A Dominant Swipe: Does Ambivalent Sexism Impact Young Adults' Engagement with Dating Applications?

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Abstract

Young adulthood can be a significant period of people's lives, as focus begins to shift from adolescent development towards personal and relationship goals (Arnett, 2000). There has been much psychological research into the challenges and benefits of relationships. As relationship beliefs and technology have simultaneously developed over time, a growing need for research into relationship formation processes in a new technological era has arisen.

However, the research base on mobile dating applications and the possible psychological underpinnings driving their use is still very much a work in progress. There are likely many reasons that an individual may come to use dating applications. One factor that may play a role in this is a set of complementary beliefs suggested to impact young adults' intimate relationships; ambivalent sexism. There has been some limited research on sexism and dating applications; the primary aim of the current study was to investigate potential links between ambivalent sexism and dating application use.

There is a common perception that dating applications are used merely for 'hook-ups' or casual sex. However, it appears that this is not always the case; consequently, interpersonal dynamics impacting relationship formation are likely to be involved. As such, a secondary aim of this thesis was to investigate whether motivations for dating application use played a moderating role in the relationship between ambivalent forms of sexism and young adults' dating application use.

The current study employed a pre-registered cross-sectional quantitative design with 998 individuals aged between 18 and 35 years. Individuals were asked whether they had ever used a dating application, as well as completing shortened versions of validated measures of ambivalent sexism and dating application motives. Multiple statistical analyses were employed to explore the relationships between individuals' dating application use, and their endorsement of hostile and benevolent sexism. This study additionally tested for possible moderating relationships including dating application motives.

Overall, there was no support for eleven of the twelve pre-registered hypotheses analysed within the current study. Moreover, there was extremely limited support for the assertion that hostile or benevolent sexism were related to dating application use. Some interesting minor findings did emerge. The effect of individuals' hostile sexism endorsement on the odds of dating application use became more positive and significant as their endorsement of sexual experience motives increased. Moreover, exploratory analyses revealed that heterosexual women who endorsed benevolent sexism more strongly were more

likely to use dating applications as endorsement of relationship seeking motives increased. The results of the current study thus suggest that under certain specific circumstances, ambivalent sexism may be relevant to some young adults' dating application use. However, there does not appear to be any evidence that ambivalent sexism more broadly plays a significant role in shaping young adults' dating application use.

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A Dominant Swipe: Does Ambivalent Sexism Impact Young Adults' Engagement with Dating Applications?

Introduction

Emerging adulthood—from age 18 to 35—has been described as a period of self-discovery and exploration (Arnett, 2000). During this transition to adulthood, individuals typically begin to open themselves to others in intimate ways. Young adulthood is thus, not only a time of *self*-exploration, but of *relational*-exploration. For some, this represents the first step towards longer-term commitments to individuals outside of the family group. Erikson (1968) suggested that success in negotiating the psychosocial crisis of ego identity vs role confusion—an *intrapersonal* development, through this *interpersonal* stage—may result in healthy relationships, founded on safety, commitment, and responsive caring. Previous research has suggested that the romantic relationships formed during emerging adulthood have enduring, salient impacts on individuals' lives; though are frequently fleeting, unstable, and ultimately, end (van Dulmen et al., 2015). Further research has concluded that emerging adults expend additional attention and effort towards establishing a long-term relationship—frequently their first—along with an increased focus on commitment in other non-romantic relationships (Sumter et al., 2013). However, for those who have a tendency to avoid intimacy, fear committing themselves, or both, this stage may lead to isolation, loneliness, and depression. The relationships of young adults have received much attention in psychological research in recent years (Olmstead et al., 2013), including both committed romantic relationships, and those relationships which are typically considered to be casual or open.

