Career role models of heterosexual and gay, lesbian, and bisexual college students

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CAREER ROLE MODELS OF HETEROSEXUAL AND GAY, LESBIAN, AND BISEXUAL COLLEGE STUDENTS

by

Michelle M. Morrow

A Dissertation Submitted to the University at Albany, State University of New York in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

School of Education
Department of Educational and Counseling Psychology

2011
Acknowledgements

I have been fortunate to have some incredibly supportive and inspirational individuals guide me through the marathon process that was this dissertation (and graduate school in general). Dr. LaRae Jome, I could not have asked for a more supportive dissertation chair. I admire you and am extremely grateful for your guidance, feedback, and advice throughout this journey. You are truly a role model to me, in terms of your knowledge, your professionalism, and your character. THANK YOU!

I also want to thank Dr. Mike Ellis and Dr. Dolores Cimini for being on my dissertation committee. You are both role models to me as well. Dr. Ellis, the time you spent reviewing the study, and the time you spent exploring the statistical analyses with me is very much appreciated. I also want to take this opportunity to thank you for your training in supervision, which was a highlight of my graduate school experience. Dr. Cimini, I appreciate your feedback and suggestions regarding this study a great deal, and I also am grateful that I have been able to continue to learn from you through my work at the University Counseling Center.

I feel fortunate to have been part of a training program that is supportive of it’s students, and I want to thank Dr. Micki Friedlander for setting that tone and constantly looking out for her students. Thank you to Joeleen Cooper, Erik Podchaski, Laura Deihl, and Kirsten Corbett for providing such great support during graduate school (I hope I was able to do the same in return). Finally, thank you to my family (Mom, Kim, Brad, Benjamin, Grammy and Poppa) I love you and appreciate your love and support!
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The lack of role models has been cited as a barrier in the career development of sexual minority individuals (Fassinger, 1996; Fassinger, 2008). Despite the theoretical arguments about the importance of gay, lesbian and bisexual role models for sexual minority individuals there is a paucity of empirical literature examining this topic. In one such study, Nauta, Saucier, and Woodard (2001) found that sexual minority individuals reported a higher number of role models than their heterosexual peers, but significantly less support and guidance when making academic and career decisions. Additionally, they found that sexual minority individuals sought role models who were of their same sexual orientation or supportive of people of their sexual orientation.

The current study is a replication and extension of Nauta et al. (2001), and examined differences in the academic and career role models of sexual minority students and heterosexual students. Specifically, number of role models, number of role models known personally, characteristics sought in academic and career role models, actual characteristics of the role models, and the amount of guidance and support and inspiration and modeling received when making academic and career decisions were explored.

The final sample included 193 undergraduate students (92 identified as heterosexual and 101 identified as gay, lesbian, or bisexual). Results indicated that sexual minority students reported more academic and career role models overall, as well as more academic and career role models with whom they share an interpersonal relationship. Contrary to expectation, sexual minority students did not endorse desiring academic and career role models who were also sexual minorities; however, they did desire their role
models to be supportive of sexual minorities, as well as members of a minority group. Sexual minority students also reported equal amounts of support and guidance and inspiration and modeling when making academic and career decisions compared with their heterosexual peers. This study adds to a small but growing body of literature exploring how the career development of sexual minority students may differ from that of heterosexual students, and this has practical implications for academic advisement and career services on college campuses.
CHAPTER I
INTRODUCTION

Role models can play an important part in individuals’ academic and career development, particularly for adolescents and college students (Hackett, Esposito, & O’Halloran, 1989). Research findings suggest that individuals tend to select role models who are similar to themselves in terms of gender (Basow & Howe, 1980, Lockwood, 2006) and ethnicity (Karunanayake & Nauta, 2004). Additionally, there is some evidence that gay, lesbian, and bisexual students prefer role models with their same sexual orientation (Nauta, Saucier, & Woodard, 2001). Given gay, lesbian, and bisexual students’ preference for academic and career role models of their same sexual orientation, it is important to explore how sexual minority students may differ from heterosexual students in terms of their preferences with regard to career role models. In the literature, gay and lesbian tends to be defined as being “predominantly” or “mostly” attracted to individuals of the same gender, while bisexual falls in between heterosexual and homosexual with no exclusive attraction to either gender (e.g. Dorland & Fischer, 2001). In this study, the terms gay, lesbian, and bisexual (glb) and sexual minority will be used interchangeably to describe individuals who self-identify as having sexual attraction to individuals of their same gender.

The purpose of the current study is to explore the differences in career role models of gay, lesbian, and bisexual college students and heterosexual students. In particular, the study will investigate the characteristics sexual minority and heterosexual students seek in their academic and career role models, and the degree to which the two
groups may differ in terms of the characteristics of the career role models they know personally (i.e., do heterosexual and gay, lesbian, and bisexual students differ in (a) the important criteria they seek in their academic and career role models, and, (b) the characteristics of the academic and career role models they have available to them). For the purposes of this study, the construct of career role model will be broadly defined based on the definition proposed by Nauta and Kokaly (2001); academic and career role models will be defined as admirable others who have had an impact on the academic and career decisions students make.

The literature on career role models for gay, lesbian, and bisexual individuals suggests that there is a lack of available gay, lesbian, and bisexual role models who are present in the academic or work setting, and that those who are present may choose to conceal their sexual orientation in order to avoid stigma and discrimination, thus not being available to serve as a role model (Croteau, 1996; Fassinger, 2008). Given this barrier, who then do gay, lesbian, and bisexual students identify as their academic and career role models? Do they find academic and career role models in their lives, or do they look to media images of gay, lesbian, and bisexual celebrities in order to compensate for a lack of academic and career role models they know personally?

Gaining a better understanding of who college students select as their academic and career role models and the influence of role models on students is important, as academic and career role models have been shown to positively influence career development in a variety of ways. For example, the quality of the relationship with one’s role model has been positively correlated with career decidedness (Perrone, Zanardelli, Everett, & Chartrand, 2002), and having a career role model (in addition to work related
skills) has been positively associated with career maturity (Flouri & Buchanan, 2002). Additionally, exposure to a positive role model has been demonstrated to increase both inspiration and pro-active career behavior among college students (Buunk, Peiro, & Griffioen, 2007).

While the importance of role models in career development has been demonstrated, what makes somebody a role model (and the factors that contribute to the influence of role models) have been less fully explored. One difficulty is that studies have varied in how they define role model, and depending on the definition of role model it may overlap with similar constructs such as mentor and hero (Pleiss & Feldhusen, 1995).

To further clarify the importance and characteristics of academic and career role models for college students, Nauta and Kokaly (2001) examined the attributes of career and academic role models (i.e., what factors make a role model helpful). They found that college students described five important aspects of role models: advice giving, encouragement and support, inspiration, modeling, and helpful with decision making. Based on Nauta and Kokaly’s findings, academic and career role models, then, can be defined as individuals who are admirable in some way to the student, and academic and career role models have an impact on the academic and career decisions students make. Academic and career role models may provide support, inspiration, or a combination of both. Role models directly (through advice, support, and encouragement) or indirectly (through modeling and inspiration) influence student’s academic and career decisions (Nauta & Kokaly, 2001; Nauta et al. 2001).

There are a range of individuals students may identify as academic and career role models in their lives. Family members and parents are typically the most commonly cited
academic and career role models among college students (e.g. Karunanayake & Nauta, 2004). However, high school and college students have also identified television characters (King & Mutlon, 1996) and media stars (Nauta & Kokaly, 2001) as being academic and career role models as well. Thus, students may look to a broad range of individuals for support, guidance, and inspiration as they make decisions and face challenges throughout their career development.

For sexual minority individuals, having academic and career role models may be complicated by family strife and a loss of parental support resulting from the coming out process (Etinger, Hilderbrand, & Hetherington 1990; Fassinger, 1996). Thus, although parents are the most commonly cited academic and career role models among college students, sexual minority students may not have the availability of parents to serve this important function and provide guidance, support, and inspiration.

Much of the literature on career role models is rooted in social learning theory (Bandura, 1977) which suggests that individuals are influenced by others who are similar to themselves in some way. According to social learning theory, the primary way people learn is through modeling. Bandura (1977) states,

“Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action.” (p. 22).

Social learning theory views individuals as being part of an interaction as opposed to merely being acted upon. In a process called reciprocal determinism, social learning theory views personal factors, environmental factors, and behavior to be operating in a way such that they all interact with and influence each other (Bandura, 1977). In applying
social learning theory to academic and career issues, this observational learning could include any school or work related behavior, from study skills to choosing a major and applying for jobs.

More recently, Lent, Brown, and Hackett (1994) proposed the Social Cognitive Career Theory (SCCT), which expands social learning theory and applies it more specifically to career development. SCCT emphasizes the influence of the individual’s environment on their academic and career development. Within SCCT the influence of an individual’s learning experiences (both direct learning experiences and vicarious learning experiences gained through the observation of others) are explored in relation to how these experiences then influence self-efficacy beliefs, and eventually career and academic choices and goals. SCCT views the career development process as dynamic and interactive, meaning that each aspect of their model influences the other aspects in a reciprocal manner. Lent et al. (1994) noted that it is important that individuals be exposed to successful role models because such exposure can be a “beneficial social condition” (p. 105) in the sense that it will aid in the acquisition of skills and increase self-efficacy beliefs and outcome expectations.

Academic and career role models also provide support and encouragement for an individual to pursue a particular occupational or academic goal, as well as support and encouragement directly related to dealing with possible environmental barriers (Lent, Brown, & Hackett, 2000). In terms of environmental barriers, SCCT highlights some of the unique ways career development can be influenced by race, ethnicity, and gender. Specifically, differences in opportunity, support, and socialization for minority individuals are highlighted within the SCCT model (Lent et al., 1994).
As SCCT emphasizes environmental and contextual factors and highlights how these factors differ for minority individuals, it is particularly fitting to apply SCCT to the career development process of gay, lesbian, and bisexual individuals. Morrow, Gore, and Campbell (1996) noted that being a sexual minority might impact environmental and contextual supports, including the potential for less parental support and less support related to gender non-traditional career interests. Further they suggest that vicarious learning via positive role models through media sources may help to provide gay and lesbian youth with support and inspiration when interpersonal (e.g. familial) support is lacking. For sexual minority youth, support and inspiration are especially important in order to help cope with a multitude of environmental barriers, including; heterosexism, verbal harassment, physical harassment, and institutionalized discrimination in schools and places of employment (Fassinger, 2008).

The lack of career role models has been cited as a major barrier in the career development of sexual minority individuals (Fassinger, 1996, Fassinger, 2008). Thus, one of the most frequently cited career counseling interventions in the gay, lesbian, and bisexual vocational literature is to encourage gay, lesbian, and bisexual role models for sexual minority clients (Pope, 1995). Despite the theoretical arguments about the importance of gay, lesbian and bisexual role models for sexual minority individuals, there is a paucity of empirical literature examining this topic. Further empirical study of the impact of career role models for sexual minority individuals is indicated, in order to examine whether there are in fact important differences in the career role models of heterosexual and sexual minority individuals. The additional environmental barriers faced by sexual minority students coupled with a dearth of availability of academic and career
role models who are themselves sexual minorities, suggests that sexual minority
individuals may have a greater need for support and guidance yet they actually have
fewer academic and career role models available to them to provide this support. Thus,
sexual minority students may differ from heterosexual students in the kinds of academic
and career role models they wish to have and the role models they have available to them,
both of which would limit the amount of support they receive in their academic and
career development.

