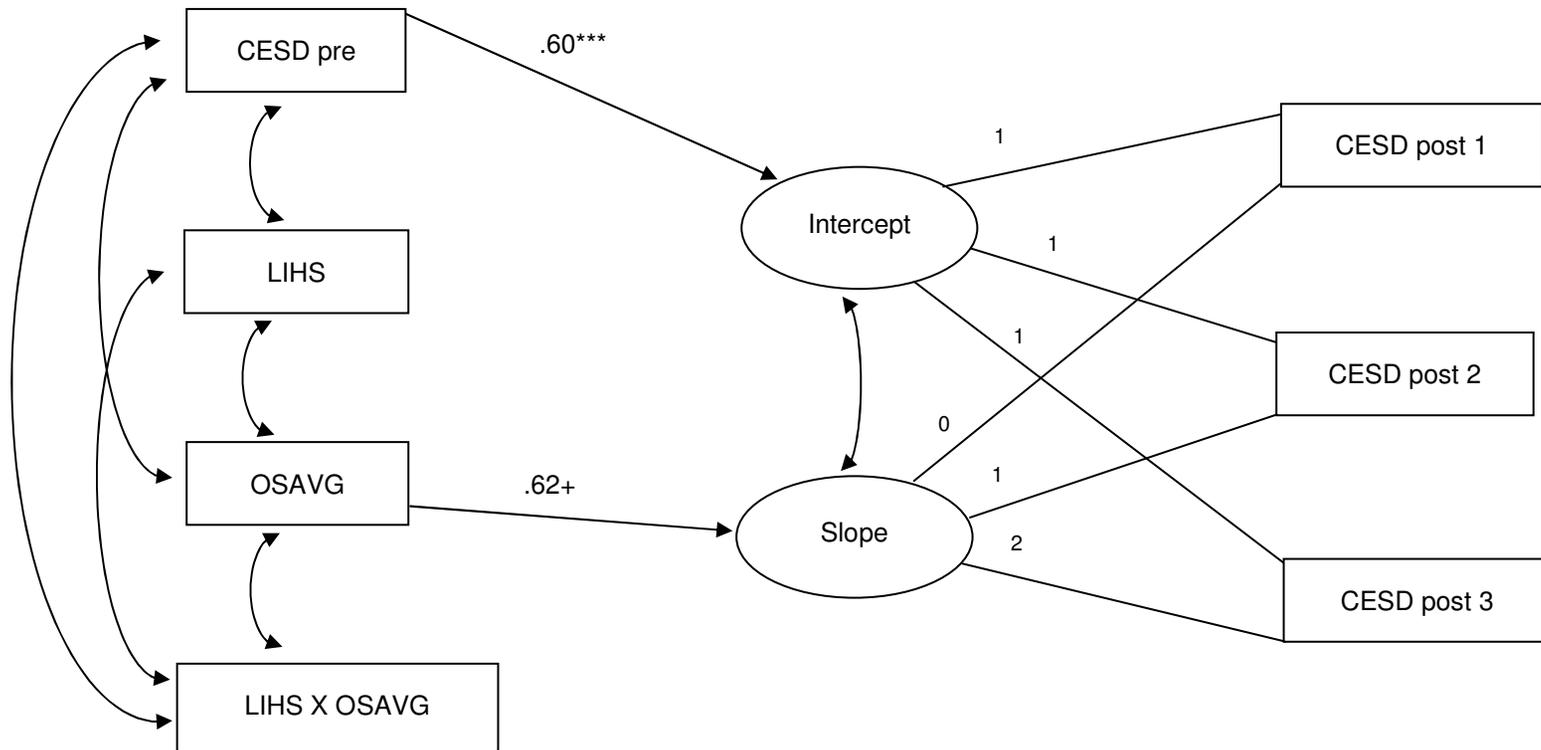
* $p < .05$, *** $p < .001$

Table 12



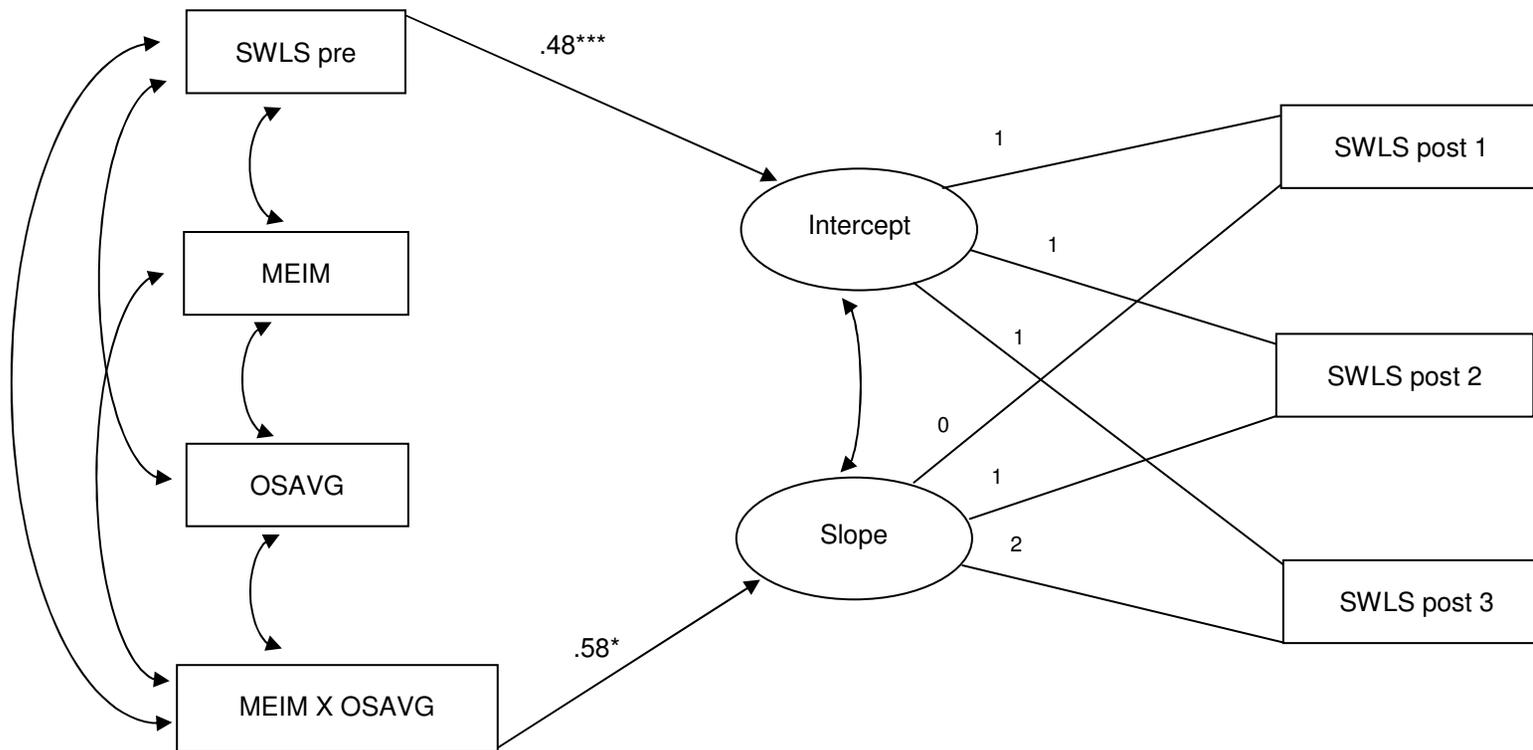
* $p = .05$

Figure 13: Moderation Model for Internalized Homophobia by Perceived Online Support on Depression



Note. $n = 35$. CESD pre-test, post 1, post 2, post 3 = Center for Epidemiological Studies – Depression Mood Scale at time