In 2020, there are many ways for young people to access and be exposed to relationships. For over two decades, businesses have attempted to provide people with access to potential relationship partners. Over the past 10 or so years, technological advances have meant that many of those efforts have been on the mobile platform. However, the research base on mobile dating applications (apps) is still very much a work in progress. Prior research suggested that emerging adults utilise online and mobile media in an attempt to find romantic partners and maintain and grow social networks, fulfilling the developmental needs outlined above (Van De Wiele & Tong, 2014). As online mobile spaces such as social media, and dating applications such as Tinder, continue to gain popularity worldwide, they have become increasingly relevant spaces through which to examine psychological experiences. Indeed, dating applications (such as Tinder) provide a unique tool for observation of interpersonal

dynamics typically seen in offline interactions, and allow psychologists to explore the ways people form and experience relationships online. For many, mobile applications provide increased access to interpersonal interaction and challenge the restrictions of offline communication. Regarding relationship formation, dating applications may make it easier to connect people (Dimmick et al., 2011), and provide a novel notion of relationships in which emotional bonds are built in a virtual space.

The reasons that people may come to use dating applications are likely multiple and varied. One such factor that has been suggested to impact young adults' intimate relationships is ambivalent sexism. Ambivalent Sexism Theory (Glick & Fiske, 1996) describes a complementary set of sexist attitudes which maintain men's advantaged status in society over women. Hostile sexism encompasses men's contest with women for societal and interpersonal power (Sibley et al., 2007). Further, hostile sexism contains a set of attitudes and behaviours that are typified by general antipathy towards women, expressing a menacing and threatening tone towards women who challenge men for position in the social hierarchy (Glick & Fiske, 1996). It is the overt negativity of hostile sexism that obliges a subjectively positive set of beliefs about women. Benevolent sexism counters the derogatory beliefs of hostile sexism with portrayals of women as caring, gentle, and warm; and places an onus on men to protect and provide for women. Benevolent sexism claims men need women to fulfill fundamental needs, while at the same time keep women in their current marginalised position in society through numerous interpersonal effects (Hammond, 2015). Ambivalent sexism has been observed to have a number of effects on intimate relationships (Hammond, 2015). However, the majority of this research is on current relationships, rather than on the formation of new relationships. The primary aim of this thesis was to examine any potential role ambivalent sexism may have in young adults' use of dating applications to form new relationships.

There has been limited research on sexism and dating applications. Research on men's general romantic relationships suggests that those who more strongly align with the ideals outlined in hostile sexism experience discomfort when discussing relationships and intimacy (Sibley & Becker, 2012). Moreover, the potential differences between men and women may appear more stark in relationship formation (Bogle, 2008). In the case of dating applications, where relationship opportunities are at a premium, it appears that men who endorse hostile sexism rely on traditional approaches such as persistent, assertive communication, and the 'treat-them-mean-keep-them-keen' approach to form relationships

with seemingly available women, creating an environment characterised by displays of toxic masculinity (Hall & Canterberry, 2011). However, benevolent sexism prescribes that men should be chivalrous, and protective of women (Glick & Fiske, 1996). As such, ambivalent sexism theory suggests there could be a group of men engaging with dating applications with aims to either impress upon women with their masculinity, or who approach relationship formation from a paternalistic, chivalrous position.

A potentially important factor in the relationship between sexism and dating applications is the role of individuals' motivations for using dating applications. Indeed, the developing research on dating application engagement suggests that there are a multitude of reasons people list for using dating applications (e.g.,, Timmermans and De Caluwé, 2017). Uses and Gratifications Theory suggests that individuals have a set of needs that they pursue when using media (Katz et al., 1974). This seems to extend to dating applications, where there have been as many as 13 different motives people list for using dating applications (Timmermans and De Caluwé, 2017). The varied reasons people give for using dating applications may be an important factor in the relationship between ambivalent sexism and dating application use. There is a common perception that dating applications are used merely for 'hook-ups' or casual sex. However, it appears that this is not always the case, and so interpersonal dynamics impacting relationship formation are likely to be involved. As such, a secondary aim of this thesis was to investigate whether motivations for dating application use played a moderating role in the relationship between ambivalent forms of sexism and young adults' dating application use.