In one empirical study that does examine academic and career role models for
gay, lesbian, and bisexual individuals, Nauta, Saucier, and Woodard (2001) examined the
number of academic and career role models, the desired characteristics of one’s role
models, and the amount of perceived inspiration and modeling and support and guidance
among a group of heterosexual and sexual minority college students. Contrary to the
authors’ hypotheses, the gay, lesbian and bisexual students reported significantly more
academic and career role models than the heterosexual students. However, despite
reporting a higher number of academic and career role models, the gay, lesbian and
bisexual students perceived significantly less support and guidance from role models
when making academic and career decisions compared to their heterosexual counterparts.
The two groups did not differ on the degree to which they perceived inspiration and
modeling when making academic and career decisions. Additionally, Nauta et al. (2001)
found that gay, lesbian, and bisexual participants endorsed specific characteristics of their
desired role model, such that they preferred role models who were the same sexual
orientation (i.e. gay, lesbian, or bisexual), same gender, and who were supportive of gay,
lesbian, and bisexual individuals (Nauta et al., 2001). Having more role models but less
perceived support and guidance suggests that there is something unique in the experience of gay and lesbian college students and their relationship with their academic and career role models which has yet to be explained. It is important to examine these factors further so that we can begin to understand the unique needs or perceptions that gay, lesbian, and bisexual college students have for academic and career role models.

The purpose of the present study is to gain further insight into the academic and career role models of sexual minority and heterosexual college students, especially in light of the surprising findings of Nauta et al. (2001). The study will examine potential differences in the academic and career role models endorsed by a group of heterosexual undergraduate college students in comparison to the academic and career role models endorsed by a group of gay, lesbian, and bisexual college students. Specifically, the study will replicate and extend the Nauta et al. (2001) study by examining the number of academic and career role models (both the overall number of role models, and the number of role models known personally), which characteristics and qualities are desired in an academic and career role model, demographic characteristics of the academic and career role models, and the amount of support and guidance and inspiration and modeling received from others when making academic and career decisions.

While the Nauta et al. (2001) study assessed the desired characteristics of participants academic and career role models, the present study will extend this construct by also assessing the actual characteristics of participants’ role models (i.e. sexual orientation, gender, race/ethnicity). While assessing the desired characteristics of college student’s role models is important, when the actual characteristics are not also assessed many unanswered questions remain. Thus, the current study will explore whether sexual
minority and heterosexual students differ in terms of the characteristics of the academic and career role models they have in their lives. The findings of the proposed study will help to clarify (a) how important sexual minority students feel it is to have academic and career role models who are also gay, lesbian, and bisexual, and (b) whether any of the academic and career role models in their lives actually are sexual minorities. Given the influence environmental barriers can have on students’ academic and career development (Lent et al., 2000), as well as the unique environmental barriers sexual minority students face (Fassinger, 2008), it is reasonable to anticipate there will be differences in the characteristics sexual minority and heterosexual students seek their academic and career role models, as well as whether role models who fit these characteristics are available. Additionally, the Nauta et al. study (2001) assessed the number of role models as a single broad construct, and the following study will separate this construct to assess the number of career role models known personally (i.e. that the participant has an interpersonal relationship with) and the number of career role models not known personally (i.e. role models from media sources). This is important to assess as a lack of available gay, lesbian, and bisexual career and academic role models has been cited as a major barrier in the career development of sexual minority individuals (Fassinger, 1996; Fassinger, 2008), and it has been suggested that sexual minority individuals may look to media portrayals to compensate for a lack of gay, lesbian, and bisexual role models known personally (Morrow et al., 1996).

Based on the Nauta et al (2001) findings, it is hypothesized that sexual minority participants will endorse a greater number of career role models compared to heterosexual participants. In addition, given the apparent lack of gay and lesbian role
models (Fassinger, 1996) it is hypothesized that the sexual minority participants will have a higher number of career and academic role models *whom they do not know personally* and that heterosexual participants will endorse a higher number of career and academic role models *with whom they have an interpersonal relationship*. Further, it is hypothesized that sexual minority participants will report less perceived support and guidance and less inspiration and modeling when making academic and career decisions when compared with their heterosexual counterparts.

Finally it is hypothesized that the two groups will differ in terms of the characteristics of the career and academic role models with whom they have an interpersonal relationship with (i.e. whom they know personally). In other words, heterosexual college students will be more similar to their academic and career role models (in terms of demographic characteristics such as sexual orientation). This hypothesis is based on the lack of availability of gay, lesbian, and bisexual role models (Fassinger, 2008; Croteau, 1996) which has been noted in the literature. Thus, while sexual minority students may seek an academic and career role model of their same sexual orientation, there may be none available to serve this need.

**Implications of the Study**

This study contributes to the vocational literature regarding career role models of college students, and in particular the career role models of sexual minority individuals. While it is noted in the vocational literature that gay, lesbian, and bisexual career role models are important for gay, lesbian, and bisexual individuals, there is a paucity of empirical literature which assesses the presence and impact of similar others as role models for sexual minority individuals. While it has been theoretically and empirically
supported that individuals seek role models who are similar to themselves, the Nauta et al. (2001) study found that gay and lesbian college students desired role models who were supportive of individuals who were gay and lesbian. Thus, heterosexual individuals (career counselors, advisors, and faculty) may be able to serve as role models and effectively provide support and guidance to this population if they are vocal about their support of the gay, lesbian, and bisexual community.
The purpose of the proposed study is to examine the potential differences in the presence and impact of academic and career role models for heterosexual and sexual minority college students. Because gay, lesbian, and bisexual college students are members of a minority group which face a multitude of environmental barriers (Morrow et al., 1996) including heterosexism, discrimination, and verbal and physical harassment they may have a greater need for support when making academic and career decisions (Fassinger, 2008). Although a recent study found that gay and lesbian college students reported having a higher number of career and academic role models than their heterosexual counterparts, they nevertheless also perceived receiving less support and guidance from those role models when making career and academic decisions (Nauta et al., 2001).

The following chapter will review the major constructs and available literature on academic and career role models with an emphasis on studies examining role model influence for minority populations, and sexual minority populations in particular. The literature examining career development issues for the gay, lesbian, and bisexual population will be discussed, with an emphasis on the ways this process differs from that of heterosexual individuals. Additionally, because the focus of this study is on replicating and extending the Nauta et al. (2001) study, this research study will be discussed in detail, including all relevant procedures and findings.
Academic and Career Role Models

This study will explore the differences between heterosexual and sexual minority college students on the academic and career role models they have in their lives, how these role models might differ from students’ ideal academic and career role models, and how much support and guidance students perceive they receive from their role models. There has been some variability in how the construct of role model is defined in the literature (Pleiss & Feldhusen, 1995). The following section will review some of the ways role models have been conceptualized in the literature, and provide the definition and operationalization of academic and career role model that will be used in this study.

Various models of career development suggest that role models can have a significant impact upon the career development process (e.g. Lent et al., 1994). However, other models of career development also highlight the impact the environment and influential others can have on the career development process. For example, Gottfredson’s (1996) theory of circumscription and compromise emphasizes how important others (e.g. teachers and career counselors) can influence students to expand their career goals despite the presence of external barriers. In further researching aspects related to role models and their impact on college students’ career development, it is important first to clarify the nature of this construct. Gibson (2004) defined a role model as “a cognitive construction based on the attributes of people in social roles an individual perceives to be similar to him or herself to some extent and desires to increase perceived similarity by emulating those attributes” (p. 136). Gibson emphasized that a role model does not necessarily have to involve a personal relationship in order to be influential, and this helps to distinguish the concept of role model from that of a mentor (which does
necessitate an interpersonal relationship). Similarly, Jung (1986) stated, “A role model, then, is one whose behavior and values can produce similar beliefs, values, and behaviors with respect to that role among observers” (p. 525). This definition also implies that “role model” does not necessitate an interpersonal relationship in order to be influential, i.e. a role model could be a celebrity, national leader, or an individual with whom one has only limited interpersonal interaction. Finally, role model has been defined as falling somewhere in between a “mentor” (where there is a close personal relationship) and “hero” (where there is no interpersonal relationship) (Pleiss & Feldhusen, 1995). While these definitions vary somewhat, they all emphasize the observation and emulation of another individual. Additionally, in some way they note the extent of the interpersonal interaction with that observed other as a way of distinguishing role model from other constructs. While interpersonal interaction is necessary in mentor relationships, and unnecessary in hero relationships, with role models the amount of interpersonal interaction can vary from none to a close interpersonal relationship (Pleiss & Feldhusen, 1995).

While the above conceptualizations provide definitions for role models in general, this study will be specifically looking at academic and career role models. Nauta and Kokaly (2001) examined the academic and career role models among a group of 116 college students. These students were instructed to list academic and career role models in 5 categories (family member, peer, teacher/coach, famous person/character, and other). Role model was defined for participants as:

“People who, either by doing something or by being admirable to you in one or more ways, have had an impact on the academic and career decisions you have made in your life. Role models may be people you know personally, or they may be people you simply know of.” (p. 85)
Nineteen percent of the participants had no famous person listed, while 20% listed a female media star, 16% listed a male media star, and 15% listed a male sports figure. When asked to identify the single most influential career role model in their life, 39% reported that their mother was the single most influential role model in their academic and career decision making, and 24% stated their father was (Nauta & Kokaly, 2001). These findings suggest that although role models may be individuals with whom one has limited or no personal interaction, the influence of those whom one has regular contact with (i.e. a family member) is particularly significant.

To further clarify the nature and influence of academic and career role models Nauta and Kokaly (2001) asked participants to describe how their role models had influenced their academic and career decision making. These responses resulted in five content areas; advice giving, encouragement and support, inspiration, modeling, and helpful with decision making. Three of these areas necessitate an interpersonal relationship, while two of them (inspiration and modeling) do not. This again emphasizes the importance of the guidance and support aspect a role model may provide, while also demonstrating that there is a range of possibilities in terms of the amount of interpersonal interaction one has with their academic and career role models.

While both the theoretical and empirical literature suggest that academic and career role models have a positive influence in individuals’ career development, there is not a clear consensus on the definition of the construct. For the purposes of this study, academic and career role model will be defined using Nauta and Kokaly’s (2001) definition. Academic and career role models will be defined as admirable others who have had an impact on the academic and career decisions students make, and these role
models can be individuals with whom students have an interpersonal relationship or the role models may be individuals with whom students do not have a personal relationship (e.g. actor, sports star).

**Career Role Models: Theories and Research**

The following section will review the theoretical basis for examining the academic and career role models of sexual minority and heterosexual college students. Specifically, SCCT (Lent et al., 1994) will be used to show how environmental barriers can impede career development, and how role models can be a key source of learning and support throughout the career development process. Lent (2005) noted that one of the ways role models provide support and learning is related to learning how to cope with environmental barriers. Unfortunately, there is a paucity of research examining any aspect of academic and career role models for sexual minority college students, however there is empirical research examining academic and career role models of other minority groups (namely racial and ethnic minorities, e.g. Karunanayake and Nauta, 2004). This research will be examined, as the experiences of other minority groups and the influences academic and career role models have on their career development may be helpful in understanding the experiences of sexual minorities as well.

The majority of the vocational literature examining the construct of role models is based on social learning theory (e.g., Nauta et al. 2001; Nauta & Kokaly, 2001; Perrone, Zanardelli, Everett, & Chartrand, 2002). Social learning theory (Bandura, 1977) emphasizes that individuals seek out role models in order to learn new tasks as well as appropriate behavior and norms. Individuals are attracted to role models who they
perceive as similar to themselves in some way, because they can more readily connect the role models experiences to their own.

SCCT (Lent et al., 1994; Lent at al., 2000; Lent 2005) is a comprehensive career development model which essentially took social learning theory (Bandura, 1977) and applied it to career development. In the SCCT model Lent et al. (1994) emphasized (a) the development of career interests (b) the development of career goals, and (c) persistence and performance in pursuit of established goals. SCCT (Lent, 1994; Lent et al., 2005) is specifically tailored to address the career development process of late adolescents and young adults, essentially during the career planning and entry phases of career development. Thus, SCCT (Lent, 1994; Lent et al., 2005) can be applied to both academic and career related behaviors of college students.