points 1, 2, 3, and 4, respectively; LIHS = Lesbian Internalized Homophobia Scale; OSAVG = Online Support Group Questionnaire, averaged over 4 time points.
 $+ p < .05$ (at one-tail level); $*** p < .001$ (at two-tail level)

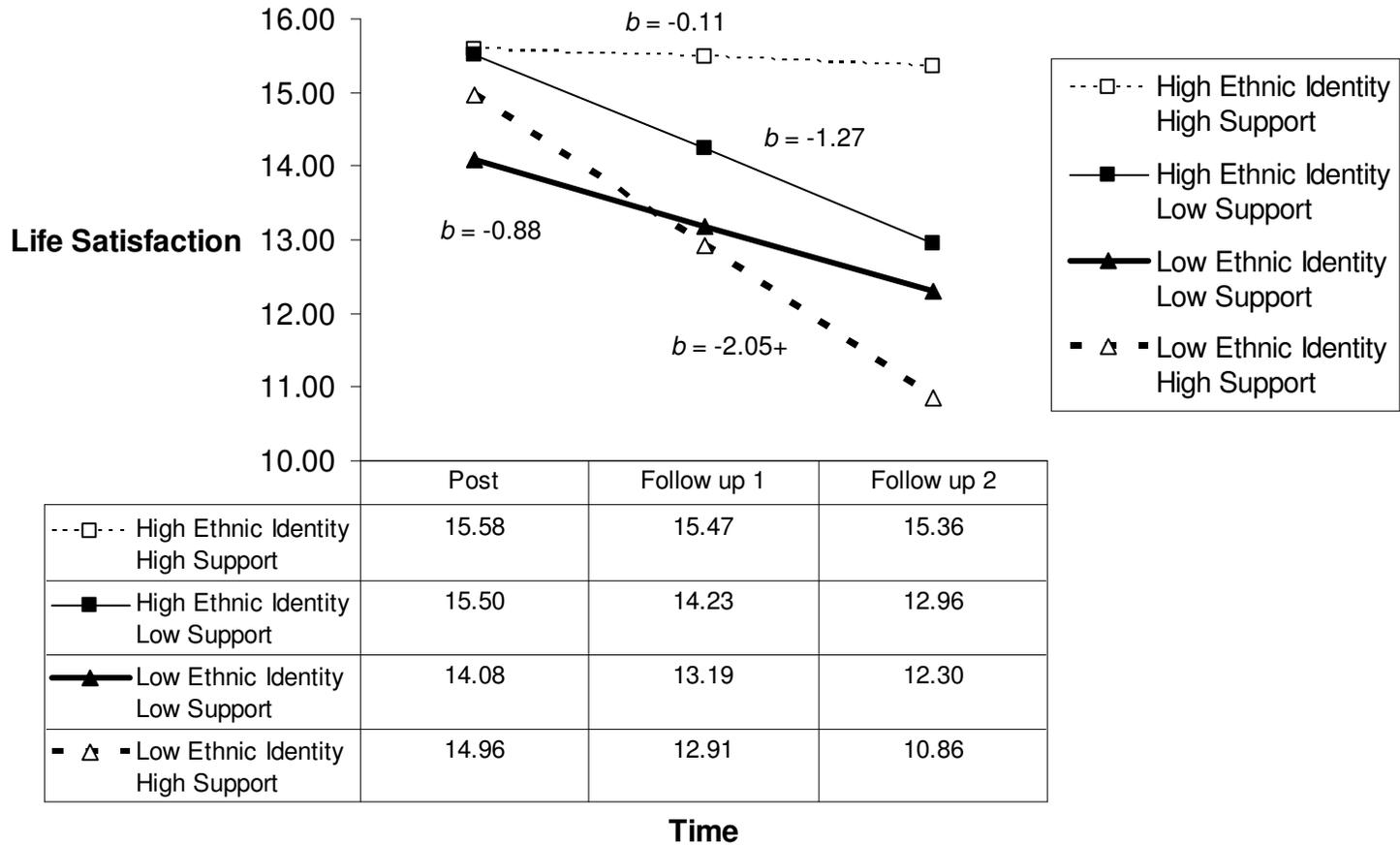
Figure 14: Moderation Model for Ethnic Identity by Perceived Online Support on Life Satisfaction