This thesis comprises my research into the role of ambivalent sexism, dating applications, and motivations for dating application use. In the following chapters, I review extant literature on each of these domains, and introduce the (as yet untested) questions regarding how sexist attitudes function within intimate relationship formation, in order to establish a theoretical foundation for the examination of sexist attitudes' role in dating application use among young adults.

Dating Applications

For the past 20-25 years, companies have aimed to provide relationship seekers with the opportunity to find the connection they desire. Specifically, the past 10 years have witnessed the development of mobile-based companies that specialise in providing some combination of: (a) access to potential romantic partners, (b) communication with potential romantic partners, and (c) matching with compatible romantic partners. While there has been a large amount of research conducted in the hope of understanding the implications of web-based online dating websites (e.g.,, Finkel et al., 2012), the research base into mobile-based dating applications is still developing. Though many focus specifically on personal relationships, research on dating applications has been conducted across the disciplines of clinical, social, developmental, and personality psychology; sociology; family studies; economics; communications; as well as other interpersonal domains (Finkel et al., 2012). In addition to this growing base of literature on dating applications, prior research on topics such as human decision-making, reinforcement, motivation science, and mediated communication become relevant.

The term 'access' refers to potential partners within a certain geographical proximity being revealed to users, such that users are exposed to, and may evaluate potential partners that they may not otherwise meet in day-to-day life. Indeed, dating apps typically generate user profiles which can be browsed. Due to the growing popularity of dating apps in social discourse, these applications typically have hundreds of thousands, sometimes millions of user profiles, offering users the opportunity to be introduced to vastly higher numbers of potential partners than they might meet in offline settings. As a function of their design, users can initiate contact with any of the potential partners they come across within the applications. However, there is no guarantee that a potential partner will reply to a contact. Dating applications thus do not guarantee a relationship partner or relationship success. They simply present users the opportunity to pursue interactions with potential partners.

Communication refers to the facilitation of app-based contact between potential partners before actually meeting in real-life. Dating applications often offer a variety of means through which to contact potential partners, be it 'likes', direct messaging, or photo-sharing opportunities. It is important to note that the vast majority of those means of communication offered in dating applications are asynchronous; that is, there is often a break between receiving and replying to messages, they do not occur in real-time. Alternatively,

some services may provide face-to-face video messaging/calling services, allowing users to see each other without being together in a room.

'Matching' refers to the tendency for dating applications to use mathematical formulas and algorithms to narrow the field of potential partners, such that users are presented with partners who align with the user according to a certain set of variables. One variable that is almost universally included in these algorithms is geo-based location. Indeed, one of the key features of applications such as Tinder is that users are able to browse potential partners who are within a customisable geographical proximity. Ideally, the matching service of dating applications is to reduce the random selection of potential partners, such that users are presented a set of potential partners with whom they are likely to have positive relationship outcomes (LeFebvre, 2017). The assumption that alignment on certain variables will ultimately lead to better romantic outcomes is key for dating applications' matching algorithms. Another assumption held by the matching formulas of dating applications is that this match likelihood can be ascertained through self-report and other measures that are able to be measured before partners even meet. If those assumptions hold, then algorithms which narrow the field of potential partners such that those potential partners are more likely to present higher chances of positive relationship outcomes seem to be an effective tool. Whilst many web-based dating sites of the previous generation did not provide matching as a service, dating applications now heavily rely on them, suggesting that today's users value a pre-screened offering of potential partners.

A Short History of the Development of Online and Mobile Dating Services

There have been a number of generations or eras of online and mobile based dating services. Indeed, as personal computers and the internet began to become more popular and accessible during the 1990s, there was a boom in the number of computer-based dating options (Whitty & Carr, 2006). Finkel et al. (2012) categorised these businesses into three generations: (a) online personal advertisement sites, (b) algorithm-based matching sites, and (c) smartphone-based dating applications.

