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MEASURING FRIENDSHIP MAINTENANCE IN GAY MEN

by

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A Dissertation

Submitted to the Graduate Faculty

of the

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This dissertation, submitted by Eliah Reding in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.




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PERMISSION

Title Measuring Friendship Maintenance in Gay Men
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ABSTRACT

This dissertation examines the existing friendship maintenance literature to develop a psychometrically sound scale for the measurement of friendship maintenance among gay men. Existing friendship maintenance research does not adequately capture the uniqueness of gay male friendship. Utilizing DeVellis's (2016) steps of scale development, this dissertation constructs a new scale, the GayFABS, to assess the unique aspects of friendship maintenance in gay men. Unique in this dissertation is the use of a focus group to establish content validity rather than the traditional approach of expert review. An exploratory factor analysis is conducted to structure the scale and its component subscales. Then initial reliability and validity examinations are conducted. The results of the study show that the scale has appropriate reliability and shows adequate convergent and divergent validity with three other scales: the Friendship Maintenance Scale; the Lesbian, Gay, and Bisexual Positive Identity Measure; and the Life Orientation Test – Revised (Oswald, Clark, & Kelly, 2004; Riggle et al., 2014; Scheier, Carver & Bridges, 1994). The initial results provide evidence of a potentially psychometrically sound measure for gay male friendship maintenance which will need to be further supported by a confirmatory factor analysis in the future.

CHAPTER 1

INTRODUCTION

Friendships are essential parts of the human experience that provide stable interpersonal relationships outside of those provided by our families and romantic partners (Baumeister & Leary, 1995). Gay men are no exception to this human rule and may even place greater value on friendships than heterosexual individuals, with friendships rising to the self-identified level of kinship (Weston, 1991). Even though these friendships are of utmost importance for gay men, very little is known about the development or maintenance of these relationships from a structural perspective. Research with sexual minority youth shows that friendship acceptance is important for developing self-esteem and a positive identity particularly related to sexual identity (Ueno, 2005; Diamond & Lucas, 2004). It has also been shown that utilization of these relationships extends into older adulthood (Grossman, D'Augelli, & Hershberger, 2000; Lyons, Pitts, & Grierson, 2013). The importance of this social relationship to gay men makes it surprising that little has been done to determine the mechanisms of its function.

The term relationship maintenance is defined as the interpersonal processes that keep a relationship in existence, keep the relationship in a specific state or condition, keep the relationship satisfactory, or keep a relationship in repair (Dindia & Canary, 1993). Specific mechanisms by which this occurs within friendships have been identified: through the behaviors of positivity, supportiveness, openness, and interaction (Oswald, Clark, & Kelly, 2004). The same study showed that the number of maintenance behaviors increased with the closeness of the friendship. The research, however, has not identified the specific maintenance strategies of gay men which may differ due to the different roles that friendships can play within the gay

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community such as providing a trusting and supportive relationships that may be filled by filial relationships within heterosexual populations (Weston, 1991; de Vries & Megathlin, 2009).

The current study aims to identify friendship maintenance behaviors that may be differentially utilized or novel within the gay male community. The functions that friends fill with gay men individuals may vary dramatically from the norms of heterosexual individuals in areas such as the formation of their sexual identity (Ueno, 2005; Rosario, Schrimshaw & Hunter, 2011), connection to the gay community (Galupo & St. John, 2001), relationship structures that may permeate both the romantic and platonic domains (Nardi, 1999; Diamond & Dubè, 2002), and chosen family support systems (Weston, 1991; Dewaele, Cox, Van den Berghe, & Vincke, 2011). These multiple roles may lead to different maintenance strategies to fulfill all four functions of relational maintenance suggested by Dindia and Canary (1993).

The Necessity of Interpersonal Relationships

Social relationships are fundamental to our survival as a species. Berkman and Syme (1979) found that low social integration led to higher rates of mortality across gender and age. Maslow (1943) included love and belonging as one of the basic human motivations. Our affiliations with others not only help define the world but they also define ourselves. The importance of social relationships has been highlighted in many major psychological theories such as Bowlby's attachment theory, Sullivan's interpersonal theory, and Horney's theory of personality (Bowlby, 1983; Horney, 2013; Sullivan, 1947). Throughout history, the need to connect with others has been established as a primary motivation for human behavior.

Baumeister and Leary (1995) proposed the need to belong as a fundamental motivation for human beings. They showed evidence of this affiliative need driving behavior, emotion, cognition, goal-orientation, and many other core components of human functioning. They also

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showed evidence for the establishment, maintenance, and lasting effects of social bonding.

Deprivation from connectedness was found to be related to mortality, physical health, and mental well-being. They identified two core components of this need: satiation which occurs when the need to affiliate is satisfied and substitution in which one social relationship can be replaced for another. All their evidence, compiled from decades of psychological literature, argues that belongingness is essential to human functioning.

Several core theories have been established about the development process of all social relationships. These general process models are thought to be applicable to all social relationships, whether those be filial, romantic, or platonic. First, interdependence theory (Thibaut & Kelley, 1959) focuses on what the individual is receiving in the relationship (impacting satisfaction) and other available relationships (impacting stability). This model harkens to the satiation and substitution aspects identified by Baumeister and Leary (1995). Second, the intersection model (Levinger & Snoek, 1972) shows the structural progression from unrelated to total unity. Finally, relational dialectics (Baxter, 1988) suggest the process of relationships on various dichotomies describing the dynamic shifting of a relationship overtime. Relationship development, function, and maintenance are all important to understanding core aspects of humans as social animals. It is also important to note that the development, function, and maintenance of relationships are interrelated but unique components of relationship study.

Friendships and Their Importance

Friendships are one of the most significant social relationships. Their establishment and their maintenance help to satiate the need for belongingness when filial or romantic relationships fall short. Friendships have been defined as a freely chosen, voluntary, and predominantly expressive relationship (Cohen & Rajkowski, 1982). This definition differentiates friendship

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from both family relationships (which are not chosen) and romantic relationships (which are more than expressive). They help to reduce the impact of life stressors (Cohen & Wills, 1985) and have been related to several positive outcomes including creating the opportunity for social and emotional development (Newcomb & Bagwell, 1995). The absence of friendships can be connected both to increased psychopathology and decreased overall well-being (Bagwell, Schmidt, Newcomb, & Bukowski, 2001). These social relationships seem to be of great importance to all humans, and gay men are certainly no exception.

Hays (1984) was one of the first to explicitly measure the functionality of friendship. He identified four domains that defined the friendship process: companionship, consideration, communication, and affection. These behaviors increase as the strength of the friendship increases and, over time, he found that the strength of friendships gradually became more intimate. Oswald et al. (2004) found that this was shown through an increase in friendship maintenance behaviors, marking these behaviors as important to understand the growth and stability of intimate friendships. These friendship maintenance behaviors help to keep the relationship at an acceptable level of commitment and satisfaction.

Relational maintenance behaviors vary widely due to purpose and function. These strategies have been found to differ between family relationships, romantic relationships, and friendships (Stafford, 2011; Myers & Weber, 2009; and Oswald et al., 2004). There are some commonalities, however, such as communication, level of dependence, prosocial or antisocial strategies, and togetherness as well as many others (Dindia, 2003). Friendship maintenance strategies focus on creating closeness in the relationship and providing support to meet the need for affiliation previously discussed.

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Oswald and Clark (2006) operationalized four key components of friendship maintenance including positivity, supportiveness, openness, and interaction. These maintenance behaviors are based off the equity theory of friendship maintenance which suggests that cost and benefits need to be equal to both parties within a relationship to maintain it (Canary & Zelle, 2000). The behaviors may contribute to the closeness of the friendship (Burleson & Samter, 1994; Oswald & Clark, 2006). This suggests that if the function of sexual minority friendships differs from that of the heterosexual community, the behaviors by which their friendships are maintained and thus the very nature of these relationships will be affected.

The Need for a Greater Understanding of Gay Male Friendships

Friendships are universally important as a mechanism for fulfilling the human need for affiliation. Friendships for sexual minority individuals (lesbian, gay, bisexual, etc.) can function as supports for similar experiences such as coming out, as possible dating partners, and replacements for families (Galupo, 2007; Nardi & Sherrod, 1994; Weston, 1991). Galupo and Gonzalez (2013) suggest that common discrimination may play a part in the strength of LGB friendships and may elevate their importance past those of heterosexual individuals. Because heterosexism is uniquely experienced by sexual minorities, they may not have close family members with which to share these experiences. As such, gay friendships can be especially important to provide unique types of support otherwise unavailable.

Weston (1991) provides an overview of the meaning of friendship to sexual minority individuals and the importance it takes on as a chosen family. She covers several issues from continued discrimination, the biological definition of families, the difficulty of the coming out process, and community as a substitute for families. She describes some of the differing functions of sexual minority friendship such as providing support for the coming out process,

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helping in procreation, experiencing heterosexism, sharing the historical trauma of HIV/AIDS, and mentoring into community affiliation. In short, Weston provides numerous reasons that gay friendships function differently, and, by extension, provides evidence for the possibility of different relational maintenance behaviors to be utilized within these relationships.

Other researchers and theorists have addressed the friendships of gay men more explicitly. Nardi (1999) wrote a seminal work on gay male friendship, presenting his mixed methods research. Early on, he discusses the dearth of research on gay male friendship despite the anecdotal importance of these relationships to the functioning of individuals as well as larger gay communities (Nardi, 1999). Indeed, much of the recent research on gay male friendship has been focused either on aging gay men and care taking roles (Tester & Wright, 2016; Muraco & Fredriksen-Goldsen, 2014; Emlet, Shiu, Kim, & Fredriksen-Goldsen, 2017) or the role of friendship and social networks in the spread and prevention efforts of HIV/AIDS and the use of drugs (Bauermeister, 2008; Carpiano, Kelly, Easterbrook, & Parsons, 2011; Kubicek et al., 2013; Kubicek et al., 2014; Mutchler & McDavitt, 2010). Other more recent work has looked to examine the various functions and structures of gay community within multiple locations and its effects on individual affiliativeness as well as its impact on various behaviors (Frost, Meyer, & Schwartz, 2016; Kennedy, 2010; Wilkinson et al., 2012; Woolwine, 2000). This study aims to provide a scale for measuring friendship maintenance behavior that could be used to study the roles and impacts of gay male friendship in a more quantitative fashion. A psychometrically sound scale will allow for more in-depth study in these areas of gay male friendship research.

Purpose

The goal of this study is to develop a scale that measures the different types of friendship maintenance behaviors utilized by gay men. The purpose of developing this is to provide another

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tool for the exploration of the function and impact of gay male friendships outside of strictly qualitative methods as well as to provide evidence that gay male friendships have distinct functions and structure from heterosexual friendships. It is expected that some of these functions will mimic the heterosexual population but that there will also be several behaviors and functions that are unique to the gay male population. Even if the general structure of friendship maintenance ends up looking quite similar to its related construct in the heterosexual population, it is likely that there will be variation in the acceptability and use of various friendship maintenance behaviors in the gay male population. The next chapter, the literature review, provides a specific exploration of many constructs related to friendship and its function within both the sexual minority population at large as well as some of the specific qualitative research done with gay men. Specific hypotheses are also posited about how gay male friendship maintenance behaviors are similar to and differ from heterosexual or “general” friendship maintenance behavior.

CHAPTER 2

LITERATURE REVIEW

As the purpose of this study is to develop a scale that measures gay men's engagement in friendship maintenance behaviors, this chapter will present a review of literature into relevant constructs: friendship, LGB individuals and the importance of friendships in the LGB community, research discussing the general functions and purposes of LGB friendships, specific research focusing on gay male friendship, theories of relational maintenance, and theories and measurement of friendship maintenance. Discussion is provided regarding the need for continued work in these fields. The section closes with the specific research questions and hypotheses for this study.

Friendship

Developing friendships and maintaining these relationships is fundamental to the human experience. While friendships have been linked to many positive outcomes (Hartup & Stevens, 1997; Berndt, 2002; Demir, Jaafar, Bilyk, & Ariff, 2012), research into the structure and function of friendships has been traditionally limited to children and early adolescents (Newcomb & Bagwell, 1995; Hartup, 1996). Adult friendships, however, still have great impact such as increased ability to deal with stress and prevention of physiological decline with age (Cohen & Wills, 1985; Hawkey & Cacioppo, 2007). Due to their many and lasting effects, it is crucial to study friendship amongst adults to better understand social support outside of family structures.

The academic study of friendship began mostly through sociological study. Cohen and Rajkowski (1982) defined friendship as a freely chosen, voluntary, and predominantly expressive relationship. They stated that this kind of relationship is hard to define although they note other important qualities, particularly the informal and personal nature of the relationship. The nature

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of this relationship was originally examined within a group context but quickly translated to psychological study and the meaning of friendship for the individual. Cohen hypothesized the buffer theory, stating that social support helps to protect from negative life stressors (e.g. Cohen & Wills, 1985). He examined both the main effect of support as well as the possible buffering effect of stress through meta-analysis and found that both models were supported. The main effect model was supported in several studies shown by the beneficial effect of social support on well-being (Cassel, 1990; Levinger & Huesmann, 1980). The buffer effect model, however, was also supported as shown by the numerous studies in which individuals were less affected by stress with higher levels of social support (House, 1980; Cohen & McKay, 1984). Thus, friendship helps adults twofold: by increasing their general well-being and by buffering them from the effects of stress.

One of the main issues of exploring friendship is defining what it is. Adams, Blieszner, and De Vries (2000) noted that the informality of friendship often leads to it being simplified or ignored outright in research. Using two samples from the US and Canada, they explored friendships qualitatively with individuals over the age of 55. They highlighted five categories that were representative of friendship as a whole: (a) behavioral processes, (b) cognitive processes, (c) affective processes, (d) structural characteristics (solidarity and homogeneity), and (e) proxy measures of process (such as frequency of contact or length of acquaintance). They found differences in characteristics that were highlighted both by geographic location and by gender. This suggests that cultural variation has a significant effect on the perception and thus the process of the development and maintenance of friendships.

Other key components of friendship have been identified by the research. Hays (1984) developed a scale measuring four types of friendship behaviors: (a) companionship, (b)

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consideration, (c) communication, and (d) affection. Companionship focuses on sharing time and interacting together. Consideration focuses on the benefits of having a friend such as goods, services, and support, both materially and emotionally. Communication describes the process of sharing information about one another as well as exchanging dialogue about a multitude of topics. Affection focuses on the expression of feelings as part of the emotional bond between friends. Hays also hypothesized three levels of friendship from superficial (lowest) to casual to intimate (highest) in accordance with previous research. He found that, over time, friendship progressed from superficial to intimate and that more intimate behaviors showed a more gradual progression (specifically consideration and affection). Hays's work suggests that friendships deepen and change over time, which may affect their function and maintenance.

The first psychological studies of friendship were focused on the problem it creates for psychological methodology, which were then quickly followed by an examination of the process of friendship. Shen (1925) examined a correlation with friendship rankings and associated positive attributions in a context of confounding effects for other research. Furfey (1927) examined the factors that affected friendship development and found that association was an essential ingredient of friendship (that is proximity) and that in associated groups, boys tended to choose friends that were similar in age, size, intelligence, and maturity. Thus, even early exploration of friendship processes showed that similarity is key in the development of friendships. This work has carried through to adult friendships as Verbrugge (1977) found that socioeconomic, demographic, religious, political, and ethnic characteristics were all positively correlated with friendship choice in adults and that proximity was a major and pervasive factor affecting friendship choice.

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The importance of friendships is not to be understated. Shulman (1975) examined the relative importance of friendship to family and spousal relationships over the course of development and found that friendships are most salient in adolescence and young adulthood and then taper off as individuals develop family structures. This is an important finding to note as other studies have shown differing development of family structures in gay men and this may belie a continuing of friendship salience over family structures in later life (Weston, 1991; Nardi, 1999). Shulman (1975) also stated, however, that although people are less likely to acquire new friendships in later stages of life, these relationships retain their importance. Friendships are important due to their positive effects on the well-being of individuals. Strong friendships have been found to be related to several positive outcomes for individuals whereas social rejection has been found to decrease psychological functioning. Bukowski, Motzoi, and Meyer (2009) reviewed research relating friendship to positive outcomes including protection from family risk factors, protection from victimization, and its functions for improving moral development. Bagwell, Schmidt, Newcomb, and Bukowski (2001) found that social rejection increases with the presence of psychopathological symptoms and decreased with overall well-being. Most of the work in friendship behaviors has focused on friendship as a developmental process, highlighting its effects in young adults.

LGB Individuals and Relationship Research

Sexual minority populations have been somewhat ambiguous and difficult to define for the purposes of research. Various factors including behavior, cognition, and identity can all be used for inclusivity or exclusivity of various persons from research samples. The APA guidelines for psychological practice with Lesbian, Gay, and Bisexual clients define sexual orientation as referring “to the sex of those to whom one is sexually and romantically attracted” (APA, 2012).

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They also discuss, with support from recent literature, that sexual orientation falls on a continuum and that individual categories such as gay, heterosexual, or bisexual, while still used may fall short of providing effective categorization. For the purposes of this study, individuals who self-identify as gay and male through an initial screener question will be allowed as participants in the study, even if later demographics reveal the individual to self-identify in other ways in terms of gender and sexual orientation. Part of the reason for this is due to the increasing complexity of measuring who is and who is not part of the gay male community as personal identity can shift related to sexual activity, cultural context, and personal growth (Dubè, 2000). To remove these narratives in the process of developing a measurement tool for gay male friendship may suggest a unilateral decision about what is and is not the gay experience for the ease of eliminating possible confounding variables.

Lesbian, gay, and bisexual (LGB) individuals have been an increased focus of research in recent years. Numerous studies have shown that they are at increased risk for multiple mental disorders including depression, anxiety, and substance abuse (Cochran & Mays, 2013; Meyer, 2003; Kertzner, Meyer, Frost, & Stirratt, 2009). According to the buffer hypothesis (Cohen and Wills, 1985), friendship could provide support to alleviating all these increased risks. In fact, support has been found for the protective role of friendships in depression (Powers, Ressler, and Bradley, 2009) and anxiety (Crawford & Manassis, 2011). Substance use in the sexual minority community, however, seems to be in part supported by the social norms created through friendships (Hughes & Eliason, 2002). A better understanding of both the positive and negative implications of close friendships in the gay community may help to address some of these health disparities.

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While there has been research on the romantic relationships of sexual minority individuals, there is a paucity of research regarding their experiences of platonic relationships. Recent research has shown that same-sex couples function as well or better than their heterosexual counterparts in relationships (Gottman et al., 2003; Kurdek, 2004). This research, however, has been mostly restricted to examining the romantic functioning of sexual minority individuals with little exploration of other types of interpersonal relationships. There have been very few, if any, studies that explore the strength and processes of LGB friendship, providing support for the development of a scale to measure the functions of friendship within sexual minority populations and specifically for that of gay men as there is more specific research support for this population than other sexual minority communities.