The availability (or absence) of career role models is viewed as an important factor in the career development process within SCCT (Lent, 2005; Lent et al.,1994; Lent et al. 2000). Within SCCT academic and career role models are seen as an important source of environmental influence, providing opportunities for vicarious learning as well as support and feedback, which ultimately lead to the establishment and obtainment of academic and vocational goals (Lent et al., 1994). Additionally, academic and career role models serve an important function when individuals are faced with environmental barriers (e.g. financial barriers, discrimination) in that they can provide support and/or a model in terms of how to manage and overcome barriers to academic and vocational goals (Lent et al., 2000).
Lent et al. (1994) intended the SCCT model of career development to be interactive and reciprocal, such that there are factors related to the environment which impact the person, and factors related to the person which act upon the environment. As such, within the SCCT model academic and career role models are viewed as an environmental factor. By providing learning opportunities and/or support role models may impact the individual and thus some of the person factors may change in that the person may begin to interact with their environment differently. Role models are primarily viewed as a “distal” or background factor in career development, in terms of the learning opportunities and support they may provide. However, role models may also be influential in a more proximal way, e.g. when individuals are making career related decisions. At these times support of role models may become relevant in practical ways such as networking and gaining contacts when entering a job search (Lent et al., 2000).

Thus, SCCT (Lent et al. 1994) provides a theoretical framework with which to understand the function of role models within the career development process. Role models are sources of vicarious learning, support, and practical assistance (e.g. assistance with the job search process) (Lent et al., 1994). Additionally, role models can provide needed support and modeling related to how to manage environmental barriers (Lent et al., 2000). Managing barriers is especially important for minority individuals throughout the career development process, and sexual minority individuals face specific and unique challenges and barriers (Morrow et al., 1996). There is a small but growing body of empirical literature examining the nature and influence of career and academic role models in college students’ career development, and some empirical literature examining
the importance of role models for gay, lesbian, and bisexual students (e.g. Nauta et al., 2001).

While the importance of academic and career role models has been firmly established for the general college student population, more research is needed that explores the nature and influence of academic and career role models for specific groups (such as gay, lesbian, and bisexual college students). Role models have been identified as influential to the career development of various groups, particularly adolescents and college students. Hackett, Esposito, and O’Halloran (1989) found that role model influence was significantly related to the career salience, level of educational aspiration, and gender non-traditionality of occupational choice among a group of 180 female undergraduates. In a study examining career maturity among British adolescents Flouri and Buchanan (2002) found that having a career role model (in addition to work related skills) was positively associated with the participant’s level of career maturity.

There are a host of individuals whom one may select as a role model, and one focus of the research examining academic and career role models has been on identifying who students select as role models. In a study of African American male adolescents, 98% of the 18-year-old subjects listed sports figures as role models (Assibey-Mensah, 1997). Mothers and fathers have been found to be the most influential role model among undergraduate students (Basow & Howe, 1980), and the same gendered parent has been shown to be the most commonly endorsed role model (Perrone, Zanardelli, Everett, & Chartrand, 2002). Karunanayake and Nauta (2004) found that 96% of their undergraduate participants identified a family member as a role model. Thus, while celebrities and sports stars are often endorsed as role models, it appears that family members (and
parents in particular) may be the most influential role models. For gay, lesbian, and bisexual individuals the coming out process often creates conflict with family members, which could then impact upon the availability of parents and other family members to serve as role models and provide support and guidance related to career development.

While role models may be influential for all individuals, Assibey-Mensah (1997) theorized that role models may be especially important for minority individuals. Minority role models may be helpful in dispelling the internalized negative stereotypes of minorities by providing a positive image that minority individuals can relate to. King and Multon (1996) demonstrated that African American youth identify most strongly with African American characters on television, and that they are influenced by the depictions of vocational roles these characters portray. Karunanayake and Nauta (2004) found that 55% of African American participants reported role models predominantly of the same race (even when controlling for family members listed as role models) while only 33% of Caucasian participants reported role models predominantly of the same race. In a study of mentoring relationships among Latina women, Gonzalez-Figueroa and Young (2005) found that participants expressed a preference to be mentored by an individual of similar ethnicity. These findings support social learning theory, and suggest that racial/ethnic minorities may place an importance on ethnicity when selecting role models. By extension, social learning theory could then be applied to the academic and career role models of sexual minority individuals as well, in that they would likely select sexual minority role models. This study aims to explore this very issue by assessing gay, lesbian, and bisexual students’ preference for sexual minority academic and career role models, as well as assessing whether there are sexual minority role models in their lives.
There is clear theoretical and empirical support for the important influence of role models in the academic and career development of individuals. The selection of a role model, and the extent of the influence they provide, may partially be influenced by demographics such as gender, race, and ethnicity. As Jung stated (1986) “The question is not whether or not role models exist or have benefits on observers. It is how adequately we can evaluate assumptions about the nature of role models and their presumed consequences.” (p. 526). The assumptions and presumed consequences of academic and career role models in the career development of sexual minority college students has yet to be fully examined. It is important to empirically study the theoretical assumptions that have been proposed regarding this population (i.e. a lack of availability of gay, lesbian, and bisexual academic and career role models, as well as the assumption that sexual minority students have a preference for academic and career role models who are also sexual minorities). Additionally, the consequences of academic and career role models on the career development of sexual minority college students needs to be explored; namely, how the amount of support and guidance they perceive receiving when making academic and career decisions compares with the amount of support and guidance heterosexual students perceive when they make academic and career decisions.

*Gay, Lesbian, and Bisexual Career Development: Theories and Research*

Although there is a paucity of research examining the career development process for the gay, lesbian, and bisexual population, recently, the area of vocational research addressing the unique experiences of gay, lesbian, and bisexual individuals has been expanding. The amount of published literature addressing gay, lesbian, and bisexual vocational issues has more than doubled since 1993 (Croteau, Anderson, Distefano, &
Kampa-Kokesch 2000). In a comprehensive review of published literature addressing gay, lesbian, and bisexual vocational psychology from the years 1980-1996, Croteau et al. (2000) cite 39 studies. They divide these studies into five main content areas: identity development, discrimination in the workplace, managing sexual identity in the workplace, societal messages/occupational interests/choices/perceptions, and career counselors and their interventions. Croteau et al. (2000) also noted that there are several content areas that are less fully addressed within the gay, lesbian, and bisexual vocational literature, among these is the impact of role models during career exploration and decision making.

In exploring the area of academic and career role models for sexual minority individuals it is first important to look at the some of the ways in which the academic and career development of sexual minority individuals differs from that of their heterosexual peers. While there is a paucity of research addressing vocational issues for gay, lesbian, and bisexual individuals, recent years have seen an increase in the exploration of this topic (Crouteau et al., 2000). Some of the key areas where research and theory have addressed the unique aspects of career development for sexual minority individuals are identity development (Prince, 1995), discrimination in the workplace (Croteau, 1996), managing sexual identity in the workplace (Chung, 2001), societal messages/occupational interests/choices/perceptions (Chung, 1995), and career counselors and their interventions (Pope, 1995). These studies show that societal stigma and school and workplace discrimination influence the career development process for gay, lesbian, and bisexual individuals. Given the unique challenges facing sexual minority individuals, encouraging gay and lesbian professionals as role models was one
of the most frequently cited recommendations for career counselors when working with gay, lesbian, and bisexual clients (Pope, 1995).

Thus, given the unique environmental barriers facing sexual minority students, Social Learning theory has particular relevance, especially given its emphasis on environmental barriers (Lent et al., 2000). Sexual minority individuals would likely seek out gay, lesbian, bisexual role models; however due to limited access they may not find any role models in their own life. This environmental barrier would limit their learning opportunities as well as the amount of support they receive in their academic and career development (Lent et al., 2000; Morrow et al., 1996).

Morrow et al. (1996) noted that for sexual minority individuals, there may be a lack of environmental support (e.g. role models) which would then constrain vocational self-efficacy, and ultimately the establishment and obtainment of career goals. This lack of support can occur as a result of homophobia experienced in the home, school, and society at large. Further, they noted that the various barriers faced by sexual minority individuals may be internalized as outcome expectations thus altering and limiting vocational goals and behavior. Finally, they proposed that one potential way that sexual minority individuals may compensate for lack of support in their home or school environment is to look to media images of successful gay, lesbian, and bisexual individuals thus obtaining some level of inspiration.

As SCCT proposes the influence processes are reciprocal in nature, it is reasonable to hypothesize that a sexual minority adolescent may avoid seeking support from important others due to a fear of homophobia or rejection regardless of the objective reality of being discriminated against or rejected (Morrow et al., 1996). So, although
there may be some individuals available to provide support and guidance to sexual minority students, they may not perceive this as an option. This would then mean sexual minority students would report fewer academic and career role models whom they know personally, as well as less support and guidance.

Fassinger (1996) identified a lack of role models as a primary barrier in the career development of lesbian women. Nauta et al (2001) found that gay, lesbian, and bisexual participants endorsed three role model characteristics as significantly important (when compared with heterosexual participants). These characteristics were: (a) being of the same sexual orientation as the participant, (b) being supportive of people with the same sexual orientation as the participant (c) being of the same gender as the participant. These findings are also in agreement with social learning theory, however it is interesting to note that gender was significantly more important for the gay, lesbian and bisexual participants than it was for the heterosexual participants. Perhaps being a minority creates a desire for a match with one’s role model in areas beyond sexual orientation.

If individuals do seek academic and career role models who are as similar to themselves as possible (as proposed by social learning theory, Bandura, 1977), and if this is particularly salient for members of minority populations (as suggested by SCCT, Lent et al. 2000) and for sexual minority populations in particular (as suggested by Morrow et al., 1996) but there is a lack of availability of academic and career role models who are sexual minorities themselves (as suggested by Fassinger, 1996, and Fassinger, 2008) then there would be expected differences in the academic and career role models of sexual minority students when compared with heterosexual students. In particular there may be differences in the characteristics that are sought in one’s academic and career role
models (i.e. sexual orientation), the number of academic and career role models available, and the amount of support and guidance received from academic and career role models.

**Role Models in Gay, Lesbian, Bisexual Career/Academic Decision Making**

In their study examining differences in the academic and career role models of sexual minority and heterosexual college students, Nauta et al. (2001) hypothesized that gay, lesbian, and bisexual participants would report fewer career role models than heterosexual participants. Additionally it was hypothesized that gay, lesbian, and bisexual subjects would place a greater importance on the academic and career role models they select being a member of an oppressed group, and express a greater importance that the role model be actively supportive of oppressed groups, compared to heterosexual students. Finally, it was hypothesized that gay, lesbian, and bisexual participants would experience less support and encouragement then heterosexual participants when making academic and career decisions.

The sample for this study was 131 undergraduates at a large Midwestern university. The sample was predominately Caucasian and female, and approximately 40% of the participants identified themselves as gay, lesbian, or bisexual. The study assessed the number of academic and career role models students had, the desired characteristics students sought in their academic and career role models (e.g. sexual orientation, gender, race/ethnicity), and the level of perceived support and guidance and the level of perceived inspiration and modeling when making academic and career decisions.
Contrary to the authors’ first hypothesis, gay, lesbian and bisexual students reported significantly more role models than heterosexual students. Because the authors did not assess any other factors related to who the role models were that participants endorsed, this finding raises many questions. It is possible that the gay, lesbian, and bisexual participants endorsed role models who were either not known to them personally, or with whom they had only limited interpersonal contact, while heterosexual participants may have endorsed a higher number of role models who were known to them personally.

Nauta et al. (2001) also found significant differences between the gay, lesbian and bisexual students and heterosexual students desired role model characteristics. The three characteristics contributing most to this difference were: (a) having the same sexual orientation as the respondent (the gay, lesbian, and bisexual participants rated this as a more important attribute), (b) being supportive of those whose sexual orientation is the same as the respondent’s (the gay, lesbian, and bisexual participants rated this as more important), (c) and having the same gender as the respondent (again, gay, lesbian, and bisexual participants rated this as more important). These findings support social learning theory, in that participants desired role models who were similar to themselves. Despite the fact that this finding supports social learning theory, because participants were asked to rate the desired characteristics of their academic and career role models, there is no information given as to the characteristics of participant’s actual role models. Did the gay, lesbian, and bisexual participants differ in terms of the characteristics of their actual academic and career role models? If so, what characteristics contribute most significantly to this difference? While gay, lesbian, and bisexual individuals want career and academic
role models who are gay, lesbian, or bisexual, are their actual role models sexual minority individuals?