The launch of Match.com in 1995 seems to mark the beginning of the first generation (Whitty & Carr, 2006). A number of sites quickly followed Match in providing individuals with the opportunity to post a variety of online personal advertisements. These sites effectively served as online notice boards, or search engines. Users could post and browse online advertisements placed on the website. Whilst sites like Match were quite general, other sites focused on finding partners with specific interests (Finkel et al. (2012) called these niche

sites) began to rise. For example, one very popular dating website that gained notoriety for its niche in the late 1990s was JDate, a site specifically for singles of the Jewish faith. Indeed, niche sites tended to focus on a number of subpopulations, such as particular age (e.g., SeniorPeopleMeet), sexual orientation, race, social status (e.g., EliteSingles), disability status, and hobby preference (e.g., Vampire-Lovers).

In 2000, the 'second era' of dating websites began with the advent of eHarmony, a website promoting a 'science-based' approach to dating services (Whitty & Carr, 2006). eHarmony touted an online matching service, beginning the development of a rash of algorithm-based companies such as PefectMatch. Algorithm-based websites required users to provide a large amount of information about themselves, frequently measuring variables using self-report scales and conducting information-gathering regarding background, education, occupation, values, and personality. They also, critically, assessed what users desired in a potential partner. The sites then took the information gathered from profiles and generated 'matches' by using the site's algorithm, which companies often kept secret under the guise of proprietary rights (Finkel et al., 2012). Many of the matching websites, unlike their predecessors, charged membership fees for the right to use their services.

The launch of the Apple App Store in 2008 began the third generation in earnest. The App store launched with the second generation of Apple's iPhone, the phone that arguably started the explosion of smartphones' popularity. The Apps Store provided a space for software developers to showcase their applications for the iPhone. As the phones gained popularity, and people embraced mobile life, dating applications rose quickly. Other smartphone companies followed suit (e.g., Google's Android Play Store), and in 2020 a search of "dating application" in Google's Play Store returns over 200 applications. There is a vast range of apps, almost all featuring geo-based relationship services.

Tinder as an Example of Dating Applications

As their popularity in social discourse has grown, a number of dating applications have arisen and gained popularity. Tinder is perhaps the most popular, and most successful dating application of them all.

Tinder is used worldwide, and it may be changing the way people engage with each other. Based on Tinder's last report, the application has members from over 190 countries, with as many as 26 million matches a day being possible (Lopes & Vogel, 2017). Tinder markets its application as focused on bringing people together and propagating connections that would not occur outside of an online space. Indeed, online dating applications are somewhat unique in terms of the accessibility they enable. Tinder's simple and intuitive graphical user interface makes it easy to use, and that contributes to the popularity of the application (Lopes & Vogel, 2017). The application presents one potential partner at a time, and to proceed to the next candidate, users must decide whether they like or dislike the person they are currently viewing. Communication through Tinder has only two steps. The first step is selecting possible partners/friends. The 'super like' feature is restricted on a per day basis. If a user super likes someone their interest is made explicit; that person will know that the user is interested before they take any action themselves (LeFebvre, 2017). That is the main part of the interaction: *choosing people*. Once a user likes a person, they must wait to see if that person reciprocates. If the liked partner does not reciprocate, they will not know that someone has liked him/her: other than in the case of a superlike; feedback is only provided when there is a mutual match. The second and last step of the interaction is chatting (Lopes & Vogel, 2017). People may maintain active conversations with their matches through the application's chat system.

Dating Applications and Individuals' Approach to Potential Relationships

The mechanism of how many dating applications work may result in a shift of how people approach potential relationship partners. The process of evaluating profiles side-by-side means that users must weight certain features in their evaluations of prospective partners (Sumter et al., 2013). Ultimately, however, the features people choose to evaluate in the side-by-side setting may be irrelevant in the context of an actual relationship. Moreover, the extremely large number of possible options may result in users adopting time-efficient, but minimally thoughtful criteria on which to judge options. Finkel et al. (2012) suggested that the assessment mindset may also impact in-person interactions as well. They assert that users may come to view relationships as transactional rather than responsive. Indeed, dating

applications may encourage the adoption of an assessment mindset, wherein users rapidly evaluate partners based on a limited set of information, which in many cases, has already been narrowed by the apps matching algorithms. Dating applications therefore may commoditise potential partners, such that the apps adopt a marketplace mentality, potentially impacting the expectations and behaviours of individuals when entering new relationships.