A good deal of support has been found for the importance of LGB friendships, specifically those in youth and young adulthood (Ueno, 2005; Diamond & Lucas, 2004; Galupo, 2007; Mutchler & McDavitt, 2010). Ueno (2005) examined the importance of friendship in the healthy psychological development of sexual minority youth. He examined the buffer hypothesis for same-orientation friendship in youth and found that sexual minority youth who formed same-sex friendships were buffered from numerous negative stressors. They experienced less psychological distress; more certainty regarding their sexual orientation; better emotional attachment; better attachment to school, parents, and friends; a greater number of friends; and lower levels of victimization as a main effect. In addition, he found support for same-sex friendships buffering the negative effects of sexual minorities experiencing greater psychological distress, high perceived STD/HIV risk, greater victimization, more frequent arguments with parents, worse attachment to parents and school, and more interpersonal problems at school (e.g. fighting, bullying). This study highlights the multiple areas in which same-sex orientation friends

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and the maintenance of friendship are essential for sexual minority individuals above and beyond that of their heterosexual counterparts for the moderation of their unique challenges.

Mutchler and Mcdavitt (2010) examined the specific challenge of communication regarding young gay men's sexual health. They examined 24 dyads of young gay males (YGM) and heterosexual females (11 YGM/YGM and 13 mixed dyads) to examine the similarities and differences of safer sex communication and their relevance to HIV prevention programs. They found that safer sex discussions were being had but that they tended to rely on partner choice rather than "negotiated safety". They discuss that the impact of the gay community at large may give YGM more accurate information regarding safer sex behaviors. This study is just one example of specific behaviors being negotiated and adapted on an interpersonal level. It suggests that friendship among gay men has the potential to disseminate norms for the gay community at large and provides a check on the accuracy of this information.

These unique challenges and the stigma that LGB individuals face do not end at adolescence. Spencer and Patrick (2009) examined how personal mastery and social support were important to the transition between adolescence and adulthood. They argue that the general instability of the transition to adulthood is exacerbated by developmental challenges associated with heterosexism and that both social support and personal mastery may serve as buffers to these negative effects. They found support for both lesbians and gay men experiencing poorer psychological well-being in emerging adulthood. They also found, however, that this effect was eliminated when social support and personal mastery were examined in conjunction with sexual orientation. That is, sexual orientation failed to be correlated with lower psychological well-being if high social support and personal mastery were present. These results suggest that friendships are crucial to buffering gay men from stressful life transitions that may be

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exacerbated by the role of discrimination and heterosexism. Due to the positive and potential negative effects of friendship on the psychological health of gay men, it is essential that more is understood about the friendship processes of this community.

The Role and Structure of LGB Friendship

The role of friendship within sexual minority populations tends to both share similarities with and differ from friendships within the heterosexual population. Friendship characteristics include communication, companionship, affection, trust, respect, and ability to rely on one another (Hays, 1984). These characteristics are likely to be equally important no matter the orientation of the friends involved. Some differences, however, can be expected for sexual minority populations, such as entanglements of romantic and platonic relationships (Nardi, 1999; Diamond & Dubè, 2002), utilization of friendships as connection to the T community (Galupo and St. John, 2001; Baiocco, Laghi, Di Pomonio, and Nigito, 2012), and shared experiences, particularly the experience of coming out and the difficulties that can accompany that process (Macdonald, 1983; Savin-Williams & Diamond, 1999; Beals & Peplau, 2005). These differences should lead to different friendship usage than what appears in heterosexual individuals.

Galupo (2007) explored the differences in friendship patterns among an adult sexual minority population. He examined sex, sexual orientation, and race to determine friendship patterns of cross-category friendships (in any of these categories). He examined 405 individuals and found that there was a greater frequency of cross-orientation friendships among bisexual individuals and more same-orientation friendships for lesbian and gay participants. This pattern is supportive of earlier research which found that lesbian women and gay men tend to make same orientation friends to better connect with those that have similar experiences, whereas bisexual individuals are more likely to develop friendships within the sexual minority community and the

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heterosexual community. In addition, the study found that younger individuals are more likely to develop cross-orientation friendships than all other age groups, perhaps suggesting a broader attempt to develop diverse friendships among younger adults. This study suggests that lesbian and gay individuals form friendships differently from bisexual individuals. In the context of this study, that suggests that bisexuals should be encompassed within the normative sample for the scale to represent sexual minority individuals.

Galupo (2009) expanded his work to examine if the patterns of friendship within sexual minorities differed from those of heterosexual individuals. Studying these patterns in a similar manner to his earlier study, he found that lesbian and gay individuals were significantly more likely to develop friendships with lesbian and gay individuals than bisexual individuals who were more likely to develop these friendships were heterosexual individuals. Bisexual individuals were the most likely to develop friendships with another bisexual individual followed by lesbian and gay individuals and least likely were heterosexual individuals. These results provide support for within-community friendships being more common for LGB individuals than out-of-community friendships. In addition to these findings, Galupo was able to describe the typical friendship profiles of each demographic studied (race x gender x sexual orientation). He found that white LGB individuals were equally likely to develop both same- and cross-sex friendships which was untrue for any other group studied. This suggests that race may have an influence on the development of lesbian, gay and bisexual friendships.

Galupo and Gonzalez (2013) studied the unique friendship values that may be salient for cross-identity friendships, providing significant support for the idea that friendship may differ depending on the individuals' sexual orientation. Specifically, they studied three general friendship values (trust & honesty, respect friend as a person, and there when needed) and three

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cross-identity friendship values (similar lives & experiences, similar values, and non-judgmental). They hypothesized that those with cross-orientation friendships (which we know from Galupo [2009] are more likely to be LGB) are more likely to rate similar lives & experiences and similar values as less important than those without. In addition, they hypothesized that non-judgmental would be more important to these friendships due to the religious and moral context surround sexual orientation. They found that LGB individuals are actually more likely to rate similar lives & experiences and similar values as less important than heterosexual individuals suggesting more evidence for the strength of within-community friendships based on the experience of common discrimination. Furthermore, they found that an interaction between cross-orientation friendships and sexual orientation predicted a higher rating of non-judgmental whereas sexual orientation did not. They suggest that this may be unique to the way LGB individuals experience cross-orientation friendship which may be maintained at a cost of repressing sexual identity. In addition, Galupo argues that this provides some support for the families of choice hypothesis of LGB friendship.

The families of choice hypothesis argues that LGB individuals are likely to experience social isolation as a result of their sexual identity and establish close social networks to help manage negative experiences and provide emotional support (Dewaele, Cox, Van den Berghe, and Vincke, 2011; Weston, 1991). Dewaele et al. (2011) studied the formation of families of choice amongst lesbian, bisexual, and gay individuals in comparison to a general population sample (which may have included LGB individuals). They hypothesized that chosen families will exist at a higher rate within the LGB sample due to the prioritization of friends over family in social networks of LGB individuals, superficial tolerance of sexual identity and heteronormativity, and the importance of friendship ties for LGB individuals. They found

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support for this hypothesis showing that LGB individuals had a lower proportion of family members as close confidants. This suggests that friendship is even more crucial in sexual minority communities to provide emotional support that may otherwise have been lost in family networks, and that understanding friendships is an important factor in understanding the sexual minority experience.

Gay Male Friendship

Nardi and Sherrod (1994) were the first to explicitly study the friendships of gay men and lesbians as different from those of heterosexual individuals. They hypothesized that friendship salience and friendship behaviors may not significantly differ, but that sexual behavior may differ within these friendships. They found that gay men and lesbians did not differ in either development or behaviors of friendships but did differ with respect to whether they engaged in sexual activity and how they mediated conflict. This study provides evidence that sexual minority individuals may be affected by the gender roles and norms within the structure of their friendships and that these relationships tend to share two aspects with heterosexual friendships that might be further explored within a sexual minority context: sexual attraction within friendships and same-sex friendship intimacies. These aspects are likely to affect both the function and development of gay male friendships.

Nardi (1999) then went on to compile a seminal mixed method work about gay male friendship at the time. To date, this is still the best example of scholarly work surrounding the complexity of friendship within the gay male community. He addresses numerous issues including the historical context of male same-sex friendships, the families of kin hypothesis from a strictly gay male perspective, the intersection of the platonic and romantic within gay friendships, and, perhaps most importantly to the current study, the meaning and maintenance of

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gay male friendship. While Nardi provides a comprehensive picture of gay male friendship in the US at the time, several major events have changed the landscape of the gay community since its release such as the legalization of gay marriage in the US (*Obergefell v. Hodges*, 2015) and the rise of social media as a major venue for gay communication and socialization (Miller, 2015; Morris, 2018). While it is somewhat dated, Nardi provides a detailed framework of the structure and function of gay friendship that may be updated with continued scholarship and is essential for understanding the academic context of the current study.

Nardi (1999) begins by discussing the historical context of male friendship. He discusses the need for gay men to engage in nonheteronormative forms of relationships, both romantically and in friendships. He examines the disappearance of same-sex male friendship from the public sphere due to the increased discussion of homosexuality (largely in a heterosexist and oppressive manner) and the rise of the gay community in the late 1970s, 1980s, and 1990s, particularly through the shared trauma of the AIDS crisis. While limited to a largely urban sample in LA (something Nardi himself comments on as limitation), he discusses individual friendships as reciprocal in the creation of a larger gay community. Gay men meet within the gay community structures, build individual friendships, and reengage in those communal spaces thus further strengthening this community built on the expression of one's sexuality, gender expression, and perhaps, as Nardi suggests, a loneliness born from being on the outside of traditional heteronormative forms of support.

This lack of support from traditional structures (at least at the time of Nardi's writing) seems to support the elevation of friendship to expressed kinship. Following from Weston's work (1991), Nardi discusses the state of affairs regarding gay kinship, both from a societal and a personal perspective. He highlights the perhaps greater emphasis on friendship as kinship in the

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gay male community even over other nonheterosexual communities. The AIDS crisis and the loss of young gay men to a sexually transmitted infection created two specific impacts that strengthened communal bonds at the time of Nardi's writing. First, the process of getting sick and dying made the caretaking by friends and the need for legal rights such as hospital visitation for non-blood relatives. Second, the loss of many individuals within the community leads to a sort of circling of the wagons as remaining friends became tighter and more important through their mutual loss. Nardi discusses the common trajectory of gay men mirroring heterosexual family behavior in things like partnership, living together, engaging in "wedding" ceremonies, and adopting/raising children. He noted that while many of his participants did agree with the statement that "friends are family" very few discussed their friendships in this way spontaneously. He mentions the difference between "lovers" and "friends" (which at times interchange) as the former denotes a potentially temporary connection and the latter a more stable, reliable series of connections that provide multiple types of support.

The need to denote the difference between "lovers" and "friends" is a complicated task within gay male communities as these relationships may have significant overlap and this issue is directly relevant to the scale in development. As Nardi discusses, gay friendship and sex are often intertwined, whether as a starting point or as a specific thing to avoid. Although the issue of sexuality in cross-sex friendships has been explored since Nardi's work (1999; Reeder, 2000; Bleske-Rechek et al., 2012), the role of sex as a major component of gay male friendship has consistently been an area of interest in the exploration of these relationships. He discusses the history of scholarship discussing gay men often separating friends and sex, that emotional intimacy in friendship was somehow violated or threatened by sexual relationships. Nardi's data, however, suggested a different pattern, "a diverse range of relationships is evident and includes,

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for some gay men, relationships in which sex and friendship coexist.” Nardi posits a flow structure of friendship and sexual activity between gay men to categorize the potential interchange that was represented in his interview and survey data. Nardi’s survey data showed that almost 78% frequently or usually expressed affection by touching their best male friend, 75% with close male friends, and 44% with casual male friends, higher than the numbers between casual and close female friends despite social norms discouraging physical contact between men. These numbers highlight the commonality of sexual contact and the forms of physical intimacy in which gay male friends engage.

In exploring gay male friendship, it is clear that a historical definition of (heteronormative) friendship such as Cohen and Rajkowski’s (1982), “a freely chosen, voluntary, and predominantly expressive relationship” may no longer fit. In traditional friendship research, the surpassing of this expressive boundary (such as with sexual contact) may violate the very definition of this relationship. Thus, the traditional definition of friendship as a nonsexual relationship may not properly capture this relationship in the gay male context. If somewhere near 20% of gay men are currently involved in sexual contact with their best friends (Nardi, 1999), the exclusion of sexual behavior from the friendship structure seems quite inappropriate.

As Nardi (1999) expands on the questions of how gay friendships function and what purpose they serve, he moves towards an examination of the meaning of these relationships and how they continue to be maintained. He posits two types of friendship behaviors that are somewhat in line with previous views of the construct: “doing” friendship in which friends do activity together and share hobbies, enacting friendship “side-by-side”, and “talking” friendship in which individuals discuss aspects of themselves and the relationship. These ideas roughly fit into Oswald, Clark, and Kelly’s (2004) themes of friendship maintenance with positivity and

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interaction fitting into the former category and openness and supportiveness. Below, general relationship and specific friendship maintenance theories are discussed and disclosing information to one another, doing tasks with and for each other, and enjoying time spent together are all maintenance behaviors that have been shown to contribute to lasting and satisfactory relationships. Nardi's work with gay men suggests that many of these processes remain true although the behaviors and contexts in which they are carried out may differ significantly. Time spent with each other, activities and topics engaged in, and general communication about the relationship all have an aspect in maintaining gay male friendships and strengthening the bonds between gay men.

Since Nardi's seminal work, much of the literature surrounding gay friendship has been focused on two topics: aging gay men and caretaking and the role of friendship and social networks on the spread and/or prevention of health risk behaviors (sexually transmitted infections, drinking and drug use, etc.). Significant scholarship has addressed the role of friendship networks as gay men age, particularly when romantic partners or family is unavailable. Muraco and Fredriksen-Goldsen (2014) examined caregiving in friendship relationships within the LGB community, highlighting the lack of societal support for these kinds of informal caregiving relationships among LGB communities. Tester and Wright (2016) also examined the social support of older gay men and found that the support patterns that are present for aging heterosexual adults are often not recreated in the sexual minority population. They found that older gay men were less affiliated with communities of faith or family networks but generally placed more importance in singular accepting family members and a circle of long-term friends. The men with these kinds of support "convoys" were generally more satisfied than those who had to downplay or hide their sexual orientation to better fit within traditional

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heteronormative support structures. It has also been found that having a sense of community and being engaged in community supported personal mastery and resilience in gay and bisexual men living with HIV (Emlet, Shiu, Kim, and Fredriksen-Goldsen, 2017). These studies suggest that individual friendship and community involvement improve life for and provide support to gay men well into older adulthood.

Perhaps not accidentally, much of the scholarly literature regarding gay male communities focuses on the way that in-person gay male friendship communities can affect various health risk behaviors. As was discussed prior, sexual risk is influenced by peer behaviors from a very young age (Mutchler & McDavitt, 2010). The question of if gay communities are important and declining is likely to be essential to understanding the importance and process of individual gay friendships. Simon Rosser, West, and Weinmeyer (2008) explored the dying of in-person gay communities and an increase in virtual community identifications, specifically focusing on the implications of HIV prevention efforts, arguing the need to modernize to reach the broader population of MSM who are less likely to engage in *in vivo* LGB communities than ever before. This suggests profound implications for the formation, maintenance, and dissolution of gay male friendships that could not have been present during Nardi's work (1999).

Another important health risk behavior that has been connected to social support networks is the acceptance and use of drugs and alcohol. Bauermeister (2008) explored drug use within Latino gay communities and found that social support helped to protect excessive use and “spiraling out of control” and that within-community support contributed to better outcomes than those individuals without that same support. Some more recent research suggests that the effects of community affiliation on health risk behaviors differ by subculture, with some subcultures boosting risk and others lowering risk (Willoughby et al., 2008). Thus, it seems gay community

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and socialization have mixed effects on behavior. This makes studies of individual friendship vital on examining how social interaction influences not only an individual's behavior but the larger subcultures of the gay community.

Various literature has examined the social networks of gay men in a variety of contexts and cultural backgrounds. Woolwine (2000) explored the notion of community as a growth of friendship, that friendship provides both support for and a place to discuss personal and important topics that may not be available within the larger heteronormative community. Kennedy (2010) examined similar concepts among rural gay communities and a broader variation in labels and more emphasis on the specific identities of "natives" and "transplants" in comparison to research done in more urban gay communities. These communities provide support in fulfilling romantic, emotional, and support needs for gay men and individual friendships are essential to building these gay communities (Wilkinson et al., 2012). Wilkinson and colleagues further argue that these communities can be essential to forming the bonds that become individual gay friendships. Thus, the building of gay communities and gay male friendships are intertwined at the most essential level. Frost, Meyer, and Schwartz (2016) found that these friendships are especially important to gay and bisexual men who rely on individuals who tend to be more similar in both sexual orientation and race and ethnicity. They explain that, while LGB individuals may not have less support, they may have fewer avenues of support than the heterosexual population. They establish importance for the continued study of LGB friendships, particularly among intersectional minority communities. In the creation of the proposed scale, it is important to discuss the theoretical underpinnings of the constructs of relationship, and more specifically, friendship maintenance. Following the formation of an adequate scale, examination of individual friendship maintenance behaviors can be related back

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to the overarching questions of how they impact functions and structures of friendship as a whole.

Relationship Maintenance

Relationship maintenance is the process focused on keeping relationships together. Dindia and Canary (1993) explored the most popular four definitions of relationship maintenance: keeping a relationship in existence, keeping a relationship in a specific state or condition, keeping a relationship satisfactory, and keeping a relationship in repair. Keeping a relationship in existence does not imply qualities of the relationship and has no bearing on if the relationship is satisfactory. It also has no bearing on the frequency of contact within the relationship. The second definition of relationship maintenance focuses on specific qualities of the relationship such as intimacy levels, commitment, liking, attraction, interdependence, or mutual understanding; this definition can also include a specific level of stability for the relationship. The third definition focuses on keeping relationships satisfactory relating to the mutual satisfaction of the partners, implying that a stable relationship does not necessarily include satisfaction. In this respect, satisfaction and longevity are the two primary ways of measuring stability within the literature, with most researchers requiring longevity or longevity and satisfaction. The final type of definition focuses on prevention and keeping a relationship “in repair.” Research has shown that repair maintenance strategies tend to be quite different than the other types of relationship maintenance strategies.

There are two major theories about relationships which have relevance both to friendships and to their maintenance: interdependence theory and relational dialectics. Interdependence theory focuses on the amount that a relationship meets the expectation of the individual within a relationship (Thibaut & Kelley, 1959; Dindia & Canary, 1993). Satisfaction

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in the relationship is based on the meeting of one's comparison level (CL) whereas stability is based on the comparison level of alternatives (CL alt), that is, the relative draw of perceived alternatives. Thus, a stable relationship is not necessarily a satisfactory relationship and vice versa.

Rusbult and Buunk (1993) further introduced another common social principle to interdependence theory to make it more applicable to relational maintenance: commitment. Called the investment model, this new application argues that the more someone has invested in the relationship, the greater that relationship's stability. Commitment was shown to both increase satisfaction with the relationship and decrease the attractiveness of alternative options that may cause an individual to leave. Rusbult and Buunk explain this phenomenon as being adaptive for long-term relationships: as individuals invest more within a relationship, the greater the costs of ending the relationship. This results in a number of behaviors within the relationship that create greater stability.