Finally, Nauta et al. (2001) found no significant differences between the two groups on perceived inspiration and modeling of role models; however gay, lesbian and bisexual students scored significantly lower on perceived support/guidance in comparison to heterosexual participants. Thus it appears that despite reporting a higher number of role models, gay, lesbian, and bisexual students still perceive that they receive less guidance and support when making academic and career choices than their heterosexual counterparts. It is unclear if the Nauta et al. (2001) study’s finding that the two groups did not differ in the amount of inspiration/modeling was a type II error based on sample size, or whether there is truly no difference between the groups on this factor. Finally, it appears that personal characteristics of career and academic role models, specifically gender and sexual orientation, are more important for gay, lesbian, and bisexual students than for heterosexual students.

Present study

Drawing on previous theory and research, it is imperative that more research focus on the career and academic role models of college students, and that the differences between the role models of sexual minority and heterosexual students be examined. The present study will compare heterosexual and gay, lesbian, and bisexual students by replicating and extending the findings of Nauta et al. (2001). The study will replicate the Nauta et al (2001) study by examining the number of role models, desired role model characteristics, and the amount of perceived guidance and support and inspiration and modeling when making career and academic decisions. Further, the study will extend the
Nauta et al. (2001) study by specifying the number of role models who are (a) known personally by the participant, and (b) not known personally by the participant but instead known through the media. Additionally, the present study will assess the actual characteristics of those role models who are known personally by the participants, and assess whether there is a difference between the two groups in terms of the characteristics of their academic and career role models.

Given the paucity of research exploring academic and career role models of sexual minority students, as well as the surprising findings of Nauta et al. (2001) (that gay, lesbian, and bisexual students reported more academic and career role models but less support and guidance when making academic and career decisions) it is important to replicate their questions to see if similar findings emerge. Additionally, given Social Learning theory’s view that people seek similar others as they can more readily connect that person’s experience to their own (Bandura, 1977) and the lack of available gay, lesbian, and bisexual role models (Fassinger, 1996, Fassinger, 2008) it is important to extend the Nauta et al. (2001) study to assess whether the role models students report are individuals who are known to them personally or whether they are role models gleaned from the media. Finally, it is also important to extend the Nauta et al. (2001) study to assess any differences between the characteristics gay, lesbian, and bisexual students seek in their role models as well as to assess the characteristics of the academic and career role models they have in their lives when they are compared to their heterosexual peers.

Given the importance of role models to career development (e.g. Hackett, Esposito, & O’Halloran, 1989), and particularly career role models for minority populations (e.g. Assibey-Mensah, 1997) there likely are differences in the types of role
models endorsed by heterosexual and sexual minority individuals. The nature and extent of these potential differences need to be explored. It may be that because of a lack of available gay, lesbian, and bisexual role models, and additional barriers due to homophobia, sexual minority individuals may seek inspiration and support through media images as opposed to individuals they know personally (as suggested by Morrow at al., 1996). Gaining more insight into the career and academic role models of college students, and what differences may exist when sexual minority and heterosexual students are compared, will help to inform the literature as well as career counseling interventions.

Hypotheses

The present study will assess the following hypotheses:

(H1) It is hypothesized that gay, lesbian, and bisexual students will report a greater number of academic and career role models when compared with heterosexual students.

(H2) Heterosexual students will report a significantly greater number of academic and career role models whom they know personally compared to the group of gay, lesbian, and bisexual students.

(H3) The two groups will differ on the set of desired characteristics of academic and career role models. In particular, the gay, lesbian, and bisexual students will endorse having role models who are the same sexual orientation, and supportive of the same sexual orientation as significantly more important than heterosexual students.

(H4) The two groups will differ on the set of characteristics of the academic and career role models whom they have in their lives. In particular, the gay, lesbian, and
bisexual students will endorse having fewer role models who are the same sexual orientation as them than then the heterosexual students.

(H5) Finally, it is hypothesized that gay, lesbian, and bisexual students will report less support and guidance and less inspiration and modeling when making academic and career decisions in comparison to heterosexual students.
Chapter III  
**METHOD**

*Design*

This study is a comparison of two groups of undergraduate college students. The independent variable was sexual orientation (sexual minority; i.e. gay/lesbian/ and bisexual vs. heterosexual). The dependent variables were: reported number of academic and career role models, reported number of academic and career role models known personally by the participant, the desired characteristics of participants’ academic and career role models, the actual characteristics of participant’s role models, and the amount of perceived guidance and support and inspiration and modeling when making career and academic decisions. The amount of support/guidance and inspiration/modeling are measured using the two subscales of the Influence of Others on Academic and Career Decision Making Scale (IOACDS, Nauta & Kokaly, 2001).

*Participants*

The target population for this study was self-identified heterosexual and sexual minority (i.e. gay, lesbian, bisexual) college students who were enrolled at an undergraduate institution at least part-time. For this study sexual orientation was assessed with a single-item open ended question (i.e., “What is your sexual orientation?”). In addition, based on a scale originally proposed by Kinsey, Pomeroy, and Martin (1948), participants were asked to rate themselves on a 5-point scale with 1 being “exclusively gay/lesbian,” 3 being “bisexual,” and 5 being “exclusively straight/heterosexual.” For the purposes of this study there were two groups based on sexual orientation, with ‘heterosexual’ or ‘straight’ participants comprising the first group (labeled as the
Heterosexual group for the purposes of this study), and ‘gay’, ‘lesbian’, ‘bisexual’, ‘homosexual’ and ‘questioning’ participants comprising the second group (labeled as the Sexual Minority group for the purposes of this study).

Participants were 193 undergraduate students. Of the study participants, 92 identified as heterosexual (47%) and 101 identified as gay, lesbian, or bisexual (53%). In terms of sexual orientation, three participants identified themselves as bisexual, and rated themselves a 4 on the Kinsey scale; these participants were included in the Sexual Minority group. Two participants identified as “pansexual” and on the Kinsey scale one rated a 2 and one a 3, thus both of these participants were included in the Sexual Minority group. Finally, one participant indicated “female” when responding to the sexual orientation question, and they rated themselves a 2 (i.e., between “Exclusively gay/lesbian and “Bisexual”) on the sexual orientation scale; this participant was included in the Sexual Minority group.

Of the study participants 128 were female (66%), 57 were male (30%), 5 were transgender (2.5%), and 3 identified as other (1.5%). Table 1 gives information regarding the demographic information on gender by sexual orientation. The mean age of participants in this study was 20.07 (ages ranged from 18-25, $SD = 1.52$). The mean age of participants who identified as heterosexual was 20.36 (ages ranged from 18-25, $SD = 1.45$), and the mean age of participants who identified as a sexual minority was 19.80 (ages ranged from 18-25, $SD = 1.55$).
Of the participants 47 were freshman (24%), 38 were sophomores (20%), 57 were juniors (30%) and 51 were seniors (26%). Table 2 gives information regarding the demographic information on year in school by sexual orientation.

Of the study participants, 143 identified as Caucasian (74.5%), and 49 identified as a racial/ethnic minority (25.5%). Detailed information regarding race/ethnicity is provided in Table 3.

Of the study participants, 1.6% \((n = 3)\) responded yes when asked if they have a functional limitation (i.e. a physical disability). The mean GPA (grade point average) for the total sample was 3.12 (GPA’s ranged from 1-4, \(SD = .56\)). The mean GPA for the heterosexual group was 3.12 (GPA’s ranged from 2-4, \(SD = .56\)), and the mean GPA for the sexual minority group was 3.13 (GPA’s ranged from 1-4, \(SD = .57\)).

Finally, in order to have additional descriptive information, participants were asked to provide information regarding their relationship status and housing situation. This information is provided in Tables 4 and 5.

**Sample Size**

A power analysis was conducted to determine the necessary sample size to achieve at least an 80% power of the test statistic in this study. Eighty percent is the minimum level of power suggested by Cohen (1992) in order to control the type II error rate.

For the first research question, a comparison of the number of academic and career role models between heterosexual and sexual minority individuals, Nauta et al. (2001) reported \(t (87) = 3.18\). This converts to an effect size (that is, \(r\)) of approximately .10 and an adjusted \(r^2\) of .01. Because this was the only published study found directly
assessing this variable, a .01 effect size was used in the power analysis. At an alpha level of .05 and one degree of freedom for hypothesis, a sample size of 110 is needed to achieve approximately 82% power (the sample size for this study was 193).

The second research question, number of academic and career role models known personally by the participant, was not directly assessed by the original Nauta et al. study however there are some studies which assess interpersonal relationships with mentors and role models. Perrone et al. (2002) assessed role model relationship quality as a predictor of career decidedness, and reported Pearson r = .17. Lyons and Oppler (2004) assessed the frequency of interaction with one’s mentor as a predictor of relationship satisfaction, and reported $t (128) = 7.12$. This converts to an $r^2$ of .283 and an adjusted $r^2$ of .279. The lower effect size, $r^2 = .17$ was used to determine sample size. At an alpha level of .05 with 1 degree of freedom for hypothesis, a sample size of 60 would achieve approximately 82% power (the sample size for this study was 193).

For the third and fourth research questions, demographic characteristics of role models, Nauta et al. (2001) reported $F(10, 120) = 3.53$. This converts to $r^2 = .224$, and an adjusted $r^2$ of .222. In a similar study, Basow and Howe (1980) examined role model influence by gender of role model. They reported $F = (7, 378) = 5.10$. This converts to an $r^2$ of .086 and an adjusted $r^2$ of .07. These two effect sizes average to an effect size of .154. At an alpha level of .05, and 10 degrees of freedom for hypothesis (because there are ten questions on the characteristics measure), a sample size of 125 is needed to achieve approximately 81% power (the sample size for these questions was 183 and 138 respectively, as not all survey questionnaires were completed).
For the final research question, the amount of perceived guidance and support and inspiration and modeling, Nauta et al. (2001) reported $t(99) = 2.3$. This converts to an $r^2$ of .05 and an adjusted $r^2$ of .04. Additionally, Hacket et al. (1989) assessed role model influence as a predictor of career salience, and reported an adjusted $r^2$ of .16. This study also assessed role model influence as a predictor of educational aspiration, and they reported an adjusted $r^2$ of .13. The median effect size, adjusted $r^2 = .13$ was used to determine sample size. At an alpha level of .05, and one degree of freedom for hypothesis, a sample size of 80 would achieve approximately 81% power. Based on this power analysis, a minimum sample size of 125 subjects is needed to achieve an appropriate level of power for this study (the sample size for this study was 193).

**Measures**

*Demographic Questionnaire.* Participants completed a demographic questionnaire assessing gender, age, sexual orientation, college major, year in school, race/ethnicity, disability status, and housing. Sexual orientation was assessed with a single-item open ended question, as well as a five item likert-type question based on the scale originally proposed by Kinsey, Pomeroy, and Martin (1948). For the purposes of this study there were two groups based on sexual orientation, with ‘heterosexual’ or ‘straight’ participants comprising the first group, and ‘gay’, ‘lesbian’, ‘bisexual’, ‘homosexual’ and ‘questioning’ participants comprising the second group.

*Number of Role Models.* The participants were asked to report the overall number of academic and career role models they have in an open-ended, single-item question.
Replicating methods developed by Nauta and Kokaly (2001), participants were provided with the following definition of academic and career role models.

“Role Models are people who, either by doing something, or by being admirable to you in one or more ways, have had an impact on the academic and career decisions you have made in your life. Role models may be people you know personally, or they may be people you simply know of.” (p. 85)

This item has a high degree of face validity, and given the potential for a large range of variance in responses it provides more accurate data than a set of closed ended options (i.e. 1-2 role models, 3-5 role models, etc.).

*Number of Role Models Known Personally.* The participants were asked to report the number of role models (reported in the question above) whom they know personally (i.e. with whom they have interpersonal contact). This was an open-ended, single item question.