Conclusion

Fundamentally, the actions of dating applications are not new. They are the latest in a line of web-based dating services, aimed to provide users access, communication, and matching that offline life cannot. Although there are similarities between offline and mobile-based dating, there are vast and obvious differences. Dating applications have become pervasive (Finkel et al., 2012), and, in 2020, overshadow many of the ways people typically meet offline. Dating applications have created an important shift in the romantic acquaintance process. Indeed, millions of people around the world now meet people in person for the first time already knowing their name, what they look like, and usually have some prior communicative knowledge about that person. Moreover, dating applications users now have immediate and uninterrupted access to thousands of potential partners. Users can access profiles from the moment they wake to the moment they sleep at night.

In sum, dating applications have created a significant shift in the dating landscape through unparalleled forms of access, communication, and matching they offer to users.

Dating Application Motivations

Largely due to the increasing popularity of the virtual-dating environment, there is a growing body of research that has aimed to explore individuals' reasons for engaging with dating applications. For example, during their development of the *Tinder Motivation Scale,* Timmermans and De Caluwé, (2017) identified 13 motivations which reliably explained individuals' reasons for engaging with dating applications, including social approval, distraction, belongingness, and sexual experience. From this developing research body comes an interesting finding; despite its reputation as a hook-up driven environment, the majority of young adults are actually engaging with dating applications for reasons other than casual sex (Timmermans & De Caluwé, 2017; Sumter et al., 2017).

Since the early 1970s, communication scholars have been intrigued by the ways people have utilised media to fulfil needs and gratifications (Katz et al., 1974). The uses and gratifications approach contends that individuals' use of media—dating applications included—is tied strongly to their needs, and that the gratifications they obtain from using those media reinforce and further their consumption of the media (Katz et al., 1974). The theory attempts to highlight: "The social and psychological origins of needs, which generate expectations of the mass media or other sources, which lead to differential patterns of media exposure… resulting in need gratifications and other consequences" (Galloway & Meek, 1981, p. 447). Previous research has suggested that need gratifications can be divided into sought or obtained (Sheldon & Bryant, 2016). Sought gratifications refer to those gratifications which are the anticipated gains from individuals' media use. Conversely, obtained gratifications are the gains actually received from media use. Furthermore, a key tenet of the uses and gratifications theory is the assumption that media users are active in their consumption. That is, individuals are assumed to be aware of their own needs, and thus be active in the pursuit of fulfilment of those needs through media use, be they social or psychological (Katz et al., 1973).

The reciprocal nature of the relationship between users' intentions and behaviours is considered in uses and gratifications theory. Indeed, while users' needs drive their interactions with media, the gratification—both sought and obtained—reinforce, and ultimately may shift, their needs (Smock et al., 2011). While the uses and gratifications theory was developed to conceptualise people's uses of mass media such as television and the internet (e.g., Dimmick et al., 2011 or Smock et al., 2011), it has been applied to developing technologies such as mobile technology (Van De Wiele & Tong, 2014). A key difference

between older mass media and mobile technologies is the degree of interaction between user and media. That is, the user has significantly more control over their experience, such as being able to contribute personal information to the systems they are interacting with, or communicating to a greater degree with other users of that media.

Over the last decade, there have been a number of studies—largely cross-sectional, survey-based in design—which have examined the uses and gratifications for highly popular applications such as Facebook (e.g., Krause et al., 2014, Sheldon, 2008, or Smock et al., 2011), Twitter (Chen, 2011, Johnson & Yang, 2009), and YouTube (Hanson & Haridakis, 2008). Perhaps one of the most relevant findings echoed by the previous research has been the shift in importance of some gratifications (Sheldon & Bryant, 2016). That is, while most people use television to be entertained, some report using social media applications to maintain and grow social networks, while applications like LinkedIn are commonly used for career advancement rather than social networking (Sheldon, 2008). Indeed, mobile technologies present users with unprecedented interaction with the media they are using. From a uses and gratifications theory perspective, mobile technologies may best represent the user as an active participant in their pursuit of and fulfilment of needs (Van De Wiele & Tong, 2014). This research focus extends to peoples' use of dating applications. For example, Miller (2015) surveyed over 300 gay men enrolled on the dating application Jack'd, most of whom were aged between 18 and 30 years old, with the aim of understanding the gratifications they obtained from using dating apps. Miller found that there were a number of different gratifications that were obtained, over and above the commonly assumed gratification of casual sexual encounters. The gratifications identified in Miller's study included: safety (i.e. ensuring every potential partner is gay), control (i.e. determining with whom one will interact), ease of use, accessibility (i.e. accessing a large pool of gay men), mobility (i.e. locating gay men nearby), connectivity (i.e. building a sense of community), and versatility (i.e. using the apps for various purposes).