The major behaviors associated with greater stability include the demeaning of alternate partners, jealousy, feeling as if one's relationship is better than others', accommodation during conflict, and willingness to sacrifice for the partner. Demeaning attractive alternate partners helps to stabilize the relationship through the minimization of CL alt. Jealousy is a similar adaptive behavior in which relational control is exerted to prevent time from being spent outside the dyad. Perceived relationship superiority is adaptive by using social comparison to hold one's own relationship quality higher than others' relationships. Willingness to accommodate promotes the reduction of social concerns (the perceptions of the other partner, relationship expectations, public self-image, etc.) through milder behavioral strategies. Finally, willingness to sacrifice highlights reciprocal giving even to the disruption of one's own needs to form a harmonious

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relationship and in the long run to hopefully benefit both parties. Rusbult and Buunk (1993) stated that these relational behaviors are unlikely to be unidirectional and that the fostering of interdependence in a relationship is essential to understanding maintenance behaviors.

When applying these principles to friendship maintenance, some of them may need modification. The core idea of investment increasing closeness may still stand, but in terms of friendships, exclusivity may no longer be an issue. Thus, the behaviors of jealousy and demeaning attractive partners may no longer be adaptive. Other behaviors such as accommodation and sacrifice for the other partner still clearly hold relevance within a friendship context. Specifically, the comparison level of alternatives may no longer matter much in friendships as friendships are not exclusive past the limited time resources that are committed to them. In addition, this model supports a mutuality of friendships, that time and effort should be exchanged freely between partners to increase support.

The second major theory of relationship maintenance is relational dialectics, which is focused on two opposing forces which exist on multiple planes in a relationship. Specifically, the dichotomies include closedness and openness, autonomy and connection, and novelty and predictability (Baxter, 1988; Dindia & Canary, 1993). It is important to note that this theory is not necessarily mutually exclusive to the interdependence perspective and in multiple areas overlaps with similar ideas (such as the struggle for voluntary interdependence). Baxter (2004) relayed a development of his dialectic theory, highlighting its nature as a dynamic process. It is important to note his departure from strict mechanistic dialectics as presented by Hegel to become more responsive to the relationship maintenance process. The first dichotomy that he focused on was openness with the other two arising later in his theoretical development.

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Baxter's theory highlights the importance of communication to relationship functioning. Baxter (2004) discusses the importance of Bakhtin's dialogical theory (1981) in the development of his own theory, exploring the various concepts of social function through these lenses. Baxter's theory largely focuses on the constant push-pull of a relationship, particularly in the function of open and closed communication within the dyad. In addition, he developed his theory in other realms (namely family functioning) increasing its applicability to other types of relationships. Montgomery (1993), a colleague of Baxter's, discussed this constant conflictual nature focusing on the interplay of conflicting and interconnected forces within relationships. It is important to note that within this paradigm, behaviors and conflict are not viewed as either good or bad but rather as actions that have the potentiality for both depending on the following consequences. In the dialectical sense, nothing is discrete, and all must be interpreted within the contexts of the relationship, decreasing the emphasis on harmony or fault and increasing an understanding of dynamic perspectives within the phenomenological moment.

In terms of relationship maintenance, different patterns of behavior are appropriate for various circumstances and situations in a relationship (Montgomery, 1993). These patterns as identified by Baxter (1988) include selection, segmentation, neutralization, disqualification, and reframing. Selection occurs when the partners choose one aspect over another such as novelty over predictability to change up the relationship. Segmentation focuses on different polarities in different domains such as openness in communication but closedness in routine. Neutralization focuses on balancing by exploring opposing forces. Disqualification employs ambiguity to prevent polarity. Finally, reframing occurs when contradictions are redefined in a manner where behaviors or perceptions are no longer oppositional. All these processes are undergone in an effort to allow the relationship to fluctuate without losing its perceived stability. These processes

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suggest a dynamic, shifting nature of relationships that arises as a response to changing external and internal pressures.

Relational dialectics is important to the study of friendships and their maintenance because it has relevance to the dyadic nature of interpersonal relationships. Friendships, more than either filial or marital bonds, are consistently chosen and thus may be less of a fit for an investment-based model (where resources are lost upon the dissolution of the relationship). A constant adaptation to new information and the ability to maintain structure becomes essential for the maintenance of friendship because it can be dissolved more easily than other social bonds. All of these relational behaviors have to be mediated between friends and friends have to be motivated to keep working together to continue to work through changes.

Another key part of relational maintenance is the behaviors enacted to achieve maintenance which often vary by situation and intention. Dindia (2003) provides an overview of these behaviors in the four relational stages (initiation, escalation, maintenance, and termination) which provide a background for the later discussion of friendship maintenance specifically. She stated that maintenance and repair strategies fall into 11 superordinate types: changing the external environment, communication, metacommunication, avoiding metacommunication, antisocial strategies, prosocial strategies, ceremonies, spontaneity, togetherness, seeking or allowing autonomy, and seeking outside help. Represented in these specific types are the overarching theoretical perspectives focusing on interdependence, communication, and level of predictability. The understanding of these core perspectives in relationship maintenance is fundamental to the more specific construct of friendship maintenance.

All of these behaviors are core to understanding friendship maintenance because they all are present to some extent or another due to friendship falling in the larger category of social

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relationships. Friendship is usually based on similarity and proximity which suggests that prosocial strategies and communication would be vitally important to friendships (Verbrugge, 1977). Other factors such as seeking outside help or ceremonies of commitment may be less relevant to friendship contexts. It is difficult to know which of these maintenance and repair strategies are most important to friendships, particularly LGB friendships.

Friendship Maintenance

The application of maintenance research into friendships is a relatively new field. While it was suggested early that friendships are dynamic and require some type of upkeep (Argyle & Furnham, 1982; Hays, 1984) only recently did friendship maintenance become studied as a distinct construct (Oswald, Clark, & Kelly, 2004; Oswald & Clark, 2003, 2006). Oswald et al. defined friendship maintenance as having four central dimensions: positivity, supportiveness, openness, and interaction defined through exploratory factor analysis during the development of the Friendship Maintenance Scale (2004). Using a confirmatory factor analysis, they found that the four-factor structure fit the data well and retained a predictive ability for the relative closeness of a friendship relationship. Furthermore, the study was able to show that certain relationship maintenance behaviors played a minimal role in friendships such as avoidance, mediated communication, and seeking external help. In addition, friendship maintenance behaviors were found to be predictive of both relationship satisfaction and commitment to the friendship.

The four key components of friendship maintenance were further operationalized in a follow-up study by Oswald and Clark (2006). Positivity focuses on the activities or behaviors that make the friendship enjoyable. Supportiveness included behaviors that support the friend or the friendship. Openness focused on interpersonal connection and sharing private thoughts.

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Interaction specifically refers to time spent together that create interpersonal closeness. All four factors are positively correlated suggesting that these are components of the larger friendship maintenance construct. Furthermore, Oswald and Clark (2006) found that friends who focused on similar types of maintenance behaviors tended to be closer.

It is important to note that much of Oswald, Clark, and Kelly's (2004) work focuses on the equity theory of friendship maintenance. Equity theory suggests that for a relationship to be maintained the relationship of cost and benefits for either party needs to stay similar over time (Canary & Zelley, 2000). As shown in Oswald et al. (2004), perceived equity in friendship maintenance behaviors predicted greater commitment to the relationship as well as greater relationship satisfaction. The research suggests that greater equity is related both to longevity of a relationship as well as its ability to meet the desired outcomes. Thus, maintaining a friendship revolves around equitable exchange in all domains and unequal friendships are not likely to last.

Social skills similarity has also been proposed as a model for the continuation of friendships. Burleson and Samter (1994) suggest that equitable communication skills are important to maintaining a satisfactory relationship, even more so than the individual's personal skill level. The key distinction to this type of model is that it has some connection to individual attributes that affect social relationships, namely communication skills. Expectation fulfillment also plays a key component in this theory, namely that continued fulfillment leads to the expansion and deepening of friendships. This also suggests that groupings of a similar level of skills would start to coalesce.

Burleson and Samter's (1994) social skills model presents the difficulty of defining friendship maintenance as an individual, dyadic, or group level process. Not much of the research has focused on friendship maintenance at an individual level or whether specific

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behaviors increase the efficacy of maintenance. Oswald and Clark (2006) examined the degree of individual and dyadic levels within the construct of friendship maintenance looking at problem-solving responses, maintenance behaviors, and their relationship to friendship satisfaction and commitment. They found that maintenance behaviors were correlated strongest with commitment and satisfaction at the dyadic level. Individual level problem-solving behaviors were associated with commitment and satisfaction where these same behaviors were not significant at the dyadic level. They suggest that problem-solving behaviors may reflect behavioral styles which is consistent with their more modest relationships with commitment and satisfaction. Oswald and Clark (2006) suggest that future work in the field should measure maintenance at both the individual and dyadic levels as both are important and clearly impacted differently by different factors.

Initial Item Development for GayFABS

The initial items of the GayFABS measure were developed in a two-part process. First, the theoretical structure of the scale and items related to said structure were derived from a thorough literature review. Second, items were developed based on a content analysis of a focus group of gay men who commented on same sex friendship maintenance behaviors. Both processes of item development had unique impacts on the shaping of the GayFABS. The literature review is discussed here and later, in the methodology chapter, the specific structure and findings of the thematic analysis are discussed.

Literature Review. The initial development of the scale was achieved by utilizing the literature discussed in the previous chapter. First, the questions were formed by the literature on gay friendship and friendship maintenance. Second, the structure of the scale and some question

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content of the scale was impacted by a scale to measure general friendship maintenance (Oswald, Clark, & Kelly, 2004).

The literature suggested several important factors to consider when generating questions for the proposed scale that may be unique aspects of gay male friendship that are not captured in current friendship maintenance scales. Nardi's (1999) seminal work suggested more fluidity in gay male friendships, romantic, and sexual relationships and anecdotally demonstrated some support for the hypothesis. He also discussed two distinct types of friendship within gay men: "talking" and "doing" friendship. If this were true, it would suggest friendship among gay men would be functionally different and thus maintained in different ways, as it has been well established that the maintenance behaviors in romantic, sexual, and friendship relationships are different and shift with different levels of intimacy (Dindia & Canary, 1993; Rusbult & Buunk, 1993; Montgomery, 1993; Dindia, 2003; Oswald & Clark, 2003).

Numerous studies have explored unique aspects of LGB and specifically gay male friendship. From Nardi's (1999) mixed methods study, he explicitly addressed friendship maintenance among gay men. He echoes earlier relational dialectic approaches, discussing the contextual nature of friendship maintenance, highlighting communication, private and public aspects of friendship, the aspects of judgment and acceptance, as well as several other potential aspects. He also discussed the anchoring of gay male friendship within a larger community of gay men and that this context helps to inform the influence of behavior on the longevity and satisfaction of friendship. Most notably, he discusses two distinct aspects of friendship: "doing" friendship in which time is spent in mutual activity and "talking" friendship in which communication is shared both about personal information as well as the friendship and the larger community context. He asked his sample if they had discussed a range of specific topics, many

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of which ended up informing much of the item content for the proposed scale and fit well in the structure put forth by Oswald, Clark, and Kelly (2004).

Nardi's (1999) seminal work on gay friendship has continued to be studied and hypothesized about, particularly qualitatively, even with some paucity of academic work on the nature of gay friendships outside of HIV/AIDS prevention contexts. As discussed in the previous chapter, numerous studies have displayed the effects of friendship on the coming out process and positive identity management in various life domains (Rumens, 2010; Rosario, Scrimshaw, & Hunter, 2011; Meyer, 2003; Diamond & Lucas, 2004). Nardi (1999) listed specific discussion topics that likely contribute to the maintenance of gay male friendship which have been supported in both sexual minority contexts and general friendship maintenance contexts: work, politics and culture, intimate relationships, sexual behaviors, other friends, hopes and goals for the future, the nature of the friendship, family, worries, and personal strengths and weaknesses.

While there are unique characteristics of friendship in the gay male community, relationship maintenance behaviors are likely to be somewhat shared between heterosexual and gay male friendship. Aspects of friendship such as communication, companionship, shared values, and reliability are likely to continue to be important within this community, perhaps even more so as gay men may be more reliant on their friendships as discussed above (Hays, 1984). Furthermore, Oswald, Clark, and Kelly (2004) developed a friendship maintenance measure for the general population focusing on four components of friendship maintenance (positivity, supportiveness, openness, and interaction) which they found to encapsulate the construct of friendship maintenance behaviors well for a general adult population, and gay men are unlikely to be an exception to this. Their work drew upon earlier qualitative research that suggested

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similar if more varied components of relational maintenance (Dindia & Baxter, 1987; Dainton & Stafford, 1993) and measured their applicability in friendship relationships.

With the construction of the proposed scale, it is evident that many of these topics are represented in the items that were developed (Appendix B). Behaviors that were well represented in the literature and/or were brought up consistently in the thematic analysis were used to anchor the development of items of the proposed scale. Utilizing the four components of Oswald, Clark, and Kelly (2004), the thematic analysis was structurally anchored in this literature while giving special attention to the unique aspects of gay male friendships.

Purpose

The goal of this study is to develop a scale that will measure friendship maintenance behaviors of gay men. This scale will help to highlight the differences between the friendships of gay men and those of heterosexual individuals (Galupo, 2009; Galupo & Gonzalez, 2013; Weston, 1991). It will also provide a new tool for the study of friendships of gay men which have not been well documented in the literature. In addition, the development of this scale provides a stepping stone to more representative research across the sexual minority spectrum, supporting quantitative exploration into understanding the diversity of experiences in relationships, particularly friendships in the sexual minority community.

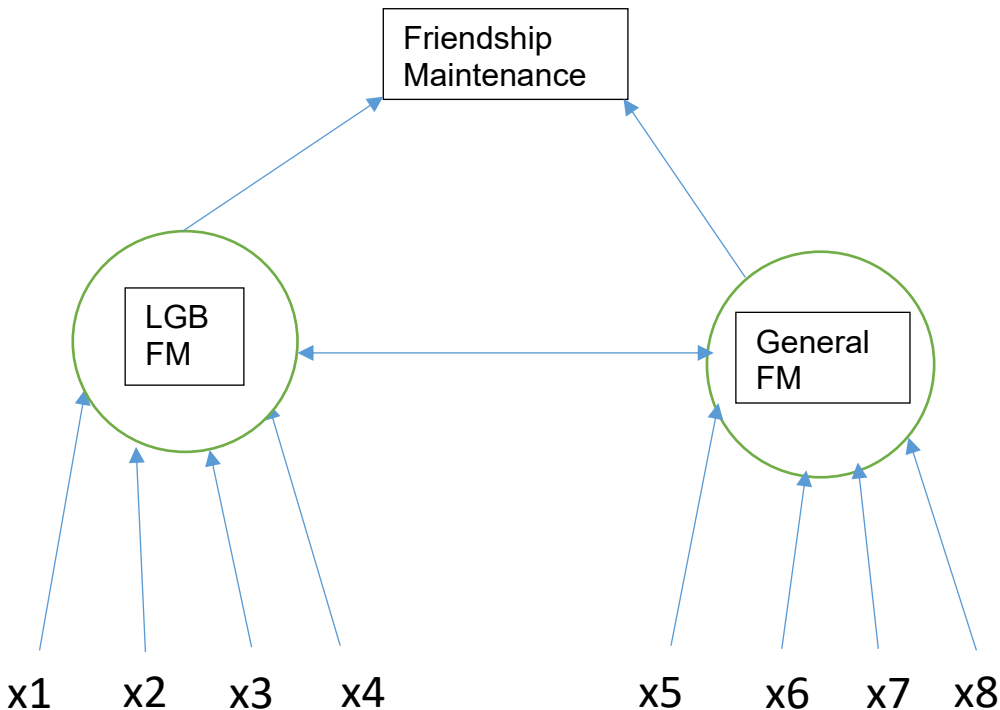
Utilizing DeVellis's (2016) steps for scale development, the proposed scale was developed. The first three steps, determining what to measure, generating an item pool, and determining item format were completed, some of which is described above and some of which is described in the methods chapter. DeVellis's step four, using expert review to establish content validity was not followed and a focus group of the sample population was used instead. Then, steps five and six were followed, administering the potential items as well as validation items to

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a development sample. Finally, steps seven and eight, validation and optimization of the scale were, conducted using exploratory factor analysis. The question this scale intends to answer is how friendship maintenance behaviors within the gay male are similar to and different from those utilized by a heterosexual population. Related to this question two hypotheses arise:

Hypothesis one. It is predicted that this scale will consist of two factors, one measuring general friendship maintenance behaviors and the other measuring gay male specific maintenance behaviors. The second factor should be comprised of differences in the acceptance of sexual behavior in friendship, the importance of support specific to experiences of discrimination and heterosexism, and a greater importance of friendship networks (friends who are friends with each other) that are likely salient in sexual minority populations than the heterosexual population. A visual depiction of the hypothesized factor structure can be found below in Figure 1.

Figure 1. Hypothesized EFA model prior to conducting analysis.



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Hypothesis two. Due to the shared structure of friendship maintenance and similarities of maintenance strategies across relationship types, the developed scale should correlate positively with the Friendship Maintenance Scale (Oswald, Clark, & Kelly, 2004). This measure will serve as a measure of convergent validity with predicted moderate, positive correlations between $r=.3$ and $r=.5$. This measure, however, also serves as a measure of divergent validity as it was normed on a general sample rather than a gay male population. If the correlation is stronger than predicted, it may be evidence that the scale does not provide enough discrimination of the friendship maintenance behaviors of gay men. Correlations between specific related subscales may be higher and still indicate good discriminant validity, but any findings like this will be addressed in context.

Hypothesis three. The developed scale should also correlate positively with measures that quantify positive LGB identity development, as this is likely to be related to the creation and maintenance of gay male friendships. Riggle and colleagues (2014) developed the Lesbian, Gay, and Bisexual Positive Identity Measure, a 25-item measure relating five aspects of positive LGB identity: self-awareness, authenticity, community, intimacy, and social justice. Due to the thematic similarities, this measure will serve as a measure of convergent validity with predicted moderate positive correlations between $r=.3$ and $r=.5$. As with the Friendship Maintenance Scale, individual subscales may correlate at higher or lower numbers depending on their individual levels of similarity.

Hypothesis four. For a measure of divergent validity, the Life Orientation Test – Revised (LOT-R; Scheier, Bridges, & Carver, 1994) was used. The LOT-R is a ten-item scale designed to measure an individual's level of optimism and should not correlate highly with the developed measure. Friendship is likely to have small correlations with general optimism for one

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of two reasons, either friendship could contribute to optimism as it has with general well-being or those who are optimistic may be more likely to engage socially and have more robust friendships. A weak positive correlation is predicted between the LOT-R and the proposed scale.