*Desired Role Model Characteristics.* The desired characteristics of participants’ academic and career role models was assessed by using the items developed by Nauta et al. (2001) to determine the desired role model characteristics. Participants were given a 5 point likert-type scale (ranging from ‘not important’ to ‘very important’) to answer ten questions about their academic and career role models. The ten questions were: How important is it to you that your academic and career role model is: (a) the same race/ethnicity as you, (b) the same gender as you, (c) the same sexual orientation as you, (d) supportive of people whose race/ethnicity is the same as yours, (e) supportive of people whose gender is the same as yours, (f) supportive of people whose sexual orientation is the same as yours, (g) someone with a successful career, (h) somebody you feel comfortable talking to, (i) somebody you feel safe discussing personal issues with.
and (j) somebody who is a member of a minority group. These items have a high degree of face validity. Additionally, three of these items (b, c, and f) did discriminate between the heterosexual and gay, lesbian, bisexual groups in the Nauta et al. (2001) study.

**Actual Role Model Characteristics.** The actual characteristics of participants’ academic and career role models was assessed by altering the items utilized by Nauta et al. (2001) to determine the desired role model characteristics. Participants were asked to determine what percent (0-100%) of the academic and career role models they know personally fit the criteria described.

**Perceived Support and Guidance and Inspiration/Modeling.** The Influence of Others on Academic and Career Decision Making Scale (IOACDS) is a 15-item measure assessing perceived support/guidance and inspiration/modeling when making academic and career decisions. The Support/Guidance subscale is comprised of eight questions answered on a five point Likert-type scale (from ‘strongly agree’ to ‘strongly disagree’). A sample item from the support/guidance subscale is “there is someone I can count on to be there if I need support when I make academic and career choices” The Inspiration/Modeling subscale is comprised of seven questions answered on a five point likert-type scale (from ‘strongly agree’ to ‘strongly disagree’). A sample question from the inspiration/modeling subscale is “There is someone I am trying to be like in my academic or career pursuits.”

Nauta and Kokaly (2001) found that the IOACDS demonstrated high internal consistency in three studies, with total IOACDS scale α ranging from .89 - .91. The Support/Guidance subscale demonstrated internal consistency α ranging from .89 –.94, and the Inspiration/Modeling subscale demonstrated internal consistency α from .87-.91.
A ten-week test-retest Pearson product-moment correlation coefficient for the total scale was .80, the support/guidance subscale was .71, and the inspiration/modeling subscale was .78.

Finally, in order to assess validity, Nauta and Kokaly (2001) correlated the Support/Guidance and Inspiration/Modeling subscales of the IOACDS with the Vocational Identity and Occupational Information subscales from the My Vocational Situation measure (MVS; Holland, Daiger, & Power, 1980) and the Indecision and Certainty subscales from the Career Decision Scale (CDS; Osipow, Carney, Winer, Yanico, & Koschier, 1976). The Support/Guidance subscale was significantly correlated with the MVS Occupational Information subscale (.17), and the CDS Indecision and Certainty subscales (-.18 and .21 respectively); and the Inspiration/Modeling subscale was significantly correlated with the MVS Vocational Identity and Occupational Information subscales (.22 and .18 respectively) and the CDS Indecision and Certainty subscales (-.20 and .28 respectively).

Procedure

Participants for this study were recruited through e-mail requests sent to student listservs of campus groups and departments at the University at Albany, as well as advertisements on a social networking site (in order to increase the sample to students at various schools throughout the United States). Finally, in order to ensure a sufficient sample of sexual minority participants, requests were made to the University’s Pride Alliance group and some of the social networking advertisements were targeted to reach sexual minority college students.
Once participants accessed the study’s website they were initially given a brief description of the study, and the estimated amount of time it would take for them to complete the measures. They were then given a consent form, which explained that their participation is completely voluntary and that their answers will be kept completely anonymous. Additionally, the consent form explained that the study has no affiliation with any campus clubs or courses. Thus, their participation (or decision to not participate) would not impact the services they receive from any campus organizations, or the grades they receive in any of their courses.

A drawing for a chance to win one of two $50 gift certificates to an online store was provided as an incentive for students to participate. The drawing was conducted by giving participants an e-mail address to send their name and contact information to after they completed the study. This had no connection to the measures the participant completed, thus their responses were kept completely anonymous.

Students completed the measures in the following order; consent form, number of role models, number of role models known personally, desired role model characteristics, actual role model characteristics, the IOACDS, and the demographic questionnaire. It was estimated that it takes approximately 30 minutes for participants to complete all of the measures.

Statistics and Data Analysis

Prior to conducting the main analyses, preliminary analyses were conducted, including examining means, standard deviations, and ranges of the study and demographic variables, as well as assessing the variables for normality. Additional
analyses explored whether the two groups differed on specific demographic variables; gender, race/ethnicity, age, and year in school were assessed. Age and year in school were assessed as these variables may differentially impact students’ experience with role models (e.g. the longer one is in school the more time they have to develop relationships with role models).

Participants were coded by sexual orientation, with heterosexual subjects coded as 1 and sexual minority participants coded as 2. The alpha level was not adjusted, and was maintained at a .05 level as controlling for type I error takes precedence over controlling for type II error.

The first research question examined differences in the number of career and academic role models between heterosexual and sexual minority participants. A one-tailed independent samples $t$-test set at an alpha level of .05 and one degree of freedom for hypothesis was utilized to assess any difference between these two groups. Additionally, the descriptive statistics for both groups (the means and standard deviations) are reported.

The second research question examined differences in the number of career and academic role models known personally by participants between heterosexual and sexual minority participants. A one-tailed independent samples $t$-test set at an alpha level of .05 and one degree of freedom for hypothesis was utilized to assess any difference between these two groups. Additionally, the descriptive statistics for both groups (the means and standard deviations) are reported.

The third research question examined differences in ten desired characteristics of the academic and career role models endorsed by heterosexual versus sexual minority
participants (these characteristics include gender, sexual orientation, and race/ethnicity). First, a two-group multivariate analysis of variance (MANOVA) was conducted with sexual orientation as the independent variable and the ten individual characteristics of academic and career role models as the dependent variables. A MANOVA was used to analyze these data so that the type I error rate could be controlled for, and so that all of the DV’s (i.e. all 10 role model characteristics) could be simultaneously analyzed (Tabachnick & Fidell, 2001). The overall effect was determined by F test and Pillai’s Trace. Additionally, the means and standard deviations of each of the ten responses (by group) were reported (see Table # 6). The discriminant function analysis was interpreted (as outlined in Haase & Ellis, 1987, Tabachnick & Fidell, 2001) to determine which of the ten factors contribute most to the difference between groups.

The fourth research question examined the actual characteristics of the academic and career role models endorsed by heterosexual versus gay, lesbian, and bisexual participants (these characteristics include gender, sexual orientation, and race/ethnicity). First, a two-group multivariate analysis of variance (MANOVA) was conducted with sexual orientation as the independent variable and the ten individual characteristics of academic and career role models as the dependent variables. A MANOVA was used to analyze these data so that the type I error rate could be controlled for, and so that all of the DV’s (i.e. all 10 role model characteristics) could be simultaneously analyzed (Tabachnick & Fidell, 2001). The overall effect was determined by F test and Pillai’s Trace. Additionally, the means and standard deviations of each of the ten responses (by group) were reported (see Table #7). The discriminant function analysis was interpreted
(as outlined in Haase & Ellis, 1987, Tabachnick & Fidell, 2001) to determine which of the ten factors contribute most to the difference between groups.

The final research question examined the differences between heterosexual and sexual minority participants in the amount of perceived support and guidance and inspiration and modeling they report when making academic and career decisions. This was assessed by their scores on the IOACDS Support/Guidance and Inspiration/Modeling subscales. The differences in these subscale scores were assessed by conducting one-tailed independent samples \( t \)-tests set at an alpha level of .05 and one degree of freedom for hypothesis.
The purpose this study was to gain further insight into the academic and career role models of GLB (sexual minority) and heterosexual (straight) college students. Specifically, the study compared the academic and career role models of a group of heterosexual undergraduate college students to the academic and career role models of a group of gay, lesbian, and bisexual college students. The study also examined the amount of support and guidance and inspiration and modeling participants perceived they receive when making academic and career decisions.

Demographics

For this study, 241 participants accessed the online survey. Out of these cases, 38 were dropped from the sample because they did not indicate sexual orientation, four were excluded due to identifying as graduate students, three were excluded due to being over 25-years-old, and three were excluded because they did not indicate the number of role models. This resulted in a final sample size of 193 participants, although analyses for the third and fourth research questions included samples of 183 and 138 participants respectively due to incomplete data on those measures from some participants. There were a total of 92 participants (47.9%) in the Heterosexual group and 101 participants in the Sexual Minority group (52.1%).

Preliminary analyses
A series of analyses were conducted to ensure that the two groups (heterosexual and sexual minority) were not significantly different on a number of demographic variables, including gender, race/ethnicity, age, and year in school.

Gender categories were: male, female, transgender, and other (see Table 1). A chi-square was done to determine if there were significant differences in the sample based on gender. Analyses were conducted assessing differences for only Male and Female participants (which accounted for 95.8% of the sample). There was a significant difference in the groups based on gender, $\chi^2 (1) = 5.03, p = .025$. Because gender did not meet the assumption of a covariate as it was not correlated with the other dependent variables (Kerrlinger & Lee, 2000) it was not added as a covariate for these analyses.

In order to examine whether the two sexual identity groups were different on race and ethnicity a chi-square analysis was conducted. The race/ethnicity variable was grouped into “Caucasian” and “Students of Color” given the small sample sizes for the various race/ethnicity groups (see Table 3). There were no significant differences found between the groups based on race/ethnicity, $\chi^2 (1) = 2.9, p = .12$.

A t-test was conducted to determine any differences in age between the heterosexual and sexual minority groups, and no significant difference was found. The results found that $t(191) = 2.57, p = .68$, suggesting that the groups did not differ significantly by age. The mean age for Heterosexual participants was 20.36 ($SD = 1.45$) and the mean age for Sexual Minority participants was 19.80 ($SD = 1.55$).

Finally, an ANOVA was run to determine any differences in year in school between heterosexual and sexual minority groups. The results found that the two groups did differ significantly on year in school, $F (3,189) = 9.89, p \leq .05$. Because year in
school did not meet the assumption of a covariate given that it was not correlated with the other dependent variables (Kerrlinger & Lee, 2000) it was not added as a covariate for these analyses.

Internal consistency reliability estimates were run for the Support/Guidance and Inspiration/Modeling subscales of the *Influence of Others on Academic and Career Decision Making Scale* (IOACDS). For the Support/Guidance subscale Cronbach’s $\alpha = .70$ for the Heterosexual groups and $\alpha = .74$ for the Sexual Minority group. For the Inspiration/Modeling subscale Cronbach’s $\alpha = .79$ for the Heterosexual groups and $\alpha = .87$ for the Sexual Minority group. This demonstrates that the Support/Guidance and Inspiration/Modeling subscales have adequate internal consistency.

The Support/Guidance and Inspiration/Modeling subscales were also assessed for normality. Histograms were visually examined, and skewness was assessed. The Support/Guidance subscale was highly negatively skewed for the Heterosexual group (skew = -1.11, $M=33.74$, $SD = 4.71$) and moderately negatively skewed for the Sexual Minority group (skew = -0.69, $M=32.75$, $SD=5.09$). The Inspiration/Modeling subscale was moderately negatively skewed for both groups; for the Heterosexual group skew = -.55 ($M=25.53$, $SD = 6.06$) and for the Sexual Minority group skew = -.82 ($M=26.94$, $SD=6.33$). These results demonstrate that scores on both subscales tended to cluster on the higher end. Finally, Levene’s test was run for both subscales in order to assess homogeneity of variance. For the Support/Guidance subscale Levene’s statistic = 1.26, $p = .26$ and for the Inspiration/Modeling subscale Levene’s statistic = .008, $p = .93$. As neither subscale demonstrated significance the assumption of equal variances was not violated.
Research Questions One and Two

Hypothesis one stated that the Sexual Minority group would report significantly more Academic and Career Role Models than the Heterosexual group. A one-tailed independent samples t-test set at an alpha level of .05 and one degree of freedom for hypothesis was utilized to assess any differences between these two groups. The results, $t(191) = -2.79, p = .005$ supported the hypothesis that the Sexual Minority group ($M = 5.44, SD = 5.49$) endorsed more role models than the Heterosexual group ($M = 3.65, SD = 2.87$).