The differences between dating applications and the popular dating websites of the previous generation become clearer when considering the affordances provided by their technologies (Shrock, 2015). Affordances refer to the subjective perceptions of media that are derived from their objective qualities (Gibson, 1979). There are five primary affordances which separate dating apps from dating websites: mobility, proximity, immediacy, authenticity, and visual dominance (Shrock, 2015). Mobility may be the most obvious affordance provided by mobile technologies, as users can access technologies like a dating

application at anytime, anywhere (Ling, 2004). Similarly to mobility, mobile technologies utilise geo-locating technologies available in smartphones to provide substantially more specific proximity connections, being able to find potential partners within a few kilometres, rather than a broad region.

However, dating applications are uniquely able to facilitate casual sex partnerships through the immediacy of connection. Thanks to the strong proximity features, and exposure to multiple partners in any given location, users could have faster routes to immediate gratification (Licoppe et al., 2016). Moreover, the construction of many dating apps requires users to link their application account to some form of social media account such as Facebook. This affords users some form of assurance that the person they are talking to is authentic. Facebook linking also allows users to choose photos to link to their dating application profiles. These profiles are better represented visually in dating applications than websites as they often take up the majority of the screen, making dating applications more visually driven than their online counterparts (Fitzpatrick et al., 2015).

While popular discourse has frequently assumed that dating applications are used to expand and extend individuals' networks of prospective casual sex partners (e.g., Chan, 2017 , Choi et al., 2016), there have been numerous qualitative (e.g., Hobbs et al., 2017, Ward, 2016) and quantitative explorations that have suggested there is a multitude of reasons people pursue the new affordances of dating applications (Timmermans & Courtois, 2018). To better understand if and how the mechanics of the process Tinder imposes on its users influences the resulting sexual or romantic interactions, Timmermans and Courtois (2018) collected data from 1038 Belgian Tinder users. Conversations were positively associated with reported offline Tinder encounters. However, less than half of the sample acknowledged an offline meeting with a match. Over a third of those who did meet in an offline setting reported their encounters led to casual sex, while more than a quarter resulted in the formation of a committed relationship. Such findings provide example of the existing empirical research that suggests Tinder and other dating applications are much more than just hook-up apps.

Dating application users may thus leverage the affordances of the media they use to pursue relationship goals, whether that be casual sex or otherwise. Indeed, dating applications have been consistently shown to be used for other purposes than casual sex. For example, Landovitz et al. (2013) used computer-assisted self-interviews to conduct a survey of 375 Grindr users. They found that over two thirds of users reported engaging with the app for dating, compared to 62.1% using the app for casual sex; this may indicate that for some users,

multiple needs may be pursued simultaneously within the app. In an empirical exploration of whether Tinder meets women's needs, Lopes and Vogel (2017) found that as many as 93% of women had used the application for a reason other than finding a casual sex partner. Moreover, 60% of their sample indicated their motive for engaging with dating applications related to a desire to find friends.