Note. $n = 35$. SWLS pre-test, post 1, post 2, post 3 = Satisfaction with Life Scale at time points 1, 2, 3, and 4, respectively; MEIM= Multigroup Ethnic Identity Measure; OSAVG = Online Support Group Questionnaire, averaged over 4 time points.
 $* p < .05$, $*** p < .001$

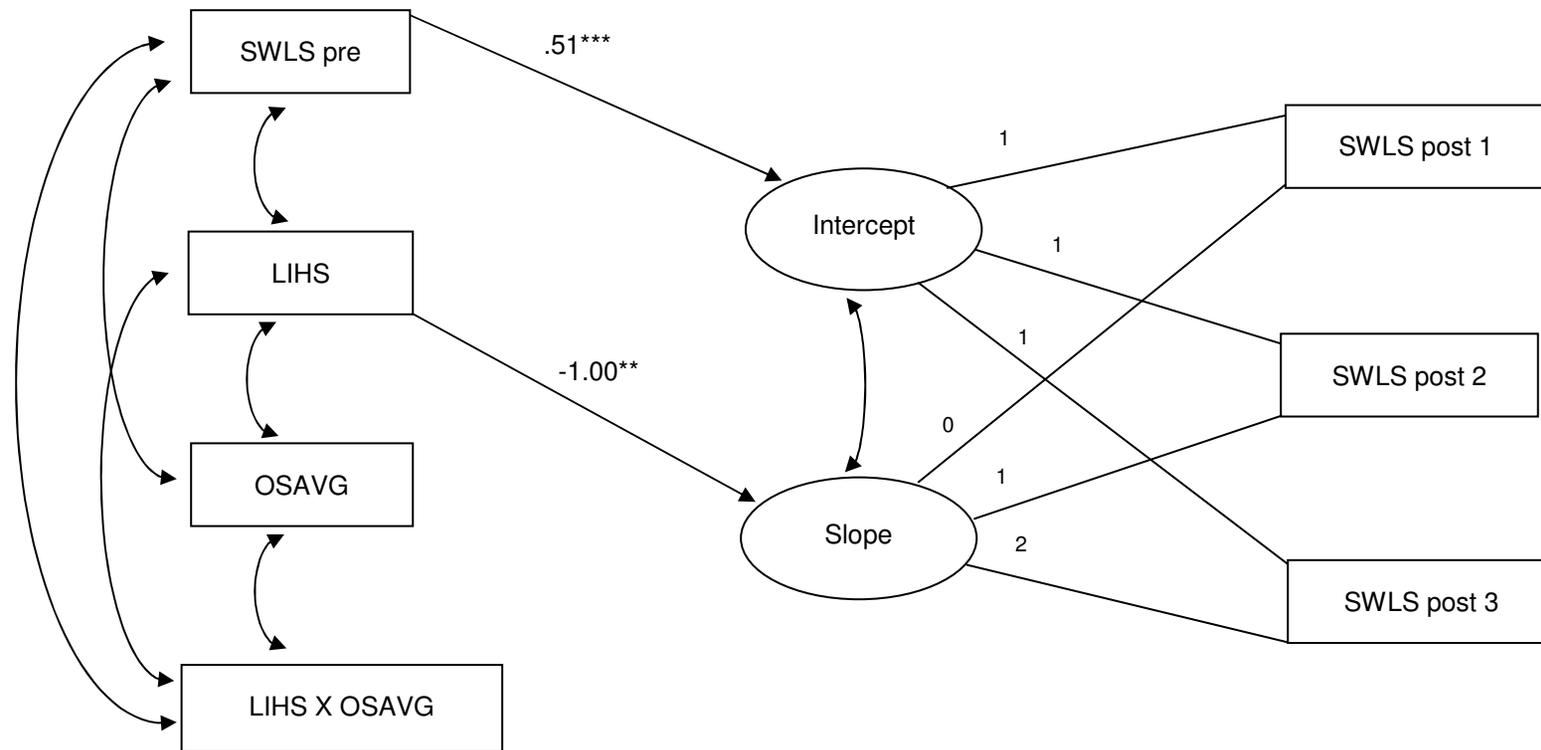
Figure 15

The Interactions between Ethnic Identity and Perceived Support on Life Satisfaction Over Time



+ $p < .05$ at one-tail level

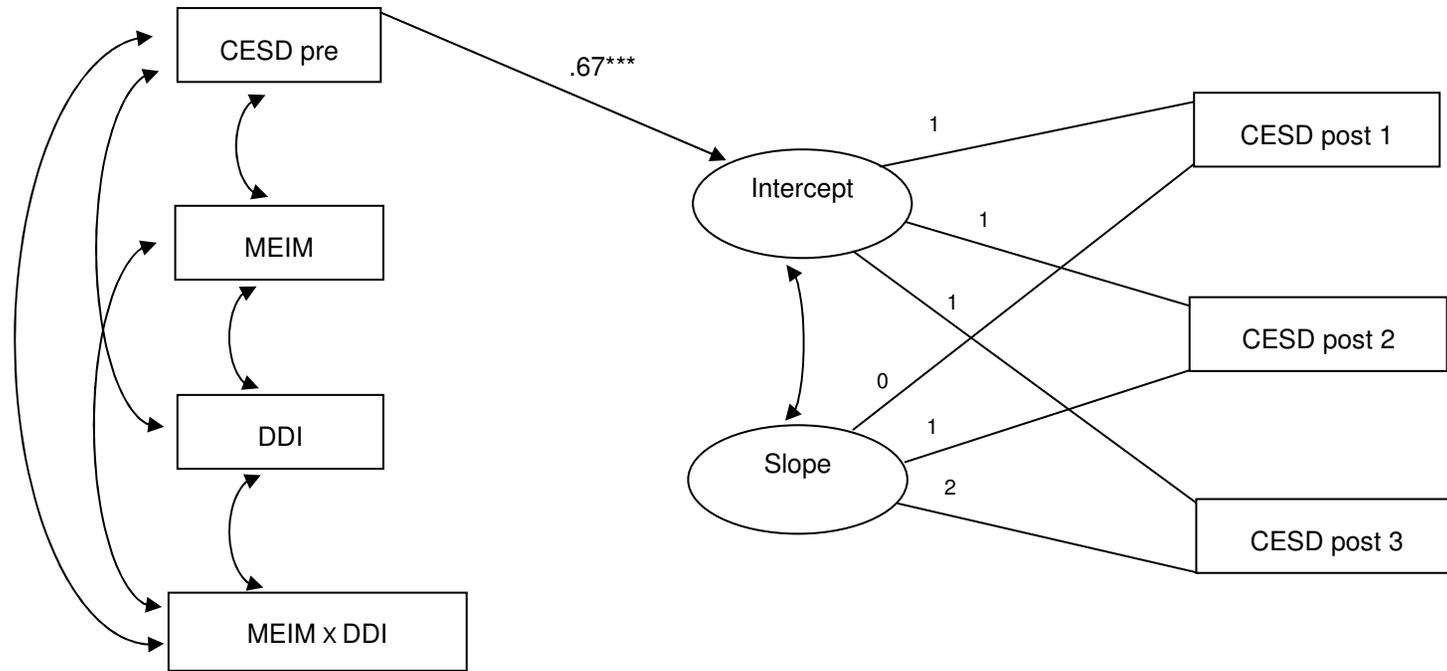
Figure 16: Moderation Model for Internalized Homophobia by Perceived Online Support on Life Satisfaction



Note. $n = 35$. SWLS pre-test, post 1, post 2, post 3 = Satisfaction with Life Scale at time points 1, 2, 3, and 4, respectively; LIHS = Lesbian Internalized Homophobia Scale; OSAVG = Online Support Group Questionnaire, averaged over 4 time points.