Hypothesis two stated that the Heterosexual group would report significantly more Academic and Career Role Models whom they know personally than the Sexual Minority group. A one-tailed independent samples t-test set at an alpha level of .05 and one degree of freedom for hypothesis was utilized to assess any differences between these two groups. The results, $t(190) = -2.52, p = .005$ supported the hypothesis. The Sexual Minority group ($M = 4.06, SD = 4.47$) endorsed more role models whom they know personally than the Heterosexual group ($M = 2.76, SD = 2.18$).

Research Question 3

Hypothesis 3 stated that the heterosexual and sexual minority groups would differ on the set of Desired Characteristics of Academic and Career Role Models. In particular, it was hypothesized that the sexual minority group would endorse having role models who are the same sexual orientation, and supportive of the same sexual orientation as significantly more important than the heterosexual group. A two-group multivariate
analysis of variance (MANOVA) was conducted with sexual orientation as the independent variable (i.e. sexual minority participants as one group and heterosexual participants as the other group) and the ten individual characteristics of academic and career role models as the dependent variables. Results show that the overall effect was significant, Pillais Trace = .31, $F(10, 172) = 7.75, p < .000$, providing support for the hypothesis that the Sexual Minority group would differ significantly from the Heterosexual group in the characteristics that are desired in their role models.

To determine which of the ten factors contributed most to the difference between the sexual orientation groups, a discriminant function analysis was conducted (as recommended by Haase & Ellis, 1987, Tabachnick & Fidell, 2001). The mean, standard deviation, standardized discriminant function coefficient, canonical variate correlation, and significance for each dependant variable are displayed in table 6. The five dependent variables that contributed most to the difference between the Heterosexual and Sexual Minority groups were Supportive of People of My Sexual Orientation, Supportive of People of My Gender, Member of a Minority Group, Safe Discussing Personal Issues With, and Same Gender. The findings suggest that Sexual Minority participants desired a role model who is (a) of the same gender (b) supportive of people of their gender (c) a member of a minority group (d) supportive of people of their sexual orientation and (e) a role model with whom they feel safe discussing personal issues. These results partially support the proposed hypothesis. Somewhat surprisingly, there was not a significant difference between the Sexual Minority ($M = 1.74, SD = 1.18$) and Heterosexual ($M = 1.46, SD = .98$) groups on the Same Sexual Orientation item.
Research Question 4

Hypothesis 4 stated that the Sexual Minority group and the Heterosexual group would differ on the set of Characteristics of the Academic and Career role models whom they have in their lives. In particular, it was hypothesized that the Sexual Minority group would endorse having significantly fewer role models who are the same sexual orientation as them than then the Heterosexual group. A two-group multivariate analysis of variance (MANOVA) was conducted with sexual orientation as the independent variable (i.e. Sexual Minority participants as one group and Heterosexual participants as the other group) and the ten individual characteristics of academic and career role models as the dependent variables. Results show that the overall effect was significant, Pillais Trace = .66, $F(10, 137) = 24.25, p < .000$ providing support for the hypothesis that the Sexual Minority group would differ significantly from the Heterosexual group in the characteristics of their Academic and Career Role Models.

To determine which of the ten factors contributed most to the difference between the sexual orientation groups, a discriminant function analysis was conducted (as recommended by Haase & Ellis, 1987, Tabachnick & Fidell, 2001). The mean, standard deviation, standardized discriminant function coefficient, canonical variate correlation, and significance for each dependant variable are displayed in table 7. The three dependent variables that contributed most to the difference between the Heterosexual and Sexual Minority groups were Same Sexual Orientation, Supportive of People of My Race/Ethnicity, and Comfortable Talking To. The results suggest that Heterosexual students reported a higher percentage of their role models being the same sexual
orientation as them, while Sexual Minority participants reported having more role models with whom they felt comfortable talking to and who were supportive of people of their race/ethnicity. These results support the hypothesis that the Sexual Minority group would endorse fewer role models who were the same sexual orientation as them, when compared with the heterosexual group.

**Research Question 5**

Finally, Hypothesis 5 stated that the Sexual Minority group would report significantly less Support and Guidance and less Inspiration and Modeling when making academic and career decisions in comparison to the Heterosexual group. Two one-tailed independent samples $t$-tests set at an alpha level of .05 and one degree of freedom for hypothesis were utilized to assess any differences between these two groups. The results for the Support/Guidance subscale, $t(191) = 1.39$, $p = .263$ did not support the hypothesis that the Sexual Minority group ($M = 32.75$, $SD = 5.08$) would endorse having less support/guidance when making academic and career decisions than the Heterosexual group ($M = 33.74$, $SD = 4.71$). There was no significant difference between the two groups on this variable. The results for the Inspiration/Modeling subscale, $t(191) = -1.58$, $p = .927$ did not support the hypothesis that the Sexual Minority group ($M = 26.94$, $SD = 6.33$) would endorse having less inspiration/modeling when making academic and career decisions than the Heterosexual group ($M = 25.53$, $SD = 6.06$).
Chapter V
DISCUSSION

The purpose of this study was to explore the academic and career role models of sexual minority college students and heterosexual college students. Specifically, the study was designed to compare the academic and career role models of a group of heterosexual undergraduate college students to the academic and career role models of a group of sexual minority college students. The study also examined the amount of support and guidance and inspiration and modeling participants perceived they receive when making academic and career decisions.

It was hypothesized that sexual minority students would report a greater number of academic and career role models when compared with heterosexual students. It was also hypothesized that heterosexual students would report a significantly greater number of academic and career role models whom they know personally compared to sexual minority students. Further, it was hypothesized that the two groups would differ on the set of desired characteristics of academic and career role models. In particular, that sexual minority students would endorse having role models who are the same sexual orientation, and supportive of the same sexual orientation as significantly more important than heterosexual students. Additionally, it was hypothesized that the two groups would differ on the set of characteristics of the academic and career role models whom they have in their lives. In particular, it was hypothesized that the sexual minority students would endorse having fewer role models who are the same sexual orientation as them than then the heterosexual students. Finally, it was hypothesized that sexual minority students
would report less support and guidance and less inspiration and modeling when making academic and career decisions in comparison to heterosexual students.

Role Models

The results of this study did show a statistically significant difference between heterosexual and sexual minority students in terms of the number of role models they have, as well as the number of role models with whom they have an interpersonal relationship. Sexual Minority participants reported having a higher number of role models, as well as a higher number of role models with whom they have an interpersonal relationship. The mean number of role models reported was 5.44 for the sexual minority group, and 3.65 for the heterosexual group. The mean number of role models with whom there is an interpersonal relationship was 4.06 for the sexual minority group and 2.76 for the heterosexual group.

The results provide some clinically important information, in that the findings of Nauta et al. (2001) have been replicated. The dearth of available role models for sexual minority students has been cited as a barrier in their career development process (e.g. Morrow et al., 1996), however given the findings of the current study more research in this area is needed. The past two decades have seen an increase in the visibility of sexual minority individuals in the media (e.g. Ellen DeGeneres, Rachel Maddow, Rufus Wainwright, and Neil Patrick Harris), which may partially account for the current study’s findings. A recent study by Gomillion and Giuliano (2011) on the influence of media role models on gay, lesbian, and bisexual identity revealed that the internet and books were rated most influential, followed by television and movies, and music and magazines.
were rated the least influential sources. The unique influence of the internet, which provides readily accessible information and anonymity for the user, would be a particularly compelling focus for future research in the career development process for sexual minority students.

Interestingly, hypothesis two was significant, but in the opposite direction anticipated. Sexual minority participants actually reported a higher number of role models with whom they have an interpersonal relationship. This study suggests that sexual minority students not only have more role models overall, but they also report more role models with whom they have an interpersonal relationship. Given the challenges involved in sexual identity development, it has been theorized that sexual minority individuals face unique challenges in their career development (Fassinger, 1996; Morrow et al., 1996). Perhaps these additional challenges prompt sexual minority individuals to seek out additional sources of support (e.g. academic and career role models). As support necessitates an interpersonal interaction (while inspiration and modeling do not), accessing support can only occur in an interpersonal context. Based on this study, sexual minority students appear to have role models available to them to provide needed support.

**Desired Role Model Characteristics**

Results indicated support for the hypothesis that the sexual minority group would differ significantly from the heterosexual group in the characteristics that they desire in their role models. Specifically, sexual minority participants desired a role model who is the same gender, supportive of people of their gender, a member of a minority group,
supportive of people with their sexual orientation, and they desired a role model who they feel safe discussing personal issues with. Importantly, sexual minority participants did not endorse desiring an academic and career role model who is gay, lesbian, or bisexual, although the mean scores show a trend in that direction. Gomillion and Giuliano (2011) reported that for the sexual minority participants they interviewed, role models were sought who were not only GLB, but also “outsiders” who “differed from existing norms.” The identification with a role model, then, may be based not just on matching characteristics (e.g. sexual orientation), but on the broader idea of being a minority of some kind with a shared experience of otherness and environmental barriers to overcome. Additionally, it appears that being overtly supportive of sexual minority individuals is significant in sexual minority individuals experience with people who they may come to view as an academic or career role model.

Actual Role Model Characteristics

Results indicated support for the hypothesis that the sexual minority group would differ significantly from the heterosexual group in the characteristics of their academic and career role models. Heterosexual students reported more academic and career role models who were the same sexual orientation, and sexual minority participants reported more academic and career role models who were supportive of people of their race/ethnicity as well as more role models who they felt comfortable talking to. While the sexual minority group reported fewer academic and career role models who were their same sexual orientation, and there was no difference in the number of role models who were supportive of people of the same sexual orientation for the participants in either
group, the sexual minority group viewed their role models as supportive in other ways (i.e. supportive of people of their race/ethnicity). It is important to note that although sexual minority participants reported desiring academic and career role models who were their same gender, a member of a minority group, and supportive of people of their gender and sexual orientation, there were no differences found when the characteristics of their actual role models were compared to those of heterosexual students. This suggests that although sexual minority students may have a greater need for support (Fassinger, 1006, Morrow et al, 1996), and they may actually be actively seeking and finding role models in greater numbers than their heterosexual peers (Nauta et al, 2001), the role models they have available to them do not have some of the characteristics they desire in an academic and career role model.

Perhaps most importantly, Sexual Minority participants reported a higher percentage of role models that they are comfortable talking to despite the fact that their role models don’t match all of the desired characteristics they are looking for in a role model. This suggests that there may be something qualitatively different in the student-role model relationship for Sexual Minority individuals. Further research in this area may help to identify the possible differences in the interpersonal relationships college students develop with their role models.

Support/Guidance and Inspiration/Modeling

The results of this study, contrary to the hypothesis, suggest there is no difference in the amount of support and guidance or inspiration and modeling that sexual minority
and heterosexual students perceive receiving when making academic and career
decisions. It is important to remember that although sexual minority participants did not
perceive receiving less support/guidance than their heterosexual peers (as was found in
the Nauta et al., 2001 study) they reported more overall role models, and more role
models with whom they have an interpersonal relationship in this study. The sexual
minority participants are reporting more role models, but equivalent amounts of
support/guidance and inspiration/modeling when compared with their heterosexual peers.
Perhaps the differences in the characteristics of the academic and career role models
students have (and how this contrasts from the characteristics that are desired in their role
models) are one factor contributing to this.

Lyons, Brenner, and Lipman (2010) investigated patterns of career and identity
interference for lesbian, gay, and bisexual young adults. They separated their sample into
three distinct groups; those high in career conflict, those high in sexual identity conflict,
and lastly a low conflict group. They found that the low conflict group reported higher
career decision making self-efficacy and more supports, while those with sexual identity
conflict reported a higher number of perceived barriers. As conflict regarding sexual
identity was not assessed in this study, it is possible that many of the participants in this
study were low on sexual identity conflict (thus higher in terms of available supports).