Furthermore there is a growing body of strong empirical evidence suggesting that while some individuals may begin their Tinder use looking for casual sex or otherwise, their Tinder engagement may shift in meaning over time, becoming more about social connection and meeting new people, or about finding long-lasting relationships (Braziel, 2015). A survey-based study investigating the motivations behind dating application use revealed that as many as 76% and 82% of the sample collected used dating applications in seeking for a partner, or just to find someone new to talk to, respectively (Stephure et al., 2009). Online daters have also historically reported using dating sites and applications for non-relationship-centric reasons (Ligtenberg, 2015; Stephure et al., 2009). Individuals using dating applications in these varied ways, despite a strong reputation as a hook-up facilitation space, suggests that young adults perceive connection and sociality as a primary function of dating applications, as Braziel (2015) suggests. This reputation, rather than the accessibility of casual sex, appears to be a strong reason underpinning dating applications' widespread growth and success.

In sum, previous research on the methods people have used to form relationships has shown a progression in the ways and types of relationships that are possible. Indeed, previous research has shown through a range of methodologies and analysis types that dating applications can be much more than just casual sex and hook-up apps. There is a growing body of empirical research supporting the notion that while dating applications—and relationship-matching enterprises in general—have typically been assumed to be driven by casual sex seekers, many people, especially women (Lopes &Vogel, 2017), seek different forms of interaction through dating applications. As such, there appears a multitude of factors underlying the motives people give for their use of dating applications. Indeed, one of the factors contributing to this diverse range of motives may be related to societal and relational power distribution; Ambivalent Sexism.

Ambivalent Sexism

"Please, Ramona, Herzog wanted to say—you're lovely, fragrant, sexual, good to touch—everything. But these lectures! For the love of God, Ramona, shut it up". (Bellow, 1964)

Sexism is ubiquitous throughout much of the world, but it differs from other forms of prejudice in that it exists in multiple forms. Indeed, one form of sexism exists in the more common, overt, and aggressively negative treatment and conceptualisation of women (Hammond, 2015). However, there is another form of sexism which is far less overt. Sexism towards women can indeed appear subjectively positive. This theorised form of sexism conveys the ideals and longings of women as men see they should be, such as women who are beautiful, gentle, and obedient being deserving of praise (Glick & Fiske, 1996). A prime example of this distinction may be seen in the quote above, where Herzog praises Ramona for the idealised traits she displays but chastises her for challenging him.

It is important to separate the different forms of sexist attitudes in ambivalent sexism theory—one hostile, one benevolent—in that the very ambivalence between the subjectively positive and overtly deprecating styles of each type of sexist attitude is what makes them so widespread and effective in maintaining men's societal power over women (Glick & Fiske, 2001). There is a certain level of complexity provided by sexist attitudes, in that they can generate the image of the fairy-tale existence of men and women, while simultaneously offering warnings of what could happen to women who challenge the power gendered imbalance. Prior research on sexist attitudes has sought to resolve these hypothesised complexities by focusing on the situations and methods through which people come to endorse hostile and/or benevolent sexist ideals (Hammond, 2015). Although the majority of research on sexist attitudes focuses on power differences at the societal level (e.g., Becker & Wright, 2011; Brandt, 2012; Connelly & Keesacker, 2012; Glick et al., 2000; Hammond & Sibley, 2011; Napier et al., 2010), there is a rapidly expanding focus on gender dynamics at the interpersonal relationship level (e.g., Cross et al., 2016). Indeed, romantic relationships, as shown by the passage above, are rich with situations in which sexism could play a role.

This thesis comprises my research investigating how sexist attitudes play a role in the relationship formation process through dating applications. This chapter will establish a general explanation and understanding of ambivalent sexism theory, discuss the relevance of intimate relationships in exploring how sexist attitudes function, and establish an outline of the content of the thesis.

Ambivalent Sexism Theory

Ambivalent Sexism Theory (Glick & Fiske, 1996) proposes two complementary attitudes which are hypothesised to enable the maintenance of a global pattern of men's privilege, access to resources (such as money, status, etc.), and advantaged societal power over women (United Nations Development Programme, 2014). Hostile sexism theorises that men must compete with women for both societal and interpersonal power (Sibley et al., 2007). The Hostile sexism label is typically used to describe attitudes and behaviours which people would typically identify as 'sexist' and includes attitudes towards women which characterise them as subservient and seeking to usurp men's position in the social hierarchy (Hammond, 2015). The attitudes expressed within hostile sexism tend to be overtly negative and threatening.