** $p < .01$, *** $p < .001$

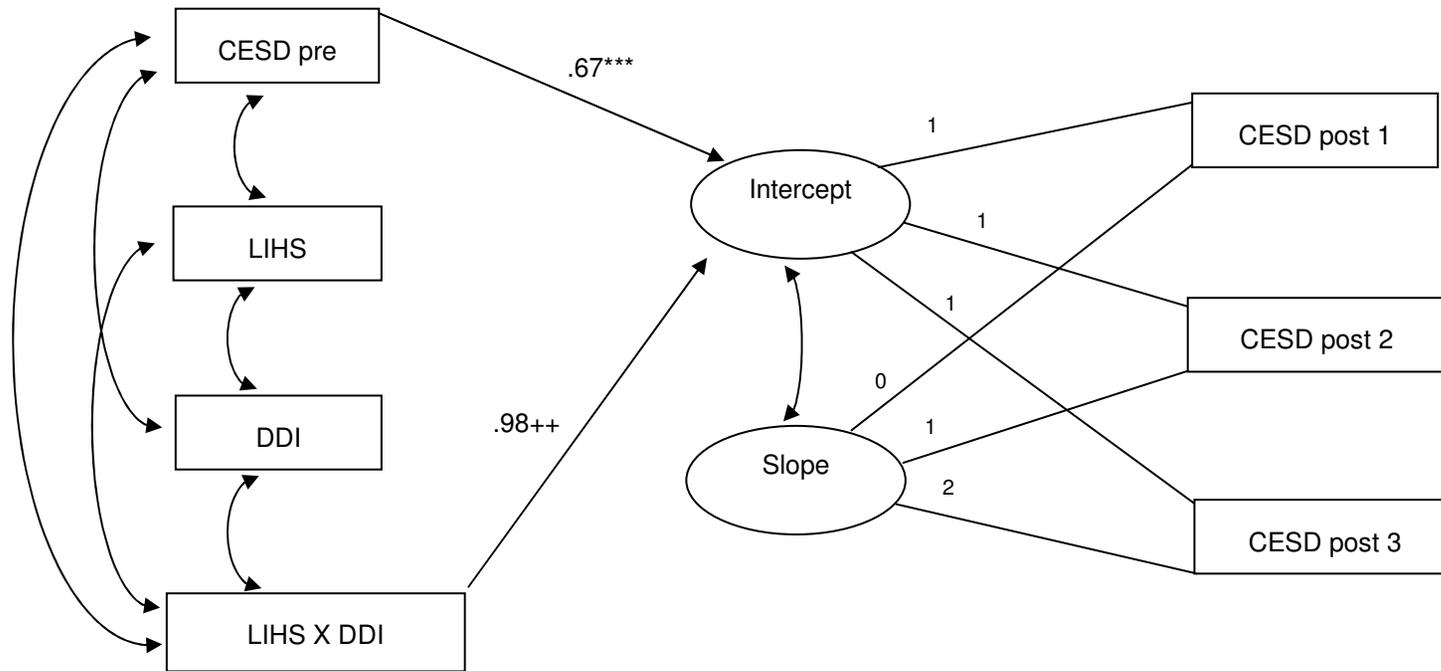
Figure 17: Moderation Model for Ethnic Identity by Distress Disclosure on Depression



Note. $n = 35$. CEESD pre-test, post 1, post 2, post 3 = Center for Epidemiological Studies – Depression Mood Scale at time points 1, 2, 3, and 4, respectively; MEIM = Multigroup Ethnic Identity Measure; DDI = Distress Disclosure Index.