Sexual minority participants reported equivalent levels of inspiration and
modeling when making academic and career decisions when compared to their
heterosexual peers. Again, this should be viewed in light of the higher number of overall
role models reported by this group. And, while only the characteristics of role models
with whom students maintained an interpersonal relationship were assessed, it would be
interesting to see if the role models not known personally by the sexual minority participants were more of a match with the desired characteristic they seek in a role model. In other words, students are somewhat limited in terms of the role models available to them in their lives, but the media provides access to a greater range of role models who can provide inspiration (but not support). As noted by Gomillion and Giuliano (2011), the visibility of gay and lesbian individuals and characters in the media has increased greatly over the past decade. This provides an important source of inspiration for sexual minority individuals who may not have sexual minority academic and career role models in their own lives.

Limitations

There are several limitations to this study that are important to note. Firstly the grouping of gay and lesbian participants with bisexual participants is problematic because it ignores the possibility of within group differences; i.e. the experiences of bisexual students specifically in terms of their career development could be distinct from those of both the gay/lesbian participants and the heterosexual participants. Dugan and Yurman (2011) examined the appropriateness of collapsing sexual minority college students into a single category when conducting quantitative research. They found in most respects gay, lesbian and bisexual participants did not differ significantly across measures of collegiate experiences and outcomes (including involvement in clubs, leadership positions, faculty mentoring, and peer mentoring). Interestingly, bisexual participants did rate overall campus climate lower, and they rated appreciation for diversity lower when compared with gay and lesbian peers.
The sampling of participants by targeting the gay, lesbian, bisexual student association creates a limitation. The gay, lesbian, and bisexual participants who attend meetings and events at this organization are likely to be more ‘out’ and could have distinct differences in their career development compared with ‘closeted’ students who do not attend these events and meetings. Because of the nature of the study, and the importance of attaining a large number of gay, lesbian, and bisexual participants, it was necessary to collect data in this manner; however it is important to note that the sexual minority students who were sampled may differ from sexual minority peers who do not openly identify as GLB.

The study is also limited in terms of racial and ethnic diversity and of the participant population. The majority of participants (74.5%) identified as Caucasian, thus analysis to identify any unique factors relating to this variable were not able to be examined limiting generalizability of the results.

It is also important to note that the sample for this study appears to be a high achieving group of students; the mean GPA (grade point average) for the total sample was 3.12. The GPA for the heterosexual group was 3.12, and the mean GPA for the sexual minority group was 3.13. High achieving students may differ from their peers in terms of their relationships with advisors, instructors, family members, and any other individual who might be potentially viewed as a role model. Any generalizations made from the findings of this study would likely not apply to college students overall.

The sample for this study was largely drawn from the Northeast. Unfortunately, data was not collected regarding which college participants attended, or what region they reside in. This oversight limits the generalizability of the results. This is important to
recognize, as students’ experiences may differ greatly based on the region they live in and the college they attend. This would be particularly true for Sexual Minority individuals (e.g. sexual minority students may have very different experiences in conservative areas vs. more liberal or accepting regions and schools).

Finally, the use of self-report measures and online data collection creates some limitations as well. The use of self-report measures creates the possibility that participants may have provided falsified or misrepresented data. The anonymous and confidential nature of the study minimizes this possibility. Lastly, collecting data online limits the participant sample to those with computer access. As a college student population was sampled in this study, and colleges have computer labs available for students this seems to be a minimal limitation.

**Implications**

The present study provides some important implications for theory and practice. The endorsement of career and academic role models for gay, lesbian and bisexual individuals is one of the most commonly listed vocational interventions for career counselors (Pope, 1995); however there has been a lack of empirical support for this intervention. The current study suggests that explicit support of the sexual minority community, and support for other minority groups, may be the most important factors desired by sexual minority students. Sexual minority students endorsed wanting role models who were supportive of people with their sexual orientation, and who were members of a minority group and supportive of minority groups. This means that providers (e.g. career service advisors, academic advisors) who are not themselves gay, lesbian, and bisexual can still have a strong positive impact on the academic and career
development of sexual minority students if they are able to create a welcoming, supportive, and inclusive environment. Additionally, this has implications for other areas of college life beyond career services and academic advising such as counseling centers, residence life, and instructional staff to name a few. Role models can be found in many areas of a students’ life, and it appears that showing support (explicitly) for minority groups is especially important for sexual minority students.

It has long been cited that there is a dearth of available sexual minority role models (Fassinger, 1996, Morrow et al, 1996); however this study suggests that sexual minority individuals actually have more role models than their heterosexual peers. This includes role models in the media, as well as role models with whom they have an interpersonal relationship. There has been a dramatic increase in the visibility of sexual minority individuals in the media (in the news as well as in fictional roles; Gomillion & Giuliano, 2011) which provides inspiration and modeling for sexual minority students. However, beyond the visibility of media role models, this finding is important as it suggests that sexual minority students are actively seeking support from individuals in their lives to help them in their academic and career development.

Hopefully the factors that contribute to the academic and career development for sexual minority students will continue to be researched. Further investigation into the specific elements of support that are helpful for sexual minority students is needed. It seems clear that there are unique challenges faced by sexual minority students, but how to most effectively meet these needs is still a new area of research. There is a dearth of empirical literature assessing career development of sexual minority students of color, and there is a dearth of literature addressing the unique needs of transgender students.
Conclusions

This study sought to assess differences in the academic and career role models of sexual minority college students and heterosexual college students as well as to assess differences in the amount of support and guidance and inspiration and modeling participants perceived they receive when making academic and career decisions. Sexual minority students were shown to have more academic and career role models overall, as well as more academic and career role models with whom they share an interpersonal relationship. Sexual minority students, surprisingly, did not endorse desiring academic and career role models who were also sexual minorities however they did endorse wanting role models of the same gender, role models who were supportive of people of their gender, role models who were members of a minority group, supportive of people with their sexual orientation, and they desired a role model who they feel safe discussing personal issues with. The two groups differed in terms of the academic and career role models with whom they have an interpersonal relationship; heterosexual participants had a significantly higher number of role models who were the same sexual orientation as them, while sexual minority participants reported that their role models were more supportive of minority groups and they had a higher percentage of role models that they were comfortable talking to. Finally, Sexual Minority students reported that they perceive receiving equal amounts of support and guidance and inspiration and modeling when compared with their heterosexual peers.
References


Croteau, J.M., & Thiel, M.J. (1993). Integrating sexual orientation in career counseling: Acting to end a form of the personal-career dichotomy. *Career Development Quarterly*
Quarterly, 42 (2), 174-179.
http://associationdatabase.com/aws/NCDA/pt/sp/cdquarterly


Karunanayake, D., & Nauta, M.M (2004). The Relationship between race and students’
identified career role models and perceived role model influence. *The Career*
Development Quarterly, 52, 225-234.

http://associationdatabase.com/aws/NCDA/pt/sp/cdquarterly


Philadelphia: Saunders.

S.D. Brown & R.W. Lent, (Eds.), *Career development and counseling: Putting*

theory of career and academic interest, choice, and performance. *Journal of*
Vocational Behavior, 45, 79-122. doi:10.1006/jvbe.1994.1027

career choice: A social cognitive analysis. *Journal of Counseling Psychology*, 47,
36-49. doi:10.1037/0022-0167.47.1.36

validation of the lesbian, gay, bisexual, and transgendered climate inventory.

lesbian, and bisexual people: Methodological considerations and
doi:10.1006/jvbe.1996.0017


doi:10.1006/jvbe.1996.0013


http://associationdatabase.com/aws/NCDA/pt/sp/cdquarterly


Table 1

Gender and Sexual Orientation

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<th>N</th>
<th>Heterosexual</th>
<th>Sexual Minority</th>
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<tr>
<td>Female</td>
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<td>30.1%</td>
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<tr>
<td>Male</td>
<td>21</td>
<td>36</td>
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<tr>
<td>% of Total</td>
<td>10.9%</td>
<td>18.7%</td>
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<tr>
<td>Transgender</td>
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<td>% of Total</td>
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<tr>
<td>Other*</td>
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<td>3</td>
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<td>1.6%</td>
<td>1.6%</td>
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<tr>
<td>Total</td>
<td>92</td>
<td>101</td>
<td></td>
<td>193</td>
</tr>
<tr>
<td>% of Total</td>
<td>47.7%</td>
<td>52.3%</td>
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</tbody>
</table>

*Note* Three participants identified as “other”, and indicated “Gender Queer”, “Queer”, and “Post Gender” on their survey responses.
<table>
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<tr>
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<th>Sexual Orientation</th>
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<tbody>
<tr>
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<td>Heterosexual</td>
<td>Sexual Minority</td>
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<tr>
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<td>17.1%</td>
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<td>Sophomore</td>
<td>9</td>
<td>29</td>
<td>38</td>
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<tr>
<td>% of Total</td>
<td>4.7%</td>
<td>15%</td>
<td>19.7%</td>
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<tr>
<td>Junior</td>
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<td>21</td>
<td>57</td>
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</tr>
<tr>
<td>% of Total</td>
<td>18.7%</td>
<td>10.9%</td>
<td>29.5%</td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>33</td>
<td>18</td>
<td>51</td>
<td></td>
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<tr>
<td>% of Total</td>
<td>17.1%</td>
<td>9.3%</td>
<td>26.4%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>101</td>
<td>193</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>47.7%</td>
<td>52.3%</td>
<td>100%</td>
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</table>
### Table 3

**Race/Ethnicity and Sexual Orientation**

<table>
<thead>
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<th>Sexual Orientation</th>
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</thead>
<tbody>
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<td></td>
<td>Heterosexual</td>
<td>Sexual Minority</td>
<td>Total</td>
<td></td>
</tr>
<tr>
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<td>% of Total</td>
<td>3.6%</td>
<td>2.1%</td>
<td>5.7%</td>
<td></td>
</tr>
<tr>
<td>Asian-American</td>
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<td>2</td>
<td>9</td>
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<tr>
<td>% of Total</td>
<td>3.6%</td>
<td>1%</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>62</td>
<td>81</td>
<td>143</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>32.2%</td>
<td>42.2%</td>
<td>74.5%</td>
<td></td>
</tr>
<tr>
<td>Latina/Latino</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>2.6%</td>
<td>3.1%</td>
<td>5.7%</td>
<td></td>
</tr>
<tr>
<td>Biracial</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>1%</td>
<td>1%</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Multiracial</td>
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<td>1</td>
<td>4</td>
<td></td>
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<tr>
<td>% of Total</td>
<td>1.6%</td>
<td>.5%</td>
<td>2.1%</td>
<td></td>
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<tr>
<td>Other*</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td></td>
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<tr>
<td>% of Total</td>
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<td>2.1%</td>
<td>5.2%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>100</td>
<td>192**</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>47.9%</td>
<td>52.1%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

* In the other category participants indicated “Indian” (N = 3), “Italian” (N = 2), “American” (N = 1), “Caucasian and Portuguese” (N = 1), “African and White” (N = 1), “Caucasian and Asian” (N = 1), and “Welsh” (N = 1)

**One participant did not provide a response to the race/ethnicity item**
Table 4

*Relationship Status and Sexual Orientation*

<table>
<thead>
<tr>
<th></th>
<th>Sexual Orientation</th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Heterosexual</td>
<td>Sexual Minority</td>
<td>Total</td>
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</tr>
<tr>
<td>Married/Living Together</td>
<td>N</td>
<td>5</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>% of Total</td>
<td>2.6%</td>
<td>3.6%</td>
<td>6.3%</td>
<td></td>
</tr>
<tr>
<td>Committed Relationship</td>
<td>N</td>
<td>41</td>
<td>32</td>
<td>73</td>
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<tr>
<td>% of Total</td>
<td>21.4%</td>
<td>16.7%</td>
<td>38%</td>
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<td>Casually Dating</td>
<td>N</td>
<td>11</td>
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<tr>
<td>% of Total</td>
<td>5.7%</td>
<td>4.7%</td>
<td>10.4%</td>
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<tr>
<td>Single</td>
<td>N</td>
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<td>87</td>
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<tr>
<td>% of Total</td>
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<td>27.1%</td>
<td>45.3%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>N</td>
<td>92</td>
<td>101</td>
<td>193</td>
</tr>
<tr>
<td>% of Total</td>
<td>47.7%</td>
<td>52.3%</td>
<td>100%</td>
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Table 5