CHAPTER III
METHODOLOGY

In this chapter, the development of the proposed gay male friendship maintenance scale, referred to henceforth as the Gay Friendship Affiliative Behavior Scale (GayFABS), is discussed. First, the chapter opens with a discussion of the initial item development for the proposed scale, beginning with the process of developing items from the results of the focus group. Specifically, the choice of items, as well as the form of rating scale, are justified. Next, the participants and data collection procedures used to arrive at the final GayFABS items are described. At the close of the chapter, associated measures and their use for validity indicators as well as their psychometric properties also are discussed.

Study One: Focus Group

Due to the novel nature of the construct measured, items were developed utilizing an online focus group comprised of gay men, following step two of DeVellis's (2016) process and providing similar process to step four as well. Specifically, information from the literature on general friendship maintenance and such behaviors within friendship in gay male and LGB communities was supplemented by a focus group of gay men who provided information about the ways in which they engage in friendship maintenance behaviors with their gay male friends. The utilization of the focus group, which attends to actual behaviors used to maintain gay male friendships, also is grounded in the attempt to differentiate between perceived friendship quality and friendship maintenance behaviors for gay males in their friendships with other gay males (Linstone, & Turoff, 1975). In his seminal text on scale development, DeVellis (2016) argues that clarity of construct is vital to developing an accurate scale. Thus, utilizing a theory-based development process supplemented with qualitative data taken from a sample of the populations

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in question should provide the best grounding for a coherent, valid scale for the construct in question.

To achieve the goals of item development and construct differentiation, information from the focus group was analyzed using thematic analysis to determine actual friendship behaviors within gay male friendships (Boyatzis, 1998). Thematic analysis is a qualitative method for uncovering a collection of themes, both implicit and explicit (Braun & Clarke, 2006). Furthermore, thematic analysis allows for both accessibility and flexibility. Due to the primary researcher's familiarity with the method (Hutchison et al., in press), it was decided that this method would be ideal for utilizing qualitative responses in a theory-driven context. The use for focus groups to expand the breadth of item development in scales as well as to increase content validity is a brand-new venture in scale development but does have precedent (Mallinckrodt, Miles, & Recabarren, 2016). The thematic analysis was explicitly theory-driven and chose to identify themes to guide item development. This setup has the ability to avoid some of the critiques that have been levied against thematic analysis as a methodology, specifically a lack of consistency due to the flexibility of the format and difficulty in understand the results of the thematic analysis (Nowell, Norris, White, & Moules, 2017). The current study addresses both critiques by adding a second layer of analysis through the exploratory factor analysis as well as coherence being less necessary as the results of the thematic analysis were merely used to develop questions that were anchored in both the lived experiences of gay men as well as supported by the empirical literature.

Participants. Thematic analysis is a mixed methods approach that transforms qualitative information into thematic structures through theory-driven consolidation. Thematic analysis has been used with a wide variety of sample sizes, even lower numbers than are suggested for

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traditional pilot studies (Boyatzis, 1998; Braun & Clarke, 2006; Braun, Clarke, Hayfield, & Terry, 2019). A major issue for work with gay men is finding a representative sample (Worthington & Navarro, 2003) due to research historically being conducted from a heterosexist perspective, so efforts were taken to ensure that the larger sample was diverse in several demographic variables including race and ethnic background, location, age, and ability status. The sample for the initial thematic analysis was a convenience sample, potentially introducing some bias.

The focus group was comprised of 15 men and an individual who did not identify in terms of gender (N=16), who found the study through a snowball sampling procedure. During the thematic analysis, it was determined that the individual who did not identify as male had similar responses to the other men and thus was included in the analysis. The men's ages ranged from 21 to 54, with 62.5 percent being in their 20's. The men were mostly Caucasian but three identified as Latino or Hispanic and two identified as Asian or Pacific Islander. Most of the men had completed a bachelor's degree but one completed a professional degree, two completed associate's degrees, and three completed high school. The men varied significantly in household income from under \$10,000 yearly to over \$150,000 yearly. The men mostly reported being from urban locations, with two reported suburban locations and one reporting a rural location. While this sample is somewhat limited, it did provide variety in several demographic categories.

Procedure. Two open ended questions were asked of focus group participants: (1) "What do you rely on your friendships for?" and (2) "How do you maintain your friendships within your community?" These questions should help to identify both differential function and differential maintenance of sexual minority friendships. The answers were compared for

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similarity and major themes were developed into specific questions for the new measure through the process of thematic analysis (Boyatzis, 1998).

Findings. The thematic analysis was conducted primarily by the author. Together, the author and his advisor debriefed the findings three times adjusting based on mutual agreement. Oswald, Kelly, and Clark's (2004) domains were used as superordinate categories in the thematic analysis. Support, interaction, positivity, and openness were all well supported, although openness was better represented as communication as the responses addressed both the content of sharing personal information as well as the explicit ways in which this information and other information was communicated. Unique categories that arose included equating gay friendships with other friendships (as previously used for justification to include general friendship maintenance questions along with gay specific friendships maintenance questions), romantic relationships, negative friendship experiences. Nardi's (1999) components were also specifically represented among the results including differentiating "talking" and "doing" friendship activities, the importance of fellowship and connectedness to the larger gay community at large (both in a positive and negative manner), and the variation of private and public friendship behaviors.

Results themes supported both Nardi's (1999) assertions that gay male friendship is generative of new relational contexts including a) potential for future romantic partners, b) engaging in sexual activity within a defined friendship context, and c) a connection to the larger queer community. In addition, gay specific variations of the core domains put forth by Oswald, Clark, and Kelly (2004) were found throughout the thematic analysis including a) discussion of gay culture and community, b) specific ways of communication (gay social media use), c)

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interacting in queer spaces or queer focused activities, and d) support explicitly related to sexual identity. A full structure of the analysis, as well as theme counts, can be found in Appendix A.

Study Two: Initial Exploratory Factor Analysis of the GayFABS

The Gay Friendship Affiliative Behavior Scale (GayFABS) is designed to measure friendship maintenance behaviors in gay men. The sample items for the general friendship maintenance subscale attempted to capture the four domains of the friendship maintenance scale (Oswald et al., 2004): positivity, supportiveness, openness, and interaction. The sexual minority friendship maintenance subscale attempted to capture a greater emphasis put on friendship networks, support specific to issues of discrimination and heterosexism, the importance of and engagement in the gay community, and the acceptance and role of sexual behavior in maintaining close friendship relationships. The initial list of 50 items to be tested in the exploratory factor analysis as well as their proposed domain attachments can be found in Appendix B.

Following DeVellis's (2016) third step of scale construction, the general format for measurement was determined. A Likert-type scale was chosen due to its similarity to the scales being used in validity analyses and their general use in measuring social constructs (Croasmun & Ostrom, 2011). A 6-point scale was chosen to discourage neutrality on the items, with higher scores indicating more frequent engagement in the behavior (1 = Never; 2 = Very Rarely; 3 = Rarely; 4 = Occasionally; 5 = Frequently; 6 = Very Frequently). The general stem given for each question was "Please answer the following questions about how often you and your gay friends engage in the following activities. Please answer honestly and accurately." The participants then responded to individual items intended to measure specific friendship maintenance behaviors. Some of the items were intended to measure general friendship maintenance behavior and others

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were specifically intended to measure gay male friendship such as questions about sexual behavior, engagement in community and activism, and use of social media applications. Some of these unique components were kept in mind when deciding how to recruit participants to the study.

Sampling procedures. Gay male populations have traditionally been difficult to sample for several reasons. First, the population is difficult to define particularly because there is a great deal of variation amongst the population (Meyer and Wilson, 2009). There are differences in identity labels, behaviors, and cognition as well as a great deal of variety added by the intersection of other identities like race and gender. In addition, the U.S. Census does not collect information on sexual orientation which has been the benchmark for determining many other samples.

Given these difficulties in sampling gay males, for this study, snowball sampling over mobile applications focused towards gay men was utilized as well as Amazon Mechanical Turk were used to collect data from a variety of participants. Inclusion criteria were individuals who self-identify as gay males, have at least an eighth-grade reading level, and are over the age of 18. Exclusion criteria included individuals who identify as transgender to simplify the analysis of gender covariance.

Appropriate sample size for the full study will depend on the test length but is generally accepted to be 10 times the number of items for shorter tests (25 items or less; Siddiqui, 2013). However, in an examination of 303 exploratory factor analyses reported in PsychINFO articles, more than 40.5% reported a subject to item ratio of less than 5:1 (Osborne, Costello, & Kellow, 2008). Due to the length of the proposed scale, the desired N was around 250. Due to difficulties

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in sampling as discussed above, the actual sample size was 202, making the subject to item ratio 4.04:1, well within common practice.

Participants. Participant demographics for the 202 participants whose responses will be used in exploratory factor analysis as well as the validity and reliability analyses can be found in the table below. The specific demographics reported in the table are age, gender, ethnicity, sexual orientation, highest education level achieved, household income, and location (urban, suburban, and rural). Besides the provided categories, the participants could self-identify for both gender and sexual orientation due to the varied self-identification of gay men and the complex nature of feelings, attitudes, physical makeup, and behavior that comprise these identities (APA, 2012). Both the gender and sexual orientation categories had an “Other” option presented in conjunction with the standard options. For gender, the sample reported all male identity except for one individual who identified as nonbinary. For sexual orientation, all individuals initially had answered a question affirming they identified as a gay man as a screener for entry into the study. However, there was quite a bit more variation with bisexual identities as well as other sexual orientation identities described in the “Other” response including pansexual, bisexual but mostly attracted to men, heterosexual (although they had identified as gay in the screener) and attraction to male physical qualities (beards and muscular physique).

Table 1

Exploratory Factor Analysis Demographic Information

Demographic Category	N	%
Participant Age		
18-20	2	1.0
21-23	7	3.5
24-29	58	28.7
30-34	36	17.8
35-44	42	20.8
45-55	13	6.4
55-64	7	3.5

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Demographic Category	N	%
65+	1	0.5
Did not respond	31	15.3
Total	202	100.0
Gender		
Male	191	94.6
Nonbinary	1	0.5
Did not respond	10	5.0
Total	202	100.0
Ethnicity (participants could select multiple)		
African-American or Black	11	5.4
American Indian or Native American	6	3.0
Asian or Pacific Islander	19	9.4
Caucasian or White	154	75.7
Latino or Hispanic	11	5.4
Mixed Race	2	1.0
Total	202	100.0
Sexual Orientation		
Homosexual	165	81.7
Bisexual	15	7.4
Other (described above)	12	6.0
Did not respond	10	5.0
Total	202	100.0
Highest Education Level Achieved		
High school or equivalent	11	5.4
Vocational/technical school (2 year)	6	3.0
Some college	35	17.3
Associate's degree	18	8.9
Bachelor's degree	87	43.1
Master's degree	24	11.9
Professional or doctoral degree (MD, JD, PhD, etc.)	10	5.0
Did not respond	11	5.4
Total	202	100.0
Yearly Household Income (in dollars)		
Under \$10,000	10	5.0
\$10,000 - \$19,999	17	8.4
\$20,000 - \$29,999	22	10.9
\$30,000 - \$39,999	23	11.4
\$40,000 - \$49,999	22	10.9
\$50,000 - \$74,999	42	20.8
\$75,000 - \$99,999	29	14.4
\$100,000 - \$150,000	23	11.4
Over \$150,000	4	2.0
Did not respond	10	5.0
Total	202	100.0
Location		

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Demographic Category	N	%
Urban	93	46.0
Suburban	75	37.1
Rural	24	11.9
Did not respond	10	5.0
Total	202	100.0

Data collection procedures. As suggested in DeVellis’s (2016) steps five and six, the item pool and validation items were administered to the development sample. The participants received electronic copies of the informed consent by following a link in the recruitment materials and if they agreed, copies of the GayFABS, the Friendship Maintenance Scale (FMS; Oswald et al., 2004), the Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994), the Lesbian, Gay, and Bisexual Positive Identity Measure (LGBPIM; Riggle et al., 2014), and the Marlowe-Crowne scale for social desirability (Crowne & Marlowe, 1960), and a demographics form in that order were generated and presented to the participants via Qualtrics. Informed consent procedures for both studies can be found in Appendix G and the measures used for validity can be found in Appendices C – F. The data was kept in Qualtrics for security purposes in two separate files, one for snowball sampling and one for the Amazon Mechanical Turk data. Two questions were used as screener questions for participation: gender identification and sexual orientation identification. The gender identification question included three options: male, female, and other with an open response box for clarification. The sexual orientation question included four options: heterosexual, gay, bisexual, and other with an open response box for clarification. These questions were used in conjunction with an initial yes or no screener question placed directly after the informed consent, “I identify as a gay man and am over 18 years of age.” If this question was answered no, the participant did not receive the rest of the study and was ineligible for compensation. Participants who wrote in transgender options for

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gender identification or the heterosexual option for sexual orientation identification were not be allowed to complete the rest of the study (other sexual orientation identifications were allowed if the initial screener question was answered in the affirmative). A 50-cent incentive was given to participants recruited through Amazon Mechanical Turk. Other participants entered a raffle for five \$25 Amazon gift cards. To qualify for this raffle, the participants clicked on a link at the end of the study which led them to a second Qualtrics where they provided their email for the drawing. This prevented identifiable information (email) from being attached to participant answers.

Measures. Along with the GayFABS, the following measures were distributed to participants via Qualtrics:

Friendship Maintenance Scale. The Friendship Maintenance Scale (FMS) is designed to measure participants' engagement in friendship maintenance behaviors. The FMS is a 20-item scale that has four subscales (positivity, supportiveness, openness, and interaction) that are each comprised of five items (Oswald et al., 2004; see Appendix C). The scale is Likert-type with 11 response options that measure frequency of engagement ranging from never on the low end to frequently on the high end. Positivity measures behaviors that make the friendship fun and asks items such as "How often do you and your friend try to make each other laugh?" Supportiveness measures behaviors that provide emotional support and assurance and asks questions such as "How often do you and your friend provide each other with emotional support?" Openness measures behaviors that involve the sharing of personal information and communicating in general and asks questions such as "How often do you and your friend share your private thoughts with each other?" Finally, interaction measures behaviors that involve spending time and engaging in activities together and asks questions such as, "How often do you and your

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friend make an effort to spend time together even when you are busy?” Scores on the subscales are calculated using the mean of the items that comprise the subscales with higher scores indicating more frequent engagement of the types of behaviors that comprise that subscale. In the current study, the general stem was changed from “How often do you and your friend...” to “Please answer the following questions about how often you and your friends engage in the following activities. Please answer honestly and accurately.” to better reflect the measuring of general friendship maintenance for an individual rather than a dyad and to provide similarity to the instructions given in the GayFABS. The individual item stems were not changed.

The FMS has shown good reliability and validity in both the original study and in a later study examining friendship maintenance behaviors and problem-solving approaches. The four subscales of the FMS are positivity, supportiveness, openness, and interaction which had Cronbach’s alphas of .95, .86, .80, and .75 respectively in the CFA sample for the development of the FMS (Oswald et al., 2004). All subscales were positively correlated to each other ranging from .12 to .64. All four were found to be correlated with friendship satisfaction as measured by relation investment variables validated by Rusbult (1980, 1983). In addition, friendship commitment relation investment variables were found to be correlated with the supportiveness and interaction subscales of the FMS. A follow-up study examining these friendship maintenance behaviors and problem-solving styles (Oswald & Clark, 2006) reported the coefficient alphas for positivity, supportiveness, openness, and interaction as .73, .85, .71, and .83, respectively. The alpha coefficients as determined by the current study were .62, .87, .84, and .76, respectively.

Life Orientation Test – Revised. The Life Orientation Test – Revised is a ten-item scale that is designed to measure an individual’s level of optimism (LOT-R; Scheier, Bridges, &

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Carver, 1994; see Appendix E). Four of the ten items are filler items while the other six measure general level of optimism. Examples of items include, “In uncertain times, I usually expect the best,” “Overall, I expect more good things to happen to me than bad,” and “I’m always optimistic about my future.” The respondents mark their agreement with the item using a 5-point Likert-type scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). There are three negatively worded items that are scored in reverse and summed with the other three items to compute an overall optimism score. Scores range from 0 to 24 with higher scores indicating a greater level of general optimism.

The LOT-R has been found to be psychometrically robust in numerous studies. Scheier et al. (1994) reported Cronbach’s alpha at .78 and test-retest reliability ranging from the lowest .56 at 24 months to the highest .79 at 28 months. One study with 2372 adult subjects examined the LOT-R as two distinct subscales, one measuring optimism and one measuring pessimism, as well as a global score as described above with coefficient alpha reported as .70, .74 and .68 (Glaesmer et al., 2012). In addition, the scale has been used and found to be reliable in an LGT sample with coefficient alpha reported as .88 in a sample of 219 biologically male gay men, 196 biologically female lesbians, and three lesbians who were transgender (MtF) women (Vaughan & Waehler, 2010). The alpha coefficient for the global score was .84 for the current study. Convergent validity for the LOT-R was established with measures of self-mastery, trait anxiety, self-esteem, and neuroticism.

Marlowe-Crowne Social Desirability Scale. The Marlowe-Crowne Social Desirability Scale (MC) assess whether participants are answering items in ways that make them appear better or more favorable socially (Crowne & Marlowe, 1960; Reynolds, 1982; see Appendix F). The MC is commonly used in social psychological research and often in scale to development to

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check for desirability effects. Any scale measuring friendship maintenance behaviors is likely to see some inflation in answers due to wanting to look better. The internal consistency coefficient calculated using the Kuder-Richardson formula was .88 (Crowne & Marlowe, 1960). A shorter 13-item form developed by Reynolds (1982) was utilized in this study to minimize the study participants' level of fatigue from answering too many items. The short form is comprised of items 3, 6, 10, 12, 13, 15, 16, 19, 21, 26, 28, 30, and 33 of the original scale. Respondents respond to true-false statements in which the false response is aimed at being socially desirable but unlikely such as "It is sometimes hard for me to go on with my work if I am not encouraged" or "There have been occasions when I took advantage of someone". Scores can thus range from 0 to 13 with higher scores suggesting a desire to appear socially desirable. Reynolds found the mean of this short form to be 5.67 with a standard deviation of 3.20 suggesting scores greater than 9 account for less than 15% of respondents and scores greater than 11 account for less than 5% of respondents. Reynolds measured the Kuder-Richardson formula coefficient at .76 and reported a range of item to total score correlations from .32-.47. The reliability and validity of the MC has been well established through meta-analysis as well as use in individual studies (Beretvas, Meyers, & Leite, 2002). In addition, the reliability of the MC has been established for use with adult gay men with a reported alpha coefficient of .71 (Copolov & Knowles, 2016).