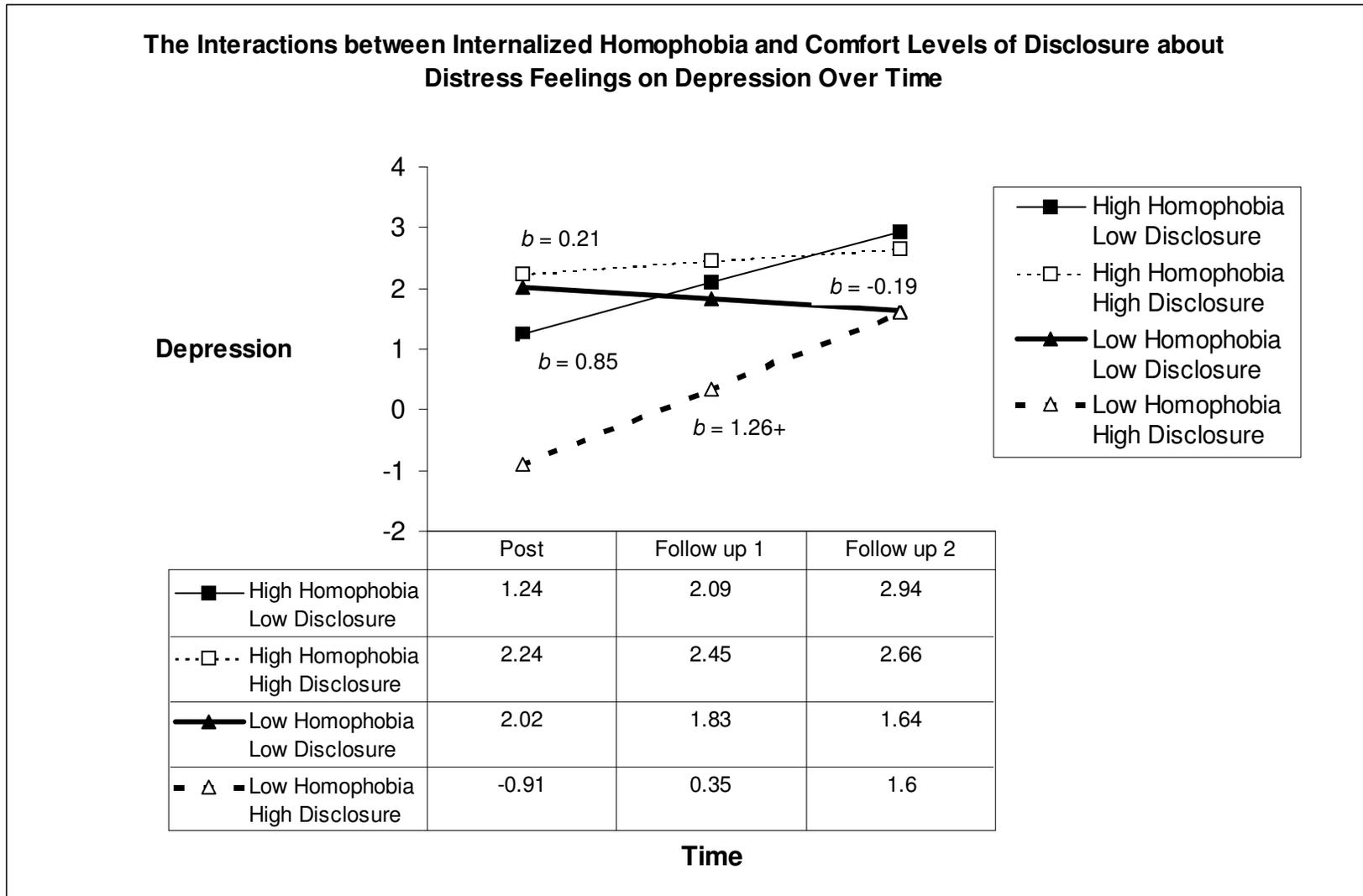
*** $p < .001$

Figure 18: Moderation Model for Internalized Homophobia by Distress Disclosure on Depression



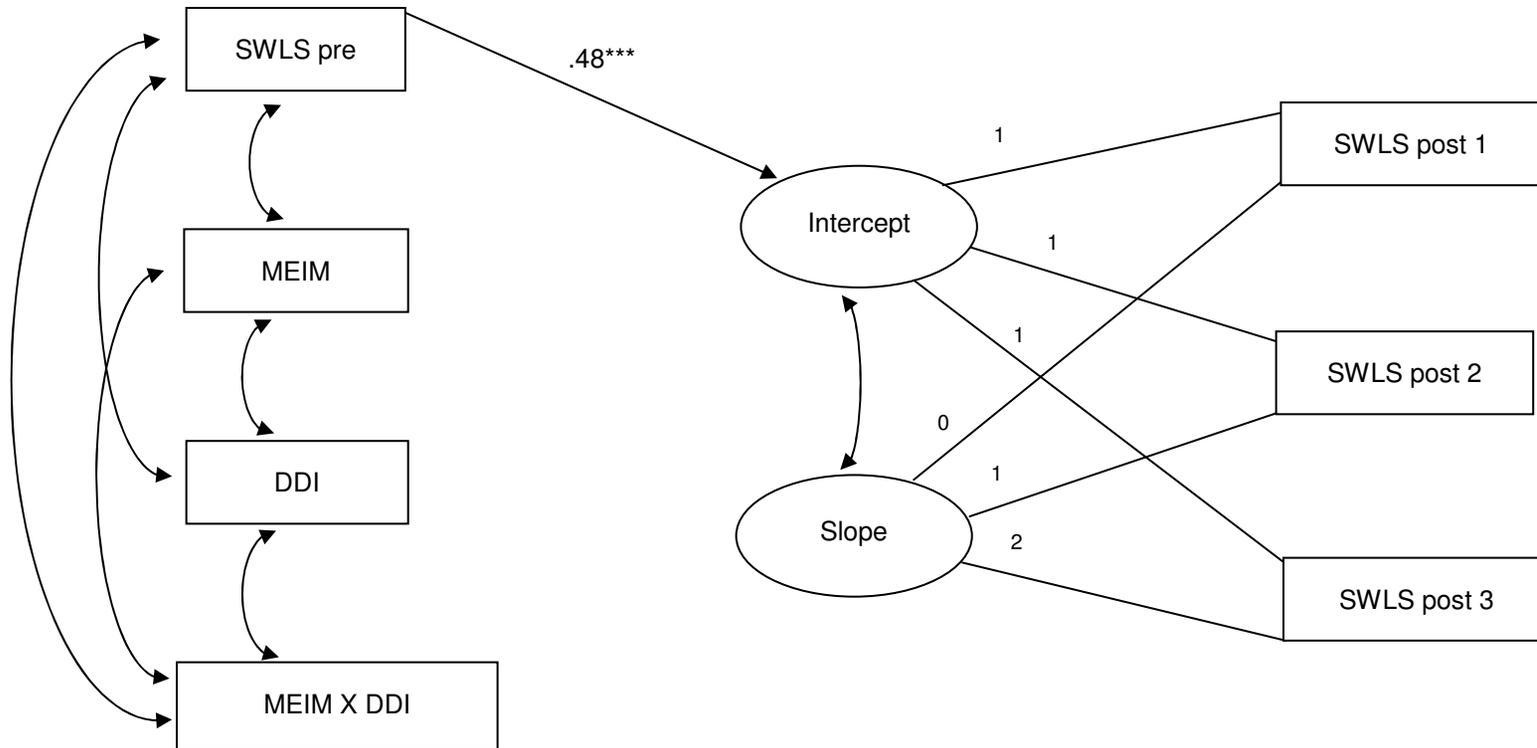
Note. $n = 35$. CESD pre-test, post 1, post 2, post 3 = Center for Epidemiological Studies – Depression Mood Scale at time points 1, 2, 3, and 4, respectively; LIHS = Lesbian Internalized Homophobia Scale; DDI = Distress Disclosure Index
 $*** p < .001$ (at 2-tail level); $++ p < .06$ (at one-tail level)