*Housing and Sexual Orientation*

<table>
<thead>
<tr>
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<th>Sexual Orientation</th>
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<th></th>
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<td></td>
<td>Heterosexual</td>
<td>Sexual Minority</td>
<td>Total</td>
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<td>On Campus</td>
<td>N 50</td>
<td>36</td>
<td>86</td>
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<td></td>
<td>% of Total 25.9%</td>
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<tr>
<td>With Roommates</td>
<td>N 24</td>
<td>24</td>
<td>48</td>
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<td></td>
<td>% of Total 12.4%</td>
<td>12.4%</td>
<td>24.9%</td>
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<tr>
<td>With Parents</td>
<td>N 9</td>
<td>26</td>
<td>35</td>
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<td></td>
<td>% of Total 4.7%</td>
<td>13.5%</td>
<td>18.1%</td>
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<tr>
<td>With Spouse/Partner</td>
<td>N 5</td>
<td>7</td>
<td>12</td>
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<td></td>
<td>% of Total 2.6%</td>
<td>3.6%</td>
<td>6.2%</td>
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<tr>
<td>Alone</td>
<td>N 4</td>
<td>8</td>
<td>12</td>
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<td></td>
<td>% of Total 2.1%</td>
<td>4.1%</td>
<td>6.2%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>N 92</td>
<td>101</td>
<td>193</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of Total 47.7%</td>
<td>52.3%</td>
<td>100%</td>
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Table 6

*Desired Role Model Characteristics*

<table>
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<tr>
<th>Characteristics</th>
<th>Heterosexual Group</th>
<th>Sexual Minority Group</th>
<th>SDFC</th>
<th>CVC</th>
<th>p</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<tr>
<td>Same race/ethnicity</td>
<td>1.37</td>
<td>.88</td>
<td>1.40</td>
<td>.85</td>
<td>.13</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same gender</td>
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<td>1.06</td>
<td>2.07</td>
<td>1.31</td>
<td>.01</td>
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<td></td>
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</tr>
<tr>
<td>Same sexual orientation</td>
<td>1.46</td>
<td>.98</td>
<td>1.74</td>
<td>1.18</td>
<td>.05</td>
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<tr>
<td>Member of a minority group</td>
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<td>.74</td>
<td>1.69</td>
<td>1.12</td>
<td>-.41</td>
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<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>Comfortable talking to</td>
<td>4.66</td>
<td>.77</td>
<td>4.72</td>
<td>.78</td>
<td>.12</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive of people of my gender</td>
<td>3.90</td>
<td>1.40</td>
<td>4.44</td>
<td>.97</td>
<td>-.10</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Supportive of people of my race/ethnicity</td>
<td>3.71</td>
<td>1.49</td>
<td>4.05</td>
<td>1.25</td>
<td>.56</td>
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<td></td>
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</tr>
<tr>
<td>Supportive of people of my sexual</td>
<td>3.27</td>
<td>1.56</td>
<td>4.60</td>
<td>.77</td>
<td>-1.09</td>
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<tr>
<td>orientation</td>
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<td></td>
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<tr>
<td>Safe discussing personal issues with</td>
<td>4.05</td>
<td>1.26</td>
<td>4.42</td>
<td>.92</td>
<td>-.19</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Has a Successful career</td>
<td>3.99</td>
<td>1.09</td>
<td>3.89</td>
<td>1.03</td>
<td>.02</td>
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<tr>
<td></td>
<td></td>
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</tbody>
</table>

Note. N = 183. Ratings are based on a 5-point scale (1=not important, 5=very important). Hetero = Heterosexual. GLB = Gay, Lesbian, Bisexual. SDFC = standardized discriminant function coefficient. CVC = canonical variate correlation.
Table 7

**Actual Role Model Characteristics**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Heterosexual Group</th>
<th>Sexual Minority Group</th>
<th>SDFC</th>
<th>CVC</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same race/ethnicity</td>
<td>77.19</td>
<td>79.73</td>
<td>.23</td>
<td>.03</td>
<td>.64</td>
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<tr>
<td>Same gender</td>
<td>56.05</td>
<td>56.21</td>
<td>.45</td>
<td>.00</td>
<td>.98</td>
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<tr>
<td>Same sexual orientation</td>
<td>84.5</td>
<td>18.00</td>
<td>-1.15</td>
<td>-.82</td>
<td>.00</td>
</tr>
<tr>
<td>Member of a minority group</td>
<td>32.32</td>
<td>28.04</td>
<td>.11</td>
<td>-.04</td>
<td>.52</td>
</tr>
<tr>
<td>Comfortable talking to</td>
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<td>.01</td>
<td>.13</td>
<td>.05</td>
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<td>Supportive of people of my gender</td>
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<td>-.05</td>
<td>.06</td>
<td>.37</td>
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<tr>
<td>Supportive of people of my race/ethnicity</td>
<td>92.24</td>
<td>99.58</td>
<td>.36</td>
<td>.15</td>
<td>.02</td>
</tr>
<tr>
<td>Supportive of people of my sexual orientation</td>
<td>89.89</td>
<td>83.49</td>
<td>.09</td>
<td>-.09</td>
<td>.17</td>
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<tr>
<td>Safe discussing personal issues with</td>
<td>79.67</td>
<td>76.41</td>
<td>-.11</td>
<td>-.04</td>
<td>.53</td>
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<tr>
<td>Has a Successful career</td>
<td>81.47</td>
<td>84.25</td>
<td>.09</td>
<td>.04</td>
<td>.52</td>
</tr>
</tbody>
</table>

*Note. N = 183. Ratings are based on a 5-point scale (1=not important, 5=very important). Hetero = Heterosexual. GLB = Gay, Lesbian, Bisexual. SDFC = standardized discriminant function coefficient. CVC = canonical variate correlation*
Appendix A

Demographic Questionnaire

What is your Age?  ______

Which term best identifies your gender?

  ____ female     ____ male     ____ transgender
  ____ intersex  ____ other (please specify)

Which term best identifies your current academic status?

  _____ freshman  _____ sophomore  _____ junior  _____ senior
  _____ graduate student  _____ not currently enrolled in school

Which term best identifies your race/ethnicity?

  ____ African-American (non-Hispanic)  ____ Asian, Asian American
  ____ Caucasian/White (non-Hispanic)  ____ Latino/Latina
  ____ Native American  ____ Pacific Islander
  ____ Biracial (please specify)  ____ Multiracial (please specify)

What is your sexual orientation?

_______________________________________________

Please rate yourself on the following 5-point scale for this question:

I consider myself to be...___________

1: exclusively gay/lesbian  2: mostly gay/lesbian  3: bisexual
4: mostly straight/heterosexual  5: exclusively straight/heterosexual
Are you a member of a fraternity or sorority?    Yes____  No___

What type of housing do you currently live in?
On campus housing/dorm ____    off-campus housing (with roommates) ___
Off-campus housing (with parents/family)___
Off-campus housing (with spouse/significant other) ____
Off-campus housing (alone) _____

What is your current relationship status?
Married/living with partner/significant other ____
Involved in a committed romantic relationship____
Casually dating one or more people _____
Single ____

Have you declared your academic major?

_____ No, I’m undecided    _______ Yes

The academic major I have chosen or the majors I am considering are:
____________________________________________

What is your current gpa (grade point average) ?

_____

Do you have any functional limitations (physical disabilities, hearing loss, etc.) ?
No____  Yes (please specify) ____________
Which of the following, if any, accommodations have you utilized during the past year in your academic setting?

Wheelchair access to classrooms and other campus facilities ___

Sign language interpretation ______

Materials in braille _____

Materials in large print_____

Extra time for exams and/or assignments_____

Assistance with writing and/or note taking____

Other (please specify)_____

None of the Above ______
Appendix B

Number of Role Models Questionnaire

*Please read the following definition:*

Role Models are people who, either by doing something, or by being admirable to you in one or more ways, have had an impact on the academic and career decisions you have made in your life. Role models may be people you know personally, or they may be people you simply know of.

*Based on the above definition, how many academic and career role models do you have?*

__________

*How many of the academic and career role models you identified in the question above Do you know personally?*

__________

*Please provide numbers to answer the following question: How many of the academic and career role models whom you know personally are…*

Related to you ______

A teacher, professor, or instructor_______

A co-worker or supervisor_______

A friend_______

An academic advisor or counselor_______

Other (please specify)_________
How do you generally interact with the academic and career role models whom you know personally? (check all that apply)

In-person

By phone

By e-mail or text message

Other (please specify)

How often do you interact with the academic and career role models whom you know personally?

On a daily basis

At least once a week

At least once a month

Less than once a month
Appendix C

Desired Role Model Characteristics Questionnaire

*Please answer the following questions using a 5 point scale*

**How important is it to you that your role model is…**

The same race/ethnicity as you?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

The same gender as you?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

The same sexual orientation as you?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

A minority?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

Somebody you feel comfortable talking with?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

Somebody who is supportive of people of your gender?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

Somebody who is supportive of people of your same race/ethnicity?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

Somebody who is supportive of people of your sexual orientation?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

Somebody you feel safe discussing personal issues with?
1- not important  2- somewhat important  3- neutral  4-important  5-very important

Somebody with a successful career?
1- not important  2- somewhat important  3- neutral  4-important  5-very important
Appendix D

Actual Role Model Characteristics Questionnaire

*Please answer the following questions using a 5 point scale*

Of the academic and career models in your life, *whom you know personally*, approximately what percent many of them …

- Are the same race/ethnicity as you?  
  0-100% ________

- Are the same gender as you?  
  0-100% ________

- Are the same sexual orientation as you?  
  0-100% ________

- Are members of a minority group?  
  0-100% ________

- Are people you feel comfortable talking with?  
  0-100% ________

- Are supportive of people of your gender?  
  0-100% ________

- Are supportive of people of your same race/ethnicity?  
  0-100% ________

- Are supportive of people of your sexual orientation?  
  1- none of them  2- a few of them  3- several of them  4- most of them  5- All of them

- Are people you feel safe discussing personal issues with?  
  0-100% ________

- Have a successful career?  
  0-100% ________
Appendix E

Influence of Others on Academic and Career Decisions Scale (IOACDS)

Please answer the following questions using a 5-point scale

There is someone I can count on to be there if I need support when I make academic and career choices.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is someone who helps me weigh the pros and cons of academic and career choices I make.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is someone who helps me consider my academic and career options.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is no one who shows me how to get where I am going with my education or career.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is someone who supports me in the academic and career choices I make.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is someone who stands by me when I make important academic and career choices.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is no one who supports me when I make academic and career decisions.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is someone who tells or shows me general strategies for a successful life.

1-strongly disagree 2-disagree 3- neither agree nor disagree 4- agree 5- strongly agree
There is someone I am trying to be like in my academic or career pursuits.

1- strongly disagree 2- disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is no one particularly inspirational to me in the academic or career path I am pursuing.

1- strongly disagree 2- disagree 3- neither agree nor disagree 4- agree 5- strongly agree

In the academic or career path I am pursuing, there is someone I admire.

1- strongly disagree 2- disagree 3- neither agree nor disagree 4- agree 5- strongly agree

There is no one I am trying to be like in my academic and career pursuits.

1- strongly disagree 2- disagree 3- neither agree nor disagree 4- agree 5- strongly agree

I have a mentor in my academic or career field.

1- strongly disagree 2- disagree 3- neither agree nor disagree 4- agree 5- strongly agree

I know of someone who has a career I would like to pursue.

1- strongly disagree 2- disagree 3- neither agree nor disagree 4- agree 5- strongly agree

In the academic or career path I am pursuing, there is no one who inspires me.

1- strongly disagree 2- disagree 3- neither agree nor disagree 4- agree 5- strongly agree