Lesbian, Gay, and Bisexual Positive Identity Measure. The Lesbian, Gay, and Bisexual Positive Identity Measure (LGB-PIM) was developed to assess positive LGB identity (Riggle et al., 2014; see Appendix D). The scale was built from researchers' previous qualitative work that had identified eight themes of positive LGBT identities. The LGB-PIM is an ideal measure for convergent validity as gay men who display higher levels of positive sexual orientation identity are associated with more supportive friendship environments, at least in adolescence (Ueno,

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2005). The LGB-PIM is comprised of five subscales: self-awareness, authenticity, community, intimacy, and social justice. The respondents respond to a 7-point Likert-type scale (from 1 = *Strongly Disagree* to 7 = *Strongly Agree*). Subscale scores are determined by averaging subscale item ratings and range from 1 to 7 with higher scores indicating greater presence of positive LGB identity. The self-awareness subscale contains items such as “My LGBT identity motivates me to be more self-aware” and had an alpha coefficient of .939 in the current sample. The authenticity subscale contains items such as “I embrace my LGBT identity” and had an alpha coefficient of .891 in the current sample. The community subscale contains items such as “I feel visible in the LGBT community” and had an alpha coefficient of .927 in the current sample. The intimacy subscale contains items such as “My LGBT identity allows me to be closer to my intimate partner” and had an alpha coefficient of .912 in the current sample. The social justice subscale contains items such as “My LGBT identity makes it important to me to actively educate others about LGBT issues” and had an alpha coefficient of .887 in the current sample. The authors of the LGB-PIM reported satisfactory test-retest correlations ranging from .54 on the Intimacy to .87 on the Authenticity subscale after 16 months. They also reported satisfactory alphas ranging from the lowest being .85 on the Social Justice subscale to the being .95 on the Community subscale. As the scale was normed on LGB individuals, it is likely these reliability estimates extend to the current sample. However, the reliability of this measure has been demonstrated elsewhere in both a general LGB sample with alphas ranging from .79 to .90 (Szymanski, Mikorski, & Carretta, 2017) as well as a bisexual male sample with alphas ranging from .87 to .94 (Cooke & Melchert, 2019).

CHAPTER IV

ANALYSIS

This chapter presents the data analysis procedures used in the present study. First, sampling analysis, including tests of sampling adequacy, sphericity, and normality are discussed. Second, the implications of these tests are discussed in choosing an adequate form of factor analysis. Third, the factor analysis and consolidation processes are highlighted, explaining the criteria for item elimination and retention. Finally, the scale length is optimized and the final configuration of the GayFABS is discussed. Following the construction of the scale, reliability and validity analyses are conducted which are then further expanded upon in the next chapter.

Preliminary Sampling Analysis

DeVellis (2016) explains factor analysis as having several purposes: determining the number of latent variables underlying items, condensing lots of unique information into a few key factors, and defining what these factors mean. This is used for DeVellis's steps seven and eight, the validation and optimization of scales. In addition, factor analysis helps to determine how individual items perform in relation to the central construct. The first step to factor analysis is extracting factors which can be done through several methods but is most commonly done with principal component analysis (Osborne, Costello, & Kellow, 2008). While this may be the most common approach, the authors criticize this approach as PCA is not a true method of factor analysis. They suggest either using maximum likelihood with relatively normal data or principal axis factors should the assumption of normality be severely violated. Therefore, in the present study, preliminary analyses of the data are necessary before conducting the EFA.

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To assess the robustness of the sample, sampling adequacy, sphericity, and normality were all assessed. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) assesses partial correlations between variables and assess level of shared variance of the items. The KMO statistic was 0.93 in the “Marvelous” range of appropriate values (Beavers et al., 2013). The Bartlett’s Test of Sphericity “provides evidence that the observed correlation matrix is statistically different from a singular matrix, confirming linear combinations exist” (Beavers et al., 2013, p. 4). The Bartlett’s test statistic had an approximate χ^2 of 5221.4 with 1128 degrees of freedom and was significant at $p < .00$. Taken together, the KMO statistic and the Bartlett’s Test of Sphericity suggest that the data are appropriate for factoring. Finally, to determine whether to use maximum likelihood or principal axis factors, the Shapiro-Wilk test for normality was run. All items were determined to be non-normal, suggesting that principal axis factors should be used (Osborne, Costello, & Kellow, 2008).

Exploratory Factor Analysis

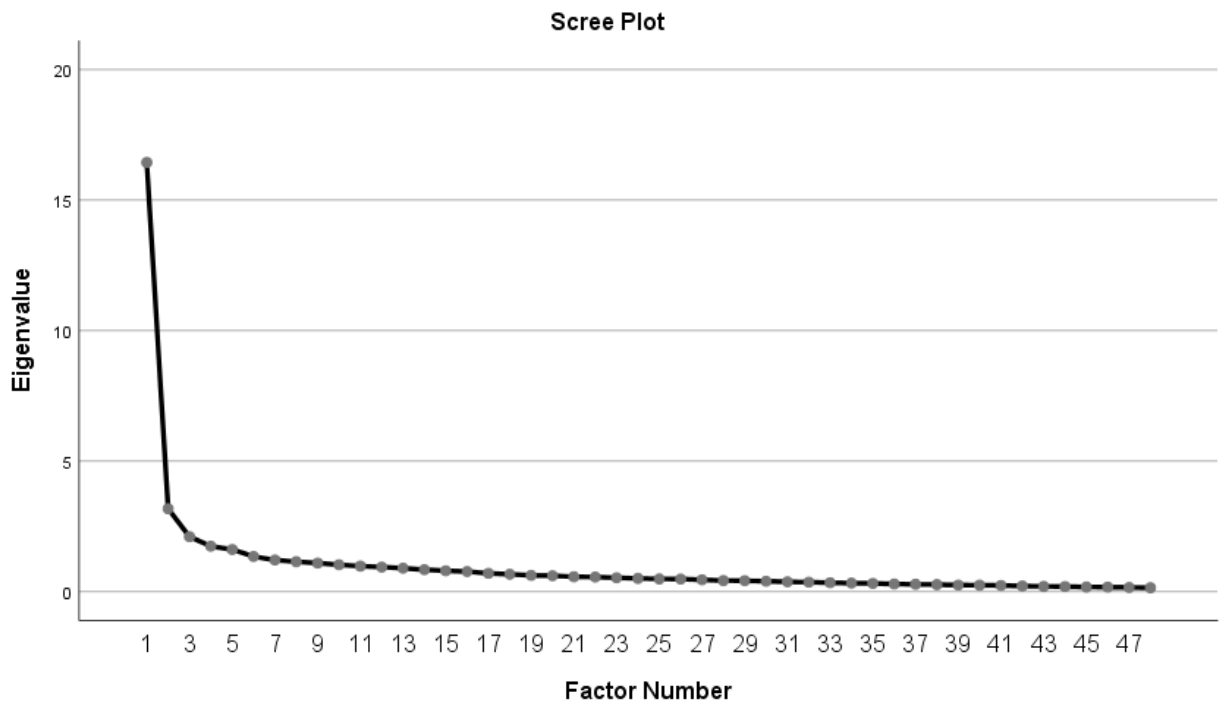
Prior to running the principal axis factors analysis, it is important to look at the performance of individual items (DeVellis, 2016). Thus, before conducting the unrotated factor analysis as described below, both the variances and the item-total correlations were examined to remove items that were unlikely to accurately contribute to the scale. Two items were removed in this fashion: “I joke around with my friends” and “I try to keep plans with my friends when we make them in advance” due to variances lower than .85 and item-total correlations below .3. These numbers suggest that these two items do not vary enough to be statistically useful and poorly reflect the central concept of the developed scale.

Following the removal of these items, the unrotated principal axis factors analysis was conducted. Figure 2 includes the scree plot for the initial extraction, which is commonly agreed

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to be the best method for determining the number of factors, although some studies retain factors with eigenvalues above 1. Unlike using eigenvalues above 1 to determine significant factors, which can lead to overidentification of significant factors, the use of the scree plot produces more meaningful and concise factors (DeVellis, 2016). As can be seen below, the “elbow” of the scree plot lies somewhere between three and five factors, not the two originally predicted factors (Cattell, 1966).

Figure 2. Scree plot following initial principal axis factors extraction.



Due to the likelihood of the factors being correlated (i.e., general friendship maintenance vs. gay specific friendship maintenance), an oblique rotation is likely to produce the best results and direct oblimin was chosen as all oblique rotation methods tend to produce similar results (Osborne, Costello, & Kellow, 2008). A series of principal axis factoring analyses with a direct oblimin rotation was used to assess the fixed factor rotations for two, three, four, five, and six factor solutions due to the odd position of the elbow in scree plot and common practice to

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investigate factors rotations ranging from one below the elbow to one above the elbow (Osborne, Costello, & Kellow, 2008). A three-factor solution was by far the cleanest result, producing the highest loadings on individual factors and the fewest cross loadings. The three initial factors accounted for 45.0% of the total variance. Specifically, the first factor accounted for 33.3% of the total variance and can be best theoretically described as an emotional support factor. The second factor accounted for 7.5% of the total variance and can be described as an interaction factor focused on spending time together. The third factor and final in the three-factor solution accounted for 4.2% of the total variance and can be best theoretically described as a factor representing sexual orientation- and sexuality-specific friendship maintenance behaviors.

Following the identification of factors, the next step in exploratory factor analysis is item elimination and scale optimization (DeVellis, 2016). Item elimination is a complex process that requires competing choices focusing on condensing the scale around the original theoretical composition of factors identified in the analysis. Items can be eliminated for multiple reasons including poor factor loading, cross-loading on multiple factors, low communality to the rest of the scale, and analysis of the theoretical importance of individual items. In an analysis of reported criteria for item selection in the *Journal of Counseling Psychology* (1995 to 2004), it was shown that loadings and cross-loadings were the most commonly reported (Worthington & Whittaker, 2006). Thus, in the present study, items were first analyzed using loadings and cross-loadings. It has been suggested loadings of less than .32 on any factor and cross loadings of less than .15 are acceptable criteria for elimination of a single item but loadings (Tabachnick, Fidell, & Ullman, 2007). Due to the impact of item removal on scale structure, they suggest care in eliminating many items at once as it may affect the overall factor structure. It is important to also note the theoretical meanings of each factor and keep questions that specifically address

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important theoretical constructs even if they may perform slightly worse than others (DeVellis, 2016). The loadings and the cross-loadings were used to eliminate items performing poorly or items that were not distinct enough across factors. Four items were eliminated due to poor loading and eight items were eliminated due to unacceptable cross-loading. After three rounds of item eliminations, mostly eliminating cross-loaded items, the final full scale contained 36 items: 21 comprising the emotional support factor, 6 comprising the interaction factor, and 9 comprising the sexual orientation- and sexuality-specific factor.

After factor identification and item deletion to optimize factors, it is important to optimize scale length which comprises the final step in scale development (Worthington and Whittaker, 2006; DeVellis, 2016). Initial reliability analyses were run finding alpha coefficients for the global scale of .94, the emotional support subscale of .93, the interaction subscale of .82, and the sexual orientation and sexuality subscale of .84. Due to the length of the emotional support subscale and high internal consistency for that subscale, it was determined that items could be eliminated further to optimize scale length. Using item-total correlations and item variances, 12 items were identified for potential elimination. One of these items, “I rely on my friends for things I am uncomfortable asking for from my family” was determined to be theoretically important enough to retain (due to being identified as a behavior that is representative of the family of kin hypothesis (Weston, 1991; Nardi, 1999)). The other eleven items were eliminated, leaving the emotional support subscale with 10 items.

A final factor analysis was run with these items to confirm that the factor structure had not changed due to the elimination of items within the emotional support subscale. This factor analysis represented the final composition of the GayFABS and its three component subscales and can be viewed in Table 2. Following confirmation that the factor structure had not changed,

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reliability analysis was conducted again, producing new alpha coefficients of .92 for the global score and .90 for the emotional support subscale. As the items did not change in the other subscales, their internal consistencies remained the same.

Table 2

Final Structure and Factor Loadings for Exploratory Factor Analysis with Direct Oblimin Rotation of the GayFABS Scales

Item	Emotional Support	Interaction	Sexuality and Sexual Orientation
I rely on my friends for emotional support.	.68	.18	.05
I rely on my friends for advice about difficult situations.	.73	.28	-.14
I rely on my friends for things I am uncomfortable asking for from my family.	.53	.16	-.06
I can count on my friends to pick me up when I feel down.	.74	.00	.02
I can count on my friends to support me emotionally if something bad were to happen (e.g. the death of someone close to me, losing a job, having to move).	.74	.00	-.04
I am comfortable telling my friends that I like them.	.52	-.07	.28
I feel closer to my friends after discussing difficult things with them.	.66	-.15	.20
My friends and I support each other when we experience homophobia or discrimination.	.57	.06	.09
I talk to my friends when I'm worried about them.	.74	.02	-.06
I discuss relationship difficulties with my friends.	.56	.02	.21
I go on vacations with my friends.	.02	.54	.16
I spend holidays with my friends.	.13	.56	.09
I engage in social activism with my friends (e.g. political events, protests)	-.07	.58	.29
I give back to the community with my friends (e.g. volunteering, attending benefits, fundraising).	-.03	.53	.20
I help my friends with regular chores (e.g. cleaning, shopping, running errands).	.17	.70	-.06
I help my friends with larger chores (e.g. moving, landscaping projects).	.23	.55	-.02

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I cuddle with my friends.	.03	.17	.52
I engage in sexual behaviors with my friends.	-.09	.16	.51
I consume queer media with my friends (e.g. gay film, TV, music).	.01	.15	.59
I go to community specific celebrations with my friends (e.g. pride events, holiday events that are held by LGBT+ organizations).	.01	.18	.55
My friends and I use slang terms common in the gay community with one another (e.g. yass, queen, read).	-.13	.15	.61
My friends and I gossip about other gay men that we know.	.11	.08	.39
I discuss sex with my friends.	.25	-.16	.67
I talk with my friends about things that my straight friends "wouldn't get".	.26	-.08	.56
There are things I only talk about with my gay friends.	.21	-.14	.57

The final factor structure of the GayFABS improved significantly over the initial factor rotations. The theoretical compositions remained the same for all three factors during the item eliminations process. The total variance accounted for by the factors increased from 45.0% to 52.2%. The emotional support factor accounted for 35.4 % of the total variance, the interaction factor accounted for 10.0% of the total variance, and the sexual orientation and sexuality subscale accounted for 6.8% of the total variance. The item count dropped from 48 to 25 making the accessible while still maintaining adequate internal consistencies.

Reliability Analysis

Any new scale must demonstrate good internal consistency, measured using Cronbach's alpha. Satisfactory alpha coefficients vary depending on what the scale is to be used for as scales affecting clinical decisions may need greater internal consistency than research measurements. Steiner (2003) suggests an alpha coefficient of around .9 for a clinical use scale and a coefficient of around .8 if the scale is to be used for research purposes. He warns that alpha coefficients

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approaching 1 indicate either that a scale is redundant or too lengthy. The final GayFABS performs admirably on this measure with a Cronbach's alpha of .92 for the global score of the 25-item scale, .90 for the emotional support subscale, .82 for the interaction subscale, and .84 for the sexual orientation and sexuality subscale. This demonstrates the GayFABS high internal consistency and potential for use in both research and clinical settings.

Another way to measure internal validity is correlations between subscales and the global scale score. High correlations suggest that the global score and subscale scores are related. As can be seen in Table 3 below, all three subscale scores have significant strong correlations to the global scale score. In addition, each subscale has a moderate to strong significant correlation to each of the other subscales of the GayFABS. These correlations suggest strong internal consistency throughout the scale.

Table 3

Internal Correlations of the GayFABS

	GayFABS Global	GayFABS Emotional Support	GayFABS Interaction	GayFABS Sexuality
GayFABS Global				
GayFABS Emotional Support	.84**			
GayFABS Interaction	.78**	.46**		
GayFABS Sexuality	.87**	.56**	.59**	

Note. ** $p < .01$; two-tailed

Validity Analysis

Validity analysis is essential in the process of scale development to make sure that the scale measures the hypothesized construct. DeVellis (2016) suggests three types of validity that are essential to scale development in evaluation of items which is his seventh step: content

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validity, criterion-related validity, and construct validity. Content validity is a measure of how well items reflect the entire domain of a content domain. Criterion-related validity highlights the ability of a scale to predict the relationship between the variables it measures to other variables and is often called predictive validity. Finally, construct validity is the property of a scale that suggests it measures what it is supposed to measure by comparison with other variables. Because both construct and criterion-related validity relate to the performance of other variables, at times a measure can be used to determine either. In the case of the current study, content validity and construct validity are the most important in making sure the scale is functioning well both theoretically and statistically. Criterion-related validity is not relevant to the current scale as it does not purport to be predictive of any other specific construct.

Content Validity. Content validity for the GayFABS was established through the focus group thematic analysis and through the empirically driven item construction. The comprehensive literature review found in Chapter 2 helps to establish the content validity of the GayFABS. Clark and Watson (1995) discuss the importance of establishing content validity in other ways as well. The scale must be sufficient in length to measure each of the content areas that it purports to measure. Since the GayFABS has more than 5 items in each subscale following elimination of the item pool, this aspect of content validity seems to be well met as there are not specific numerical guidelines for this. Another component of content validity they discuss is the choice of item format. They suggest that a Likert-style format provides better reliability and stability than a dichotomous format but in turn may contribute to response bias. The structure of the GayFABS is such that it forces a choice (as a six-item Likert-style scale) and provides greater variability at the potential cost of response bias.

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Due to the potential for response bias, the Marlow-Crowne scale for social desirability was used to account for potential response bias. There was little evidence of response bias as all three subscales and the global GayFABS score were either mildly positively correlated or not significantly correlated at all to the Marlowe-Crowne scale for social desirability as can be seen in Table 4.

Table 4

GayFABS Bivariate Correlations with the Marlowe-Crowne Scale for Social Desirability

	GayFABS Global	GayFABS Emotional Support	GayFABS Interaction	GayFABS Sexuality
Marlow-Crowne	.16*	.06	.20**	.16*

Note. * $p < .05$, ** $p < .01$; two-tailed

Construct Validity. Construct validity measures the theoretical relationships between variables of interest (DeVellis, 2016). In scale development, construct validity is determined in two ways: convergent validity and discriminant validity. In convergent validity, correlations between scales that purport to measure theoretically similar constructs allow for the statistical confirmation that they measure similar constructs. Using theory, we should be able to predict how new scales will correlate with psychometrically robust scales that measure similar (or dissimilar) constructs. Because the method by which constructs are measured can contribute to covariance, the predicted correlation should be higher than that expected by mechanically similar measures. Discriminant validity (also called divergent validity) establishes that measures are not related to other measures that they should not be theoretically related to. Measures used to establish discriminant validity should have little to no correlation to the new measure. Three of the study's hypotheses relate to the establishment of convergent and discriminant validity.

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Hypothesis one: Convergent validity with friendship maintenance behaviors. The subscales of the FMS were hypothesized to be correlated with the GayFABS at a moderate positive level with $.30 \leq r \leq .50$. This hypothesis was substantiated across most of the subscale interactions as well as the subscale to global interactions. Three of the four subscales of the FMS were related at a higher level than predicted, $.50 < r < .60$, but these correlations still suggest good convergent validity. Only one of the sixteen correlations between the FMS and the GayFABS was not significant which was the correlation between the interaction subscale of the GayFABS and the positivity subscale of the FMS. Interestingly, the two interaction subscales were only correlated at around .4 which was somewhat unexpected. However, the relationships between the openness and supportiveness subscales of the FMS and GayFABS emotional support subscale were the highest of all correlations measure which makes good sense due to the theoretical similarity of these three subscales. All 16 correlations can be found in Table 5.