Figure 19



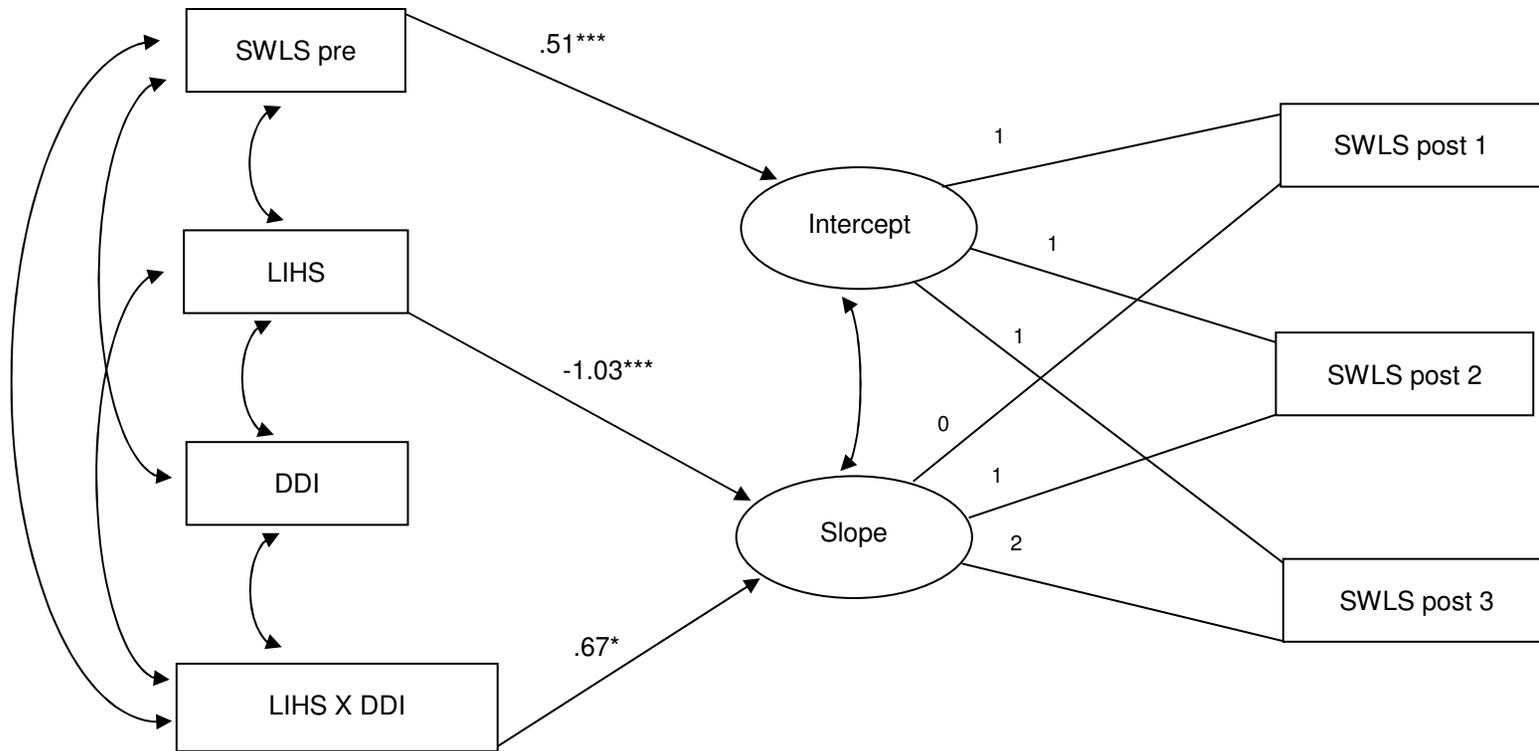
Note: + $p < .05$ one-tailed

Figure 20: Moderation Model for Ethnic Identity by Distress Disclosure on Life Satisfaction



Note. $n = 35$. SWLS pre-test, post 1, post 2, post 3 = Satisfaction with Life Scale at time points 1, 2, 3, and 4, respectively; MEIM = Multigroup Ethnic Identity Measure; DDI = Distress Disclosure Index
 *** $p < .001$