Table 5

Bivariate Correlations of the GayFABS and the Friendship Maintenance Scale Subscales

FMS Subscale	GayFABS Global	GayFABS Emotional Support	GayFABS Interaction	GayFABS Sexuality
Openness	.58**	.65**	.36**	.40**
Positivity	.36**	.50**	.12	.22**
Supportiveness	.53**	.60**	.31**	.38**
Interaction	.51**	.48**	.40**	.39**

Note. * $p < .05$, ** $p < .01$; two-tailed

Hypothesis two: Convergent validity with the positivity LGB identity. The Lesbian, Gay, and Bisexual Positive Identity Measure (Riggle et al., 2014) has five distinct subscales of five questions, each measuring self-awareness, authenticity, community, intimacy, and social justice in relation to a participant's LGB identity. It was hypothesized that the concepts would have a moderate, positive correlation with the GayFABS, $.30 \leq r \leq .50$. This hypothesis was

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substantiated. Again, the strength of the correlations was slightly underpredicted between the individual subscales of the LGBPIM and the global score of the GayFABS with correlations ranging from $r = .51$ to $r = .61$. Individual subscale correlations were as predicted with correlations ranging from $r = .29$ to $r = .57$. All 20 correlations were significant at the $p < .01$ level and are reported below in Table 6.

Table 6

Bivariate Correlations of the GayFABS and the LGBPIM Subscales

LGBPIM Subscale	GayFABS Global	GayFABS Emotional Support	GayFABS Interaction	GayFABS Sexuality
Self-Awareness	.61**	.51**	.41**	.57**
Authenticity	.51**	.51**	.29**	.43**
Community	.55**	.41**	.47**	.49**
Intimacy	.51**	.42**	.32**	.51**
Social Justice	.60**	.53**	.39**	.55**

Note. * $p < .05$, ** $p < .01$; two-tailed

Hypothesis four: Discriminant validity with optimism. It was hypothesized that the GayFABS would not correlate strongly with a measure of general optimism, the LOT-R (Scheier, Carver & Bridges, 1994). However, the GayFABS did show weak positive but significant correlations between the LOT-R and both the global score of the GayFABS as well as two of the subscale scores, ranging from $r = .22$ to $r = .39$. Likely this does not represent a failure in statistical testing as much as it represents a mistaken hypothesis. High levels of friendship maintenance behaviors, particularly those regarding spending time with one's friends as well as sexuality specific support, are associated with higher levels of general optimism, albeit weakly. Interestingly, emotional support behaviors with friends is not associated with general optimism. The correlations between the LOT-R and the GayFABS can be found in Table 7.

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Table 7

GayFABS Bivariate Correlations with the Life Orientation Test - Revised

	GayFABS Global	GayFABS Emotional Support	GayFABS Interaction	GayFABS Sexuality
LOT-R	.28*	.13	.39**	.22*

Note. * $p < .05$, ** $p < .01$; two-tailed

CHAPTER V

DISCUSSION

This chapter reviews the findings, interpretation, and future research implications of the construction of the Gay Friendship Affiliative Behavior Scale (GayFABS). The purpose of creating the GayFABS was to develop a psychometrically sound measure that captured the unique aspects of friendship maintenance behavior within gay men while remaining a valid assessment of the general friendship maintenance behaviors already well validated within the literature. The GayFABS successfully achieves this purpose by measuring two aspects of general friendship maintenance in the emotional support and the interaction subscales and the unique component of gay male friendship in the sexuality specific friendship. The GayFABS can be used both for further research, particularly mixed methods study of the LGB friendship, as well as potentially in clinical settings as a measure of social ability in gay men.

The chapter is organized by each component of scale development followed by the discussion of the original hypotheses. The chapter begins with a discussion of the factor structure of the GayFABS. This is followed by a discussion of the validity hypotheses and their implications for the psychometric robustness of the GayFABS. Finally, the limitations of the study; areas of further research interest; and implications for theory, practice, and research are illuminated. Overall, the original factor structure hypothesized for the development of the GayFABS was not exact, but the majority of validity hypotheses were well supported. All findings are somewhat preliminary due to the lack of a CFA to confirm the factor structure of the GayFABS.

Factor Structure

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The initial hypothesis for factor structure of the EFA predicted a scale with two factors: one related to general friendship maintenance behaviors and one related to sexuality specific friendship maintenance behaviors. While the final GayFABS consisted of three distinct subscales, the original hypothesis was well founded but ultimately not supported. The one proposed factor of general friendship maintenance ended up loading onto two distinct factors in the EFA, one specifically regarding emotional support and one regarding interaction. The sexuality specific factor did emerge distinctly in the EFA. Further exploration of the factor structure in a CFA would help confirm the structure of the GayFABS and its component subscales. Below, the individual subscales are discussed and their fit into the split general friendship and sexuality specific friendship maintenance hypothesis are expanded on.

Emotional Support Subscale

The subscale accounting for the greatest variance in the GayFABS at 35.4% was the emotional support subscale. The need for friendships to provide emotional support to reduce emotional stress has been well established (Cohen & Willis, 1985; House, 1980; Cohen & McKay, 1984). At the same time, emotional support seems to be especially essential for the gay community who may be less supported by their families of origin and utilize friendship as a primary means of emotional coping (Weston, 1991). Indeed, this support has been shown to reduce both depression and anxiety in the LGB population (Powers, Ressler, & Bradley, 2009; Crawford & Manassis, 2011). Given these previous findings, emotional support seems to be important not only in heterosexual friendships but also within sexual minority communities.

The presence of an emotional support subscale supports the construct's importance in measuring general friendship maintenance. The Friendship Maintenance Scale (Oswald, Clark, & Kelly, 2004) included two subscales comprised of similar items to the GayFABS emotional

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support subscale, namely openness and supportiveness. The FMS Openness subscale measures both communication and sharing of personal information and includes items that are clearly similar to items within the GayFABS emotional support subscale such as, “I am comfortable telling my friends that I like them” or “I discuss relationship difficulties with my friends.” The majority of the GayFABS emotional support subscale is closer to the FMS Supportiveness subscale measuring emotional support and assurance. GayFABS items similar to the FMS Supportiveness subscale include “I can count on my friends to pick me up when I feel down” and “I rely on my friends for advice about difficult situations”. These specific types of friendship maintenance behaviors have also been found in Dindia’s (2003) examination of maintenance and repair strategies and dyadic communication similarity has been supported as important to maintaining satisfactory friendships (Burleson & Samter, 1994). As such, the emotional support subscale is perhaps the strongest scale due to its centrality as a key function in maintaining friendship, namely providing support against life’s stressors.

Due to the unique stressors of the gay male community, the emotional support subscale also has some unique aspects that are not present in the general friendship maintenance literature. First, one of the remaining items was “I rely on my friends for things I am uncomfortable asking for from my family”. This item fits well into the discussion of the LGB creating surrogate families from friendships that may support them when their families of origin fall short (Weston 1991; Nardi, 1999; Dewaele et al., 2011). Another unique item addressed sexual orientation support, “My friends and I support each other when we experience homophobia or discrimination”. This item loading most significantly on the emotional support subscale rather than the sexuality support subscale speaks to the essential nature of this support in the lives of gay men. The need for support surrounding homophobia and discrimination has been well

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documented (MacDonald, 1983; Wilkinson et al., 2012; Frost et al., 2016) and it is no surprise that individual friendships, rather than the community, provide the bulk of this support. Gay men of color may need friendships with individuals of similar intersectional backgrounds to provide specific support related to complex experiences of discrimination (Frost et al., 2016). Due to the intersectionality of these experiences, it is unlikely that family or friends of similar sexual orientation or ethnicity alone would provide adequate support and friends from a similar intersectional background can help fill the need for that support. The GayFABS provides at least some sensitivity to the complexities of the friendship of gay men, even in the measurement of aspects of friendship maintenance that have been demonstrated in the general population.

Interaction Subscale

The interaction subscale accounted for 10.0% of the total variance and measured items focusing on spending time with friends and helping them with tasks. Interaction is an essential aspect of friendship as it reduces social isolation (Hawthorne, 2006). Choosing to spend time together can be seen as a form of commitment to the friendships, particularly when other social relationships compete for one's time. As such, the interaction subscale highlights the investment model of relational maintenance, emphasizing the use of time spent as a personal investment (Rusbult & Buunk, 1993). Though friendships may be more easily dissolved in comparison to other types of relationships (i.e. romantic and familial), spending time with one another, particularly in service to the other is an investment in the ongoing relationship.

In the gay community, this investment can be especially important. First, friendships can provide the structure in which new romantic relationships form, either with the two friends or with friends of friends (Kennedy, 2010; Nardi, 1999). Second, these friendships help to fill the gap of unsupportive or distant family structures, with LGB individuals reporting the

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prioritization of friendships more frequently than general samples (Dewaele et al., 2011). Finally, friendships among gay men provide access to the larger gay community both in person and virtually (Wilkinson et al., 2012; Morris, 2018). These individual ties may become even more important if traditionally gay spaces such as bars and community spaces continue to close.

The GayFABS interaction subscale does a good job of unifying the general concept of time spent together with scenarios that may be more likely to be found in a gay male sample. Some of the items focus on things that are likely to be true for many friendships such as shared vacations, giving back to the community, or helping with large chores (e.g., moving or landscaping). However, the other items may focus on activities that are more frequent in the gay male (and larger LGB) community such as spending holidays together, engaging in social activism, and helping friends with smaller day-to-day chores. These types of activities have been shown to be vital in the larger LGB community, relying on caregiving from friends or engaging in social activism to fight against homophobia and other forms of discrimination (Muraco & Fredriksen-Goldsen, 2014; Riggle et al., 2014). The uniqueness of this subscale in measuring gay male-specific interaction is shown through the positive, yet moderately strong correlation with the interaction subscale of the FMS at $r = .4$ (Oswald et al., 2004). This demonstrates that while these subscales measure similar constructs, there is enough variability between the two, likely where gay male-specific interaction behaviors are concerned.

The GayFABS interaction subscale may come closer to capturing what Nardi (1999) calls “doing” friendship in which gay men engage in interactive activities in three ways: assisting each other, doing activities together, and spending time talking. Clearly, assisting each other is demonstrated in the two items that explicitly ask about chores. Doing activities were also well established in the items focusing on social activism and giving back to the community as well as

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going on vacation and spending holidays together. Spending time in talking focused activities was not represented in this subscale, likely because spending time talking is both an emotionally supportive and interaction focused activity, leading many of these initial items to be eliminated due to high cross-loadings. Items like having a meal together and setting aside time to talk were eliminated from the initial item pool in this way.

Sexuality and Sexual Orientation Subscale

While accounting for the least amount at 6.8% of the total variance, the sexuality and sexual orientation subscale is the subscale that sets the GayFABS apart from the FMS. This subscale accounts for the items that are not likely to be endorsed in heterosexual friendships but that contribute to the maintenance of gay male friendships. These items fall into two general categories: behaviors that are acceptable due to the different social norms within the gay community and behaviors that specifically focus on supporting the uniqueness of one's own sexual orientation and the community at large.

Behaviors that are theoretically more acceptable in the gay community than in the general public comprise about half the subscale. First, two questions focus on the blurred line between platonic and romantic relationships within the gay male community: "I cuddle with my friends" and "I engage in sexual behaviors with my friends". These items were largely left for the individual responding to define but represent behaviors that would typically not be defined as "friendship" within heteronormative contexts. In addition, the explicit discussion of sex is also less likely to be tolerated within heterosexual friendships. The best argument for this may be the differential loading of the items "I discuss sex with my friends" and "I discuss relationship difficulties with my friends", the latter of which loaded on the emotional support subscale though the two items at least appear to bear some similarity. The final and most unique item that

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discusses behavior is “My friends and I gossip about other gay men that we know”. This item focuses on a behavior that is not seen to be very socially appropriate (gossip) but may still be an important part of establishing individual gay male friendships, particularly in places with a larger, more alienating gay community.

Other items in the sexuality and sexual orientation subscale focus on activities and behaviors that celebrate and support the very act of being gay. Some of these items focus on increasing affiliation with the community such as consuming queer media with friends and going to community specific celebrations. Others focus on communication and support surrounding being gay like using gay slang and discussing matters that an individual feels unable to open up about or misunderstood by heterosexual friends. Both these items, as well as the behavior-based items, are well supported not only by the literature but by the structure of the LGBPIM with its community and intimacy subscales (Riggle et al., 2014). Hence, these items are not only a reflection of the maintenance of gay male friendship but perhaps even a description of how positive gay identities are formed. That is, engaging and maintaining gay male friendships may increase the development of an individual’s own positive self-identity.

Internal Consistency

Internal consistency is concerned with the similarity of items within a scale and its ability to measure a latent variable (DeVellis, 2016). Therefore, the GayFABS should produce both individual subscales and a global scale with high internal consistency. In examining the reliability of the GayFABS utilizing Cronbach’s alpha (Cronbach, 1951), the GayFABS demonstrated a high internal consistency for both the global scale and the individual subscales. The GayFABS global and emotional support subscales reached alpha levels suggesting clinical robustness, which supports potentially using this measure in a clinical setting. The strong internal

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consistencies of the GayFABS global and individual scales support the idea not only that the subscales represent their own theoretical subconstructs well but also that the subscales contribute toward the measurement of the overarching construct of gay male friendship maintenance.

Content and Construct Validity

After reliability is established, it becomes vital to validate a developed scale to make sure that the specific variable measured is the cause of the variability in the items of the scale (DeVellis, 2016). Validity is most concerned with the adequacy of a scale to measure a specified construct. Of the three essential types of validity, establishing GayFABS' content and construct validity is of utmost importance. Establishing content validity is done through the creation of items to encompass the breadth of the desired construct (in this case gay male friendship maintenance). Following adequate content validity, the scale must also be assessed to confirm that it is measuring the desired construct (construct validity). This is primarily demonstrated in two ways: comparison to other scales that measure constructs related to the desired construct (convergent validity) and comparison to scales that have no theoretical reason to be significantly correlated with the proposed scale (discriminant validity). The rest of this section discusses these two types of validity with respect to the GayFABS and the initial validity hypotheses.

Content Validity

Content validity concerns a scale's ability to measure as much breadth as possible of a given domain of interest (DeVellis, 2016). In practice, it can be quite difficult to draft a pool of items that both encompasses a wide variety of facets of a given construct without either missing theoretically important facets or becoming redundant. As presented in the literature review, there is a complex range of friendship maintenance behaviors that vary contextually. In addition, inclusion of multiple similar factors in scale development tends to lead to factor confusion and is

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less likely to lead to the development of a robust instrument. For this reason, the initial hypothesis of a two-factor structure, while aspirational, was developed in hopes of creating both a simple but useful scale for the measurement of gay male friendship maintenance behaviors. The development of the GayFABS sought to capture the complexities of friendship maintenance in a population not well represented in the literature, gay men, and demonstrate that these behaviors may require different types of measurement across populations.

Content validity is achieved well through a proposed scale's empirical grounding in the literature as well as structuring the scale so it measures the breadth of the specified domain. DeVellis (2016) discusses content validity as related to the initial choices in scale construction: the proposed item pool, the length of the scale, and the scale format. He states that content validity is most often pursued in scale development through the process of expert review, where academics in the field check to see if items span the entirety of the construct as well as identify potential concerns of conciseness, clarity, and redundancy. The current study utilized the implementation of a focus group instead. Reasons for utilizing a focus group rather than an expert panel included the nascency of the academic study of friendship maintenance as well as the dearth of academic literature when it came to gay male friendship processes. Using a focus group helped to identify lived experiences of gay men regarding their friendship maintenance behavior explicitly and used those responses to develop questions anchored in the research. For this reason, the use of thematic analysis was especially important.

Thematic analysis is a unique form of qualitative research that creates theoretical structure through the consolidation of qualitative data (Boyatzis, 1998). Through the development and counting of codes, a theoretical structure can emerge from the qualitative data. This specific study followed a deductive approach using current friendship maintenance and

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relational maintenance research as a theoretical framework to understand the process of gay male friendship maintenance. As far as the researcher can tell, this approach to content validity is novel in scale development, but still demonstrates empirical grounding as well as breadth of the proposed scale. The use of individuals who belong to the studied population as “experts” has been demonstrated elsewhere in community-driven research but is relatively new in the field of scale development (Mallinckrodt, Miles, & Recabarren, 2016).

Besides the theoretical breadth of the initial item pool, it has also been suggested that the very structure of a proposed scale can be a matter of content validity (Clark & Watson, 1995). In the examination of the GayFABS, scale length was optimized through removal of items in the emotional support subscale. The final scale is comprised of 25 items with no subscale comprising less than 6 items, suggesting adequate items to capture constructs without too much repetition.

Another component of addressing content validity is checking for social desirability effects. Scales measuring psychological construct must take care not to accidentally begin to confound variability in the measured variable with those caused by a desire to remain socially desirable (King & Bruner, 2000). This particular form of validity is somewhat of a cross between discriminant and content validity as the researcher is both attempting to prevent the scale from responding to social reliability effects (discriminant validity) and attempting to write and clarify items that measure the desired variable (content validity). In the present study, two of the subscales and the global scale score were found to have weak, positive correlations with the Marlowe-Crowne Social Desirability Scale. This suggests in part that social response bias may have had a minor effect on the variance of the GayFABS. The researcher hypothesized two reasons for this. First, the GayFABS is a six-point Likert-style measure. This specific

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configuration was chosen to increase variability by not allowing participants to pick a neutral option. However, this may have had the unintended consequence of skewing the answers to the GayFABS more positively. Second, the GayFABS is designed to measure the engagement of an individual in friendship maintenance behaviors. In some sense, this construct may be theoretically linked to the need for social affirmation that social desirability scales measure. In further assessing the GayFABS validity, it is important to look at other similar constructs to assess how well the new scale fits within the current empirical landscape.

Based on the presented evidence, the GayFABS demonstrated adequate content validity. Initial decision-making processes and item development were anchored toward representing the empirical literature. Special effort was made to incorporate the lived experience of gay men utilizing a focus group approach while maintaining a connection to the body of academic literature through a theory-based application of thematic analysis. Finally, scale length was optimized while taking into account items that may carry heavier theoretical significance.

Construct Validity

Construct validity is perhaps the most important form of validity because it concerns how well a scale measures the concept it is created to measure (DeVellis, 2016). The present study's findings provided evidence for the GayFABS' construct validity through the convergent and discriminant validity testing as suggested by DeVellis (2016). At best, this type of analysis approximates construct validity, particularly when developing a scale in an academic area that does not have psychometrically sound scales already. Evidence for convergent validity in the current study was collected by comparing the GayFABS to two multidimensional scales that purport to measure constructs related to its theoretical underpinnings: general friendship maintenance and positive LGB identity. Evidence for convergent validity was well established

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across the vast majority of subscale to subscale and subscale to global scale correlations. Evidence for discriminant validity was established using a unidimensional scale measuring optimism. Evidence for discriminant validity was not established and likely represents a failed theoretical hypothesis between the relationship between optimism and gay male friendship maintenance.