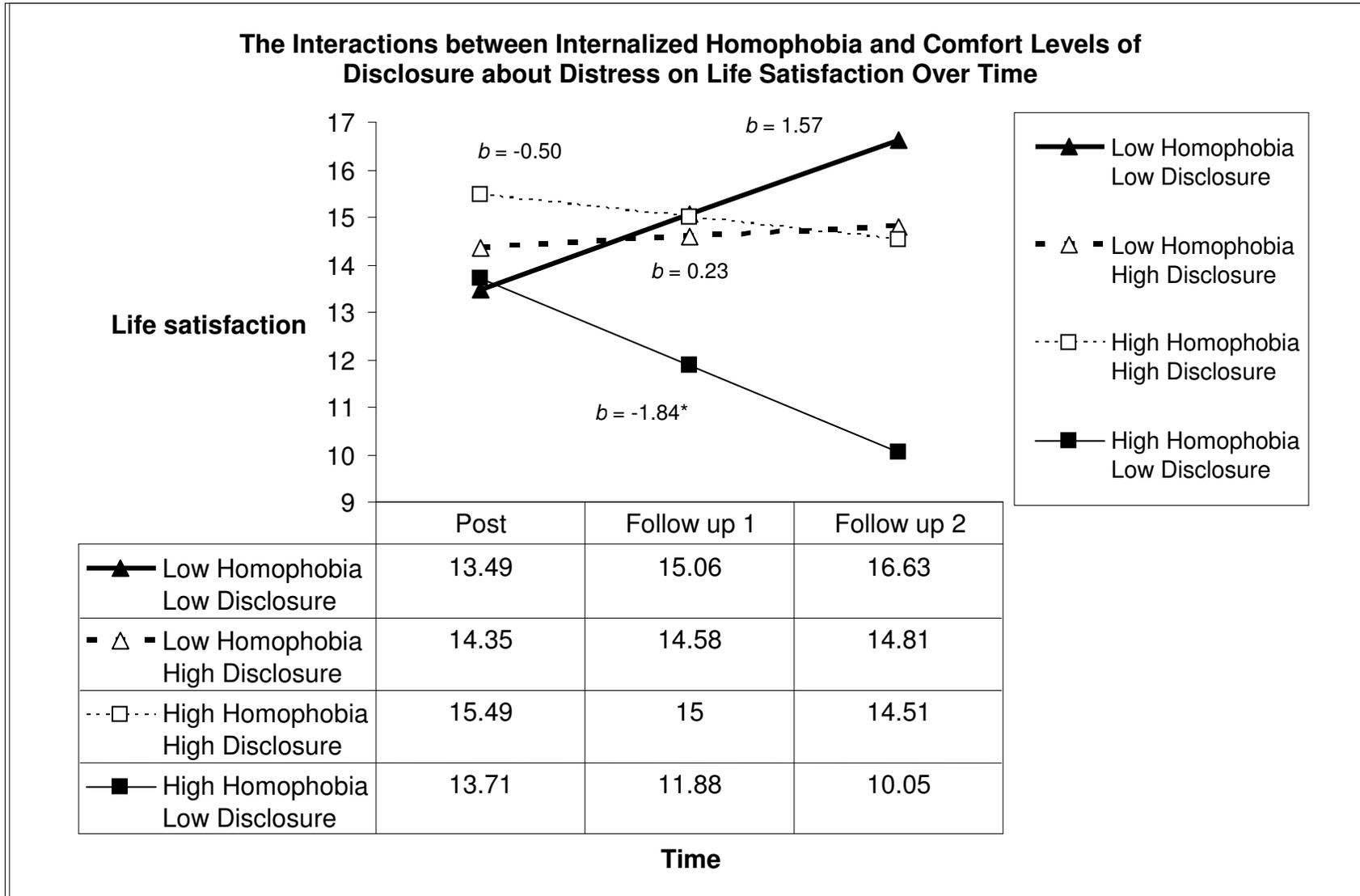
Figure 21: Moderation Model for Internalized Homophobia by Distress Disclosure on Life Satisfaction



Note. $n = 35$. SWLS pre-test, post 1, post 2, post 3 = Satisfaction with Life Scale at time points 1, 2, 3, and 4, respectively; LIHS = Lesbian Internalized Homophobia Scale; DDI = Distress Disclosure Index

*** $p < .001$, * $p < .05$

Figure 22



Note: * $p = .05$.

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ACKNOWLEDGEMENTS

I want to extend my sincerest gratitude to those who helped make the completion of this work possible. First, I would like to thank my parents, Sid and Sandy Zakalik, for providing me with the unconditional love and support that has given me the courage to go after what I want in life. Second, thank you to my wonderful husband and best friend, Ethan Van Brunt, for supporting me in countless ways through all my years of graduate study. This has been a long road and I am glad I was able to hold your hand along the way. Third, I send my thanks to my graduate cohort, my intern class, and the training staff at the University of Delaware for their help and encouragement this year. I would also like to thank the faculty at Iowa State University for the wonderful years I spent with you. I was truly able to learn from you all. Finally, I would like to thank Dr. Meifen Wei, my major professor, for all the years you pushed and supported me. You are a gift to your advisees and I am so lucky to have been able to work, learn, and grow with you. Cheers to you all! I could not have done it without you!