General friendship maintenance. In regard to convergent validity, it was hypothesized that the GayFABS would share moderate, positive correlations with all subscales (positivity, supportiveness, openness, and interaction) of the Friendship Maintenance Scale (FMS; Oswald, Clark, & Kelly, 2004). Bivariate correlations indicated that the anticipated overlap between the GayFABS and FMS scales was well-founded, providing support for the convergent validity of the GayFABS. Some of the correlations reached moderate to high level, a closer overlap than predicted. These included correlations between the global score of the GayFABS with all but the supportiveness subscale of the FMS as well as the correlations between the GayFABS emotional support subscale and both the openness and supportiveness subscales of the FMS. In general, this may suggest that the GayFABS has slightly more overlap with general friendship maintenance than originally predicted which fits with Nardi and Sherrod's (1994) original analysis of gay male friendship structure looking similar in behaviors and development but different in sexual behavior and conflict mediation. They explicitly speak to gay male friendship occurring in a context that shares the relational aspect of same-sex friendship but the presence of potential sexual attraction that influences cross-sex friendship. These similarities may speak to correlations of higher strength than predicted that were found between the GayFABS and the FMS.

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The generally higher correlations between the emotional support subscale and the FMS versus the other two subscales of the GayFABS may suggest the emotional support factor is more associated with general friendship maintenance than gay male specific friendship maintenance. As originally hypothesized, the GayFABS was intended to measure some of the processes that were shared between general friendship maintenance and gay male specific friendship maintenance. Emotional support has been found to be vital for gay male friendships, especially support surrounding aspects of identity and discrimination as well as more generally feeling supported by someone with similar experiences (Galupo & Gonzalez, 2013; Frost, Meyer, & Schwartz, 2016). In addition, general friendship maintenance seems to be somewhat centered on creating relational closeness and providing support, so the support subscales may be more representative of the general construct than are subscales related to other types of maintenance behaviors (Dindia, 2003, Oswald & Clark, 2006). It is perhaps unsurprising then that the subscale of the GayFABS that relates to emotional support would correlate strongest with factors that comprise general friendship maintenance.

On the other hand, the positivity subscale of the FMS was more weakly related to the component subscales of the GayFABS. The correlation between the positivity subscale of the FMS and the interaction subscale of the GayFABS was not significant. The correlation with between the positivity subscale of the FMS and the sexuality and sexual orientation subscale was weaker than the hypothesized strength for confirmation of convergent validity. Oswald, Clark, and Kelly (2004) posit that the positivity subscale measures the behaviors that make the friendship fun. While these concepts were present in the focus group as well as the initial item pool for the GayFABS in items such as “I joke around with my friends” and “My friends and I have fun together,” by and large these items tended to cross-load between the emotional support

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and interaction subscales and were thus eliminated from the final structure of the GayFABS. A four-factor solution was no more representative of the positivity component for the GayFABS as it began to split apart the Sexuality and Sexual Orientation subscale and the factors quickly lost meaning upon further consolidation. Thus, it would seem that while positivity may be an important aspect of friendship maintenance, it may already be well captured by the emotional support subscale (which correlated strongest with the positivity subscale at $r = .50$).

The GayFABS demonstrated good convergent validity with the FMS, particularly in the FMS emotional support subscale. The interaction subscale of the GayFABS correlated somewhat weaker across all FMS subscales, but this may be attributable to the gay specific interaction behaviors that were highlighted in the analysis section. In addition, the sexuality and sexual orientation subscale correlated sufficiently with all subscales other than positivity of the FMS suggesting that the unique sexuality and sexual orientation subscale is directly related to the construct of general friendship maintenance behavior. This provides support for the “similar but different” reasoning for the current study. The hypothesis regarding moderate, positive correlations between the GayFABS and the FMS was well supported. To further examine the uniqueness of the GayFABS and its relationship to the development of a positive gay identity, the newly developed LGBPIM was used (Riggle et al., 2014).

Positive LGB identity. The theoretically similar construct of positive LGB identity was used to further demonstrate convergent validity. The newly developed Lesbian, Gay, and Bisexual Positive Identity Measure (LGBPIM; Riggle et al., 2014) was hypothesized to share a moderate positive correlation with the GayFABS. Theoretically, individuals who demonstrate higher frequencies of gay male friendship maintenance behaviors should develop more positive gay identities. This is congruent with literature that suggests that friendships and community

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integration increase the development of positive identity within gay men (Nardi, 1999; Woolwine 2000; Wilkinson et al., 2012). This hypothesis was completely substantiated with the lowest correlation between the GayFABS and the LGBPIM ranged between $r = .29$ and $r = .61$, nearly exactly the strength predicted in the original hypothesis.

The relationship between the LGBPIM and the GayFABS was much stronger than that between the FMS and GayFABS, providing significant support for the third hypothesis. This suggests in part that the GayFABS has done a good job of accentuating unique aspects of friendship maintenance that are not only present in the gay community at large but that influence the development of positive gay identity. The importance of this cannot be overstated. Research has shown minority stress in gay men to be associated with risk of lower psychological well-being, largely due to the impact of discrimination and oppression (Meyer, 1995). However, research has also demonstrated that high social support helps to buffer this effect (Spencer & Patrick, 2009). Friendship among gay men is important, not only to provide support in similar ways as heterosexual friendship, but to provide support that leads to more positive individual identity and a lessened effect of the stresses of oppression and discrimination (Meyer, 2010).

Optimism. While it is important to examine similar constructs to establish construct validity, it is also important to identify constructs that should not be related to establish that the scale does not measure what it is not supposed to be measuring. DeVellis (2016) describes insignificant correlations between the proposed scale and theoretically unrelated variables as being indicative of divergent validity, providing evidence that the measure's items, not its methodology, drive the variance. Optimism was chosen as a divergent construct and the Life Orientation Test – Revised (LOT-R; Scheier et al., 1994) due to its demonstrated psychometric soundness. It was hypothesized that the GayFABS would have weak relationships to the LOT-R

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since it is a socially related construct but not directly related to the measurement of gay male friendship maintenance. This fourth hypothesis supported, as both the global GayFABS scale score and all but one subscale scores were significantly positively correlated with the LOT-R.

The positive correlations between the GayFABS and the LOT-R demonstrate some support for the hypothesized relationships between the constructs. The emotional support subscale was not significantly related to the LOT-R, so for that specific scale, the hypothesis was somewhat well founded. Both other subscales and the global score were weakly positively correlated with LOT-R scores. The weak to moderate positive correlation between the interaction subscale of the GayFABS and the LOT-R further supports. At first glance, it does not make much sense that spending time with friends would be moderately associated with general optimism but there are some possible explanations when examining more deeply. First, the interaction subscale likely responds to the quantity of friendships more than the other subscales of the GayFABS. That is, the more friends you have, the more likely you are to engage in more frequent interaction behaviors. Thus, one's own positive outlook on life may make them more attractive friendship partners to others. Also, individuals who have higher levels of general optimism may engage better socially which supports a mild relationship between the GayFABS and the LOT-R. Another potential explanation relies on the relationship between interaction in gay community events and positive sexual orientation identity development. Gay men responding at higher levels to the interaction subscale questions may also have higher scores in general optimism due to greater involvement within their communities, leading to overall greater psychological well-being and resulting in more general optimism, but this relationship has not been examined in the existing literature. It is difficult to determine the exact theoretical connection between the interaction subscale and the LOT-R.

Limitations

The current study has several limitations, both in sampling as well as potentially in methodology. Internet-only data collection and data collection using social media eliminates the potential for participants who do not have easy access or knowledge on how to use these avenues of responding. In addition, the new use of thematic analysis rather than expert review presents a break in tradition but may also represent an exciting new way to establish content validity. In relation to this, the lack of expert reviewers is a weakness when compared to DeVellis's (2016) steps of scale developments. Finally, the lack of a CFA to confirm the factor structure of the GayFABS prevents the confirmation of the relationships between factors posited after the completion of the EFA. While all three factors may present limitations, they provide opportunities for further study and the completion of that research would help increase certainty through reproducibility.

Internet and social media data collection are rising in popularity in psychological research. While collection from traditional laboratory settings provides lower non-response error, it often has a higher risk of poor external validity. Amazon Mechanical Turk was used to recruit approximately half of the sample in the current study and although it has been shown that AMT may have lower subject motivation and non-response rates than traditional lab settings, it also increases external applicability and decreases the change for a contaminated subject pool and experimenter effects (Paolacci, Chandler, & Ipeirotis, 2010). The other half of the sample population was reached using gay social media applications and snowball sampling. Traditional critiques of this have been generalizability and selection bias but these concerns are not unique to this type of sampling and internet-based and snowball sampling have been shown to be especially effective in recruiting gay men (Meyer & Wilson, 2009). The easiest way to address

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these potential limitations is to review the demographic information. As can be seen, the sample pool of the GayFABS provides wide variation including around 25% individuals of color as well as significant variation in geographic location, income level, and age. Thus, the current sample may be more representative than many scales that have been normed on traditional college student populations. In essence, the sampling procedure used in the current study provides a different set of external validity concerns versus a traditional laboratory or community-based sample but does not necessarily increase and may actually decrease these concerns.

As with the sampling, the unique use of thematic analysis to demonstrate content validity may present both a strength and a limitation. In devising the GayFABS, items were drafted to either fit in gay male specific friendship maintenance or general friendship maintenance. This may have led to an unintentional lack of sampling breadth, such as is potentially true for the positivity aspect of friendship maintenance. DeVellis (2016) suggests utilizing a set of experts both to increase sampling adequacy as well as to clarify items. The lack of a set of experts to review the items may weaken content validity, particularly in concisely capturing the breadth of the construct. The use of thematic analysis somewhat manages the first aspect by using a deductive, qualitative based, empirical method for constructing test domains. In addition, an iterative discussion between the researcher and an experienced academic helped to edit the items for clarity. Both goals for the expert pool were met while utilizing non-traditional but innovative and well-researched methods, but may fall short of actually utilizing a pool of expert reviewers. Content validity was also addressed in several other ways during scale construction to help mitigate the lack of an expert review panel. The unique approach of the thematic analysis could be further expanded on in future studies if directly compared to use of expert review.

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The final major limitation of the current study is the lack of a confirmatory factor analysis. A CFA provides statistical confirmation of the factor structure of scales and would go further in supporting the psychometric robustness of the GayFABS. The one major issue with not conducting a CFA, is that the psychometrical soundness of the scale has yet to be fully confirmed. However, CFAs can be completed in isolation from EFAs and as such, there is no limitation on conducting a CFA in the future to further support the structure of the GayFABS.

Implications

Theoretical Implications

The theoretical implications for the GayFABS are twofold. First, the structure of the general friendship maintenance subscales within the GayFABS both supports and reexamines the current theory and measurement of friendship maintenance. Second, the findings surrounding convergence with positive identity and the identification of sexuality specific behavior give some backing to current theory regarding gay male friendship. These implications are to be expected in any newly developed measure as the development process helps to crystallize previously proposed theory, particularly that which has yet been measured qualitatively.

The structure of the GayFABS both supports and challenges the existing literature on friendship maintenance, particularly that represented in the Friendship Maintenance Scale (Oswald et al., 2004). The GayFABS found support for similar types of friendship maintenance behaviors, particularly those found in the interaction, supportiveness, and openness subscales. The items within the final structure of the GayFABS also supported existing understanding of multiple types of maintenance behaviors, even outside the core subscales, such as those discussed by Dindia (2003). The GayFABS did not offer much information on the variation of friendship maintenance behaviors, but future dyadic studies could examine friendship

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satisfaction and longevity and similarity or dissimilarity of maintenance styles. The GayFABS, while largely supporting the theory behind the FMS, also provides some challenges to the understanding of general friendship maintenance. While much of the literature has examined friendship maintenance as a multidimensional construct, the GayFABS was able to provide a global score of friendship maintenance, something that has not been present within the literature yet. In addition, it challenges or measures in a unique way the concept of positivity, that is the activities that “make friendship fun.” Largely these types of positivity behaviors were subsumed by the three overarching subscales. Despite the mix of support for existing friendship maintenance literature, most of the findings of the GayFABS were congruent with existing theory and this remained true in the GayFABS relationship with existing theory on gay male friendship.

By and large, the construction of the GayFABS supports the existing literature on gay male friendship and helps to offer general statements where much of this literature has previously been culturally and contextually bound. Nardi’s (1999) work discussed gay friendship around the turn of the century, prior to the rise of social changes such as social media applications, as well as in a specific cultural context (primarily men in the Bay Area in his quantitative work). The GayFABS largely supported many of his findings, including the use of friendship to engage in and build community, the murky line between platonic and romantic relationships in gay men, the concepts of “talking” and “doing” friendships, and in the focus study, the meaning of gay men’s individual friendships. Many of these individual hypotheses have also been borne out elsewhere in the literature. Community creation and engagement has been explored as a positive and identity building experience for gay men (Woolwine, 2000; Wilkinson et al., 2012). In addition, the GayFABS provided some support for open discussion

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surrounding issues that may not be easily talked about such as safer sex behaviors or the commonality of drug use in the gay community (Kelly et al., 2012; Bauermeister, 2008). Future use of the GayFABS may help to further corroborate specific hypotheses about the nature of friendships within the gay community and their effect on various public health risks and their prevention.

The GayFABS is more general than specific. Many of its well supported items harken to findings in the empirical literature but may also posit new areas in which theory can grow. The items regarding discussion of things straight friends “wouldn’t get” and the use of friendship to engage in community specific activities provide some support to the continued need for in-person community spaces to provide experience specific support for gay men (Kubicek et al., 2013 a, 2013b; Simon Rosser, West & Weinmeyer, 2008). Additionally, some items speak to the development of informal caregiving relationships that can become essential as gay men age, such as the item regarding helping friends with daily chores or relying on friends for things that would be normally fulfilled by family members (Tester & Wright, 2016; Muraco & Fredriksen-Goldsen, 2014). In provision of new potential implications, the GayFABS highlights friendship existing within the context of the gay community, specific ways of communicating with one’s friends, a poorly defined line between romantic and platonic relationships as well as a great acceptance of multiple structures of the friendship relationship, and support around specific concerns for gay men.

Implications for Future Research

Due to the dearth of psychometrically sound instruments that address friendship maintenance in minority populations, the current study is vital to continued research of friendship maintenance. Since relationship maintenance and friendship maintenance have been

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associated with improved relationship quality, satisfaction, and longevity, the creation of tools to better assess the unique contexts of these behaviors is necessary. They will help address: how friendships are created, maintained, and ended; the effects of various friendship maintenance behaviors on the quality and longevity of friendships; the psychological impact of the ability to maintain and sustain satisfactory friendships; and how friendships are similar to and differ from other types of relational maintenance. In addition, this study specifically provides a tool to further examine this behavior in a population that has not been well-represented in the literature. The unique aspects of friendship in the gay male community suggest a number of other important venues for research: the impact of healthy friendships on individual identity development, the role of friendships in providing support against discrimination and oppression, the relationship between friendship maintenance in gay men and larger integration into the gay male community, the types of communication behaviors in which gay men engage in (e.g. the use of slang, gossiping), the impact of friendship in providing unique forms of support such as decreasing health risks or provision of informal caregiving, and the use of friendship to form romantic bonds or provide an outlet for intimacy needs. An immense strength of the current study is the measurement of specific support behaviors rather than general perceived quality or quantity of social support as is measured by many of the existing scales examining constructs related to friendships.

The GayFABS also provides an opportunity for use among the sexual minority community in general. The GayFABS could easily be restructured and renamed on populations such as lesbians, bisexual individuals, or transgender and gender nonconforming individuals. The GayFABS has shown an ability to both be used on a subscale as well as a global level, offering more specificity in examining desired constructs. A few specific studies would go a long way to

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furthering the utility of the GayFABS. First, a CFA conducted to confirm the factor structure would improve the utility of the scale and its subscales. Furthermore, a comparison study between scores for gay men and scores for a heterosexual population could be telling in assessing which specific items are more attuned to the unique aspects of this population. Comparison of a heterosexual and homosexual sample is important to further establish the differences between general friendship maintenance and gay male specific friendship maintenance. Finally, slight rewording and renorming would likely allow the GayFABS to be used with a larger sexual minority sample, increasing its utility for future research.

Implications for Clinical Work

In clinical settings, the GayFABS could be used as a brief measure to examine an individual's level of engagement in various types of friendship maintenance behaviors. Gay men may be able to generally identify lack of social support but the GayFABS could provide specific information into what kind of support is missing. In addition, it could be used in conjunction with other measures to assess the process of identity development, specifically in stages related to community integration (Cass, 1984). As has been discussed, the integration of gay men into the larger gay male community can be both beneficial and risky, but more often produces positive effects. Clinical support for this integration, particularly among gay men just beginning the coming out process or integrating with the community for the first time, could help smooth this process and address any potential risk. At the very least, the individual items suggest behaviors that may improve an individual's sense of connectedness with friends and the community and identify places in which the individual may feel uncomfortable socially.

Conclusions

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The initial goal of the study was to develop a psychometrically sound measure to assess the friendship maintenance behaviors of gay men. The GayFABS presents a novel, robust measure that addresses both general friendship maintenance in gay men as well as sexuality and sexual orientation specific friendship maintenance behaviors. It is important to note that without a CFA, all findings are only preliminary. In comparison to the existing general friendship maintenance scale (Oswald, Clark & Kelly, 2004), the GayFABS appears to be psychometrically superior as evidenced by a similar number of items, higher internal consistency, robust validity, and the inclusion of a global scale score rather than just subscales assessing specific types of friendship maintenance. Not only that, but the GayFABS offers the opportunity to study an underrepresented research population as well as argues that the display of friendship maintenance behaviors changes depending on contextual factors.

This new scale continues to build on previous research by examining the structure of friendship maintenance and interpreting it in innovative structural ways. The current study also offers a novel approach to content validity in the use of thematic analysis to achieve empirically driven item development without the use of experts in the field, potentially offering underrepresented populations to offer their experiences in authentic ways rather than through the researchers' own perspectives. The development of the GayFABS offers new avenues into the study of gay male and in general LGB friendship, a landscape that has shifted drastically in the past few years with new forms of communication and integration found through social media as well as greater legal acceptance of the LGBT community in general. The impact of these greater social changes on the existing structures of queer friendship is likely to be significant and the GayFABS provides a potentially psychometrically sound tool in which to examine these changes.

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Appendix A

Results of the Thematic Analysis Used to Organize Item Development

Superordinate structure (Oswald et al., 2004)

1. Positivity – behaviors that make the friendship enjoyable
2. Openness – Sharing personal information
3. Supportiveness – supporting each other emotionally
4. Interaction – Spending time with one another

Thematic Analysis Results

- 1) Equating gay friendships and friendships in general
 - a) 1Ci, 1Fi, 1Ji, 2Fi, 2Mii, 2Pii
- 2) Supportiveness
 - a) General discussion of support construct - 1Niii, 2Fii, 2Jiii
 - b) Emotional support
 - i) 1Ai, 1Aii, 1Ii, 2Ai
 - c) Support activities – i.e. trips to the airport, sleeping on the couch, picking someone up for a night out
 - i) 1Liii, 2Liv
 - d) Support related to sexual orientation and shared experience of that; ability to be yourself
 - i) 1Di, 1Iii, 1Kii, 1Jii, 1Oi, 1Pii, 2Di
- 3) Spending time together (Interaction)
 - a) In mutual activity (hanging out)
 - i) 1Bi, 1Li, 2Bi, 2Di, 2Hii, 2Hiii, 2Ii, 2Jii, 2Oi, 2Pv
 - b) In public
 - i) 1Li, 1Lii, 2Giii, 2Kii, 2Liii, 2Oii, 2Pii
- 4) Positivity – having fun together, having a sense of community
 - a) Fun
 - i) 1Hi
 - b) Fellowship
 - i) 1Bii, 1Hii, 1Ii, 1Ki, 1Oii, 2Kiii, 2Piii
 - c) Humor
 - i) 1Eiv, 1Gi, 2Aii, 2Di
- 5) Romantic relationships
 - a) Friends as sexual partners
 - i) 1Biii, 1Biv, 1Ni, 1Nii
 - b) Friends as potential romantic partners
 - i) 1Biii, 1Biv
 - c) Understanding of queer relationships/same-sex attraction
 - i) 1Fii, 1Gii, 1Piii, 2 Pvi

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- 6) Communication (Openness)
 - a) In person or general
 - i) 1Cii, 2Ci, 2Fii, 2Gii, 2Hi, 2Iii, 2Lii, 2Piv
 - b) About understanding of gay culture/community
 - i) 1Evi, 1Iii, 2Diii
 - c) Online
 - i) 2Bii, 2Gi, 2Ki, 2Li

- 7) Negative experiences
 - a) With gay friendships
 - i) 1Ei, 1Eii, 2Pii
 - b) Within the gay community
 - i) 1Eiii, 1Mi, 1Piv, 2Eii
 - c) Lack of gay friendship support
 - i) 1Pi, 2Cii

- 8) Miscellaneous (unique or didn't fit)
 - a) 1Ev, 2Eiii, 2Ni

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Appendix B

Potential Item List and Domain Associations for the GayFABS

Potential Item	Associated Domain
1. I hang out with my friends at home (either theirs or mine) one-on-one.	Interaction
2. I spend time in mutually enjoyable activities with my friends in groups at home (game nights, movie nights).	Interaction
3. Me and my friends go to social gatherings together or have social gatherings of our own (e.g. dinner parties, house parties).	Interaction
4. I have dinner with my friends.	Interaction
5. I go out to entertainment events with my friends (movie theatres, sports events, concerts).	Interaction
6. I go on vacations with my friends.	Interaction
7. I spend holidays with my friends.	Interaction
8. I joke around with my friends.	Positivity
9. I hug my friends.	Positivity
10. I cuddle with my friends.	Positivity
11. I engage in sexual behaviors with my friends.	Positivity
12. I consume queer media with my friends (e.g. gay film, tv, music)	Positivity
13. I engage in social activism with my friends (e.g. political events, protests)	Interaction
14. I give back to the community with my friends (volunteering, benefits)	Positivity
15. I go to community specific celebrations with my friends (e.g. pride events, holiday events that are held by LGBT+ organizations).	Interaction
16. My friends and I discuss our shared pastimes.	Openness
17. My friends and I reminisce about past experiences.	Openness
18. I help my friends with regular chores (e.g. cleaning, shopping, running errands).	Support
19. I help my friends with larger chores (e.g. moving, landscaping projects).	Support
20. I rely on my friends for emotional support.	Support
21. I rely on my friends for advice about difficult situations.	Openness
22. I rely on my friends for things I am uncomfortable asking for from my family.	Support
23. I can count on my friends to pick me up when I feel down.	Openness
24. I support my friends when they're going through tough times.	Support
25. I can count on my friends to support me emotionally if something bad were to happen (e.g. the death of someone close to me, losing a job, having to move).	Support
26. I talk with my friends using social media or gay specific apps (e.g. Facebook messenger, WhatsApp, Kik, Grindr, Hornet, Scruff, etc.). (gay specific, interaction)	Interaction
27. My friends and I use slang terms common in the gay community with one another (e.g. yass, queen, read).	Interaction
28. My friends and I gossip about other gay men that we know.	Positivity

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Potential Item	Associated Domain
29. I reach out to my friends if we have been out of touch for a while.	Support
30. I am comfortable telling my friends that I like them.	Openness
31. My friends and I discuss our level of emotional closeness.	Openness
32. I tell my friends what they mean to me.	Openness
33. I connect with my friends through experiences that may have unique aspects in the gay community such as parenting.	Support
34. I discuss sex with my friends.	Openness
35. I discuss dating and relationships with my friends.	Openness
36. My friends and I discuss our sexual orientation, coming out, and the way that being gay impacts our lives. (gay specific, support)	Support
37. I talk with my friends about things that my straight friends “wouldn’t get”.	Openness
38. I set aside time to talk with my friends, whether in person, on the phone, or online.	Interaction
39. I feel closer to my friends after discussing difficult things with them.	Openness
40. My friends and I have fun together.	Positivity
41. My friends and I work through our disagreements.	Openness
42. There are things I only talk about with my gay friends.	Openness
43. My friends and I support each other when we experience homophobia or discrimination.	Support
44. I try to keep plans with my friends when we make them in advance.	Interaction
45. I talk to my friends when I’m worried about them.	Support
46. I talk about a friend with other mutual friends if I’m worried about their well-being.	Support
47. I introduce my friends to new activities.	Interaction
48. I let my friends know if they are doing something I feel could hurt them (e.g. dating the wrong person, engaging in drug use, engaging in risky sex).	Support
49. I support my friends in nonjudgmental ways (even if I think what they’re doing is wrong).	Support
50. I discuss relationship difficulties with my friends.	Support

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Appendix C

The Friendship Maintenance Scale (Oswald et al., 2004; items separated by subscale)

Please answer the following questions about how often you and your friends engage in the following activities. Please answer honestly and accurately.

Positivity

Express thanks when one friend does something nice for the other?

Try to make each other laugh?

Not return each other's messages?

Try to be upbeat and cheerful when together?

Reminisce about things you did together in the past?

Supportiveness

Try to make the other person "feel good" about who they are?

Let each other know you accept them for who they are?

Support each other when one of you is going through a difficult time?

Let each other know you want the relationship to last in the future?

Provide each other with emotional support?

Openness

Share your private thoughts with each other?

Repair misunderstandings?

Give advice to each other?

Show signs of affection toward each other?

Have intellectually stimulating conversations?

Interaction

Do favors for each other?

Visit each other's homes?

Make an effort to spend time together even when you are busy?

Celebrate special occasions together?

Work together on jobs or tasks?

Items are rated on an 11-point Likert-style scale with only the two end points labelled. The scale ranges from Never on the low end to Frequently on the high end.

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Appendix D

Lesbian, Gay, Bisexual Positive Identity Measure (LGB-PIM; Riggle et al., 2014)

We are going to ask you a series of questions about your identity as a Lesbian, Gay, or Bisexual identified (LGB) person. There are several questions and some of the questions may seem similar, but there are differences in the wording, so please try to answer all of the questions. Please answer the questions by thinking about which response category best represents your feelings about your experiences. Indicate how you really feel now, not how you think you should feel. There is no need to think too much about any one question. Answer each question according to your initial reaction and then move on to the next. Choose the response that best reflects your feelings about your lesbian, gay, or bisexual identity.

1. My LGBT identity leads me to important insights about myself.
2. I am more aware of how I feel about things because of my LGBT identity.
3. My LGBT identity motivates me to be more self-aware.
4. Because of my LGBT identity, I am more in tune with what is happening around me.
5. My LGBT identity has led me to develop new insights into my strengths.
6. I feel I can be honest and share my LGBT identity with others.
7. I am honest with myself about my LGBT identity.
8. I have a sense of inner peace about my LGBT identity.
9. I embrace my LGBT identity.
10. I am comfortable with my LGBT identity.
11. I feel supported by the LGBT community.
12. I feel visible in the LGBT community.
13. I feel included in the LGBT community.
14. I feel a connection to the LGBT community.
15. I find positive networking opportunities in the LGBT community.
16. My LGBT identity allows me to understand my sexual partner better.
17. My LGBT identity allows me to be closer to my intimate partner.
18. My LGBT identity frees me to choose who I want as my sexual/intimate partner.
19. I have a sense of sexual freedom because of my LGBT identity.
20. My LGBT identity helps me to communicate better with my intimate partner.
21. As an LGBT person, it is important to act as an advocate for LGBT rights.
22. My LGBT identity makes it important to me to actively educate others about LGBT issues.
23. My experience with my LGBT identity leads me to fight for the rights of others.
24. I am more sensitive to prejudice and discrimination against others because of my LGBT identity.
25. I have a greater respect for people who are different from society's expectations because of my LGBT identity.

Note. Items should be randomized for presentation in a survey. Recommended response scale: 1, *Strongly Disagree*; 2, *Disagree*; 3, *Somewhat Disagree*; 4, *Neither Agree nor Disagree*; 5, *Somewhat Agree*; 6, *Agree*; 7, *Strongly Agree*. Subscale scores are computed by averaging subscale item ratings: Self-awareness (1, 2, 3, 4, 5), Authenticity (6, 7, 8, 9, 10), Community (11, 12, 13, 14, 15), Intimacy (16, 17, 18, 19, 20), and Social Justice (21, 22, 23, 24, 25).

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Appendix E

Life Orientation Test – Revised (LOT-R; Scheier et al., 1994)

Instructions:

Please answer the following questions about yourself by indicating the extent of your agreement using the following scale:

[0] = strongly disagree

[1] = disagree

[2] = neutral

[3] = agree

[4] = strongly agree

Be as honest as you can throughout, and try not to let your responses to one question influence your response to other questions. There are no right or wrong answers.

- _____ 1. In uncertain times, I usually expect the best.
- _____ 2. It's easy for me to relax.
- _____ 3. If something can go wrong for me, it will.
- _____ 4. I'm always optimistic about my future.
- _____ 5. I enjoy my friends a lot.
- _____ 6. It's important for me to keep busy.
- _____ 7. I hardly ever expect things to go my way.
- _____ 8. I don't get upset too easily.
- _____ 9. I rarely count on good things happening to me.
- _____ 10. Overall, I expect more good things to happen to me than bad.

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Appendix F

Marlowe Crowne Social Desirability Scale – Short Form C (MCSD – SFC) (Crowne & Marlowe, 1960; Reynolds, 1982)

Directions: Read each item and decide whether it is true (T) or false (F) for you.

1. It is sometimes hard for me to go on with my work if I am not encouraged.
2. I sometimes feel resentful when I don't get my way.
3. On a few occasions, I have given up doing something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I'm talking to, I'm always a good listener.
6. There have been occasions when I took advantage of someone.
7. I'm always willing to admit it when I make a mistake.
8. I sometimes try to get even rather than forgive and forget.
9. I am always courteous, even to people who are disagreeable.
10. I have never been irked when people expressed ideas that are very different from my own.
11. There have been times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favors of me.
13. I have never deliberately said something that hurt someone's feelings.

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Appendix G

Informed Consent Documents for the Focus Group and the Exploratory Factor Analysis

Each of these consent forms was approved for use in Qualtrics through the Institutional Review Board of the University of North Dakota

Consent Form for Participation in the Focus Group

THE UNIVERSITY OF NORTH DAKOTA CONSENT TO PARTICIPATE IN RESEARCH

TITLE: *Development and Validation of a Gay Male Friendship Maintenance Scale*
PROJECT DIRECTOR: *Elijah Reding, MA*
DEPARTMENT: *Department of Counseling Psychology and Community Services*

STATEMENT OF RESEARCH

A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?

You are invited to be in a research study about gay male friendship because you self-identify as a gay man and have been contacted either by the researcher, a friend of the researcher, or a study participant

The purpose of this research study is to examine gay male friendship in an open-ended fashion for inclusion in the development of a scale measuring gay male friendship maintenance

HOW MANY PEOPLE WILL PARTICIPATE?

Approximately 15-30 people will take part in this study online through the University of North Dakota.

HOW LONG WILL I BE IN THIS STUDY?

Your participation in the study will last 2-10 minutes depending on the length of your answers.

WHAT WILL HAPPEN DURING THIS STUDY?

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After consenting, you will answer two questions regarding your friendships with other gay men. Then you will fill out a demographics form for anonymous reporting of demographic data. No identifying information such as your name will be collected for this study.

WHAT ARE THE RISKS OF THE STUDY?

The risks of being in this study are expected to be minimal. The questions will center on your experience of friendships and also your identity as a sexual minority individual. The sensitive nature of these questions may cause some discomfort but it is not expected to be in excess of daily living. Thus, such risks are not viewed as being in excess of “minimal risk”. The Trevor Project (1-866-488-7386) is a great resource for individuals struggling with sexual minority identity and may be of help should you experience emotional discomfort during completion of the surveys. Again if you become upset by questions, you may stop at any time or choose not to answer a question.

WHAT ARE THE BENEFITS OF THIS STUDY?

You may not benefit personally from being in this study. However, we hope that, in the future, other people might benefit from this study because this study will contribute to our knowledge of sexual minority friendships as well as develop a measure to be used in future research in this area. You may also find that through answering the questions, you come to a greater understanding of the importance of your close friendships and/or your sexual identity.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

You will not have any costs for being in this research study.

WILL I BE PAID FOR PARTICIPATING?

You will not be paid for participating in this study.

WHO IS FUNDING THE STUDY?

The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

CONFIDENTIALITY

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies and the University of North Dakota Institutional Review Board. Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. You should know, however, that there are some circumstances in which we may have to show your information to other people. For example the law may require us to show your information to a court or to tell authorities if we believe you have abused a child, or you pose a danger to yourself or someone else.] Confidentiality will be maintained by use of Qualtrics to keep the data

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anonymous. At no time will you be asked for personal identification information other than basic demographic information. The research team will be the only ones who have access to the information.

If we write a report or article about this study, we will describe the study results in a summarized manner so that you cannot be identified.

IS THIS STUDY VOLUNTARY?

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

CONTACTS AND QUESTIONS?

The researchers conducting this study Mr. Eliah Reding, MA and Dr. Rachel Navarro, PhD. If you later have questions, concerns, or complaints about the research please contact Eliah Reding at **(701) 732-0483**. You may also call Dr. Rachel Navarro at **(701) 777-2635**.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at **(701) 777-4279**.

- You may also call this number about any problems, complaints, or concerns you have about this research study.
- You may also call this number if you cannot reach research staff, or you wish to talk with someone who is independent of the research team.
- General information about being a research subject can be found by clicking “Information for Research Participants” on the web site:
<http://und.edu/research/resources/human-subjects/research-participants.cfm>

Your clicking yes below indicates that you have read and understand this consent form, that your questions have been answered, and that you agree to take part in this study.

Subjects Name: _____

Signature of Subject

Date

I have discussed the above points with the subject or, where appropriate, with the subject’s legally authorized representative.

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Signature of Person Who Obtained Consent

Date

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Consent Form for Amazon Mechanical Turk Recruitment to the EFA

The University of North Dakota Consent to Participate in Research

TITLE: Development and Validation of a Gay Male
Friendship Maintenance Scale

PROJECT DIRECTOR: Eliah Reding, MA

DEPARTMENT: Counseling Psychology and Community Services

STATEMENT OF RESEARCH

A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?

You are invited to be in a research study about the patterns of friendship development of gay men because you identify as gay and are over the age of 18.

The purpose of this research study is develop and test a measure looking at the differences and similarities of friendship development of gay male friendships and heterosexual friendships.

HOW MANY PEOPLE WILL PARTICIPATE?

Approximately 250-300 people will take part in this study online through Amazon Mechanical Turk

HOW LONG WILL I BE IN THIS STUDY?

Your participation in the study will last 15-30 minutes. You will need to sign the informed consent and complete all questions to receive payment for this study.

WHAT WILL HAPPEN DURING THIS STUDY?

You will first complete the informed consent and a few questions about your qualifications for the study. Then you will complete several surveys, some of which are related to friendship. Finally, you will be given your Amazon Turk completion code at the end of the study. You are

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free to skip any questions that you would prefer not to answer, however this may affect your eligibility for receiving the completion code.

WHAT ARE THE RISKS OF THE STUDY?

The risks of being in this study are expected to be minimal. The questions will center on your experience of friendships and also your identity as a gay man. The sensitive nature of these questions may cause some discomfort but it is not expected to be in excess of daily living. Thus, such risks are not viewed as being in excess of “minimal risk”. The Trevor Project (1-866-488-7386) is a great resource for individuals struggling with sexual minority identity and may be of help should you experience emotional discomfort during completion of the surveys. Again if you become upset by questions, you may stop at any time or choose not to answer a question.

WHAT ARE THE BENEFITS OF THIS STUDY?

You may not benefit personally from being in this study. However, we hope that, in the future, other people might benefit from this study because this study will contribute to our knowledge of sexual minority friendships as well as develop a measure to be used in future research in this area. You may also find that through answering the questions, you come to a greater understanding of the importance of your close friendships and/or your sexual identity.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

You will not have any costs for being in this research study.

WILL I BE PAID FOR PARTICIPATING?

You will be paid for being in this research study. You will receive a completion code worth \$0.50 through Amazon Turk upon full completion of the study. You may choose to cease your participation at any time but only those completing the entire survey will be eligible for compensation. A research assistant will be checking your work to ensure quality assurance. Quality checks may take up to one week. You are welcome to contact the researcher for additional questions or concerns about your work.

WHO IS FUNDING THE STUDY?

The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

CONFIDENTIALITY

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies, the UND Research Development and Compliance office, and the University of North Dakota Institutional Review Board

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Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. You should know, however, that there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court or to tell authorities if we believe you have abused a child, or you pose a danger to yourself or someone else. Confidentiality will be maintained by use of Qualtrics to keep the data anonymous. At no time will you be asked for personal identification information other than basic demographic information. The research team will be the only ones who have access to the information.

If we write a report or article about this study, we will describe the study results in a summarized manner so that you cannot be identified.

IS THIS STUDY VOLUNTARY?

Your participation is voluntary. You may choose not to participate, or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. However, only those completing the entire survey will be eligible for the completion code and associated compensation. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

CONTACTS AND QUESTIONS?

The researchers conducting this study Mr. Eliah Reding, MA and Dr. Rachel Navarro, PhD. If you later have questions, concerns, or complaints about the research please contact the researchers at lgbqfriendshipstudy@gmail.com. You may also call Dr. Rachel Navarro at **(701) 777-2635**.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at **(701) 777-4279**.

You may also call this number about any problems, complaints, or concerns you have about this research study. You may also call this number if you cannot reach research staff, or you wish to talk with someone who is independent of the research team. General information about being a research subject can be found by clicking “Information for Research Participants” on the web site: <http://und.edu/research/resources/human-subjects/research-participants>.

Your clicking yes below indicates that you have read and understand this consent form, that your questions have been answered, and that you agree to take part in this study. In addition, clicking yes below indicates that you are aware that failure to adequately complete the survey will not result in approved payment through Amazon Mechanical Turk.

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The same consent form as above was used with minor alterations describing recruitment and compensation in the approval of the snowball sampling and social media application cohort.

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