The struggle for societal power manifests as a warning that women who step outside of the traditional roles they are prescribed (e.g., feminists, career women) will incite gender equality as a means to take societal power from men (Ambivalent Sexism Inventory; Glick & Fiske, 1996). Conversely, at an interpersonal level, competition for power is represented by a suspicion that women will use men's needs for emotional and sexual intimacy against them—humiliating and manipulating them—by, for example, "seeming sexually available and then refusing male advances" (Ambivalent Sexism Inventory; Glick & Fiske, 1996, p. 496). Indeed, limited previous research has demonstrated that men who hold these hostile beliefs are more likely to sanction the concept of sexual economics—the idea that sex can be used as a relational commodity, and thus linked to power—and validate other men engaging in casual sex encounters (Rudman & Fetterolf, 2014; Papp et al., 2015; Rudman, 2017).

Rudman and Fetterolf (2014) explored the notion of sexual economics theory—which suggests that women use sex and sexuality as a commodity—and its impacts on gendered interactions in a sample of 225 18-22 year olds in the United States. It was assumed that women were more likely to endorse the theory than men. However, results from the surveys conducted and an implicit association task suggested the opposite; that it was men who endorsed the sexual economic theory more strongly, which the authors suggested was a demonstration of how women's sexuality is a concept based on patriarchal control. Moreover, men in the sample were found to contribute sexual advice that enforced the sexual double standard more so than women's (i.e., men encouraged men more than women to have casual sex), which was mediated by hostile sexism endorsement. Rudman and Fetterolf concluded that perhaps men attempt to supress women's sexual freedom in an attempt to

resist women's empowerment in the relational domain, and thus come to associate sex with money and power more than women. The authors provided a controversial (Vohs & Baumeister, 2015) summation of their results—that women appear unconcerned with sexual economics, while men appear invested in maintaining gendered differences in relational power, even at the cost of raising the relational threshold for sexual relations (Rudman & Fetterolf, 2014).

It is the theorised negativity fostered by hostile sexism that necessitates a more positive set of beliefs towards women (Glick & Fiske, 1996; Hammond & Sibley, 2011; Hammond & Overall, 2013a). Benevolent sexism represents a set of subjectively positive attitudes and beliefs which, rather than overtly derogating women, portray them as soft, caring, warm, gentle; deserving of reverence, protection, and support from men. Benevolent sexism ideologically concedes that heterosexual men are reliant on women for fulfilling interpersonal needs of intimacy, closeness, and reproduction (Glick & Fiske, 1996; Hammond, 2015; Hammond & Sibley, 2011). Similar to its hostile counterpart, benevolent sexism considers the power dynamics between men and women at both the societal and interpersonal levels. In terms of societal roles, benevolent sexism suggests that men and women should be complementary, positioning men as the 'competent' partner, who uses their status and access to fiscal resources to provide for and protect the women. Women are positioned as 'warm and caring', accepting social roles as the nurturer and home-maker, focusing their energy into relational and domestic pursuits. The relational role extends to the realm of interpersonal relationships.

Indeed, benevolent sexism rewards and idealises women who are willing to assume traditional, caring relationship positions, such as suggesting that no man is incomplete without the love of a woman, and that good women should be put on a pedestal by their partner, being protected and provided for regardless of the impact of that on their individual goals or interests (Ambivalent Sexism Inventory; Glick & Fiske, 1996). On the surface, benevolent sexism appears protective and caring. However, the ideals laid out in benevolent sexism work in unison with those in hostile sexism to restrict the ways in which women are allowed to exist. Indeed, benevolent sexism validates the derogation and antipathy of hostile sexism by providing a safe and cherished relationship for those accepting a traditional role for women (Hammond et al., 2014). Hammond et al. (2014) used longitudinal data from a nationally representative sample in New Zealand to investigate whether women's self-ratings of psychological entitlement (including deserving nice things, social status, and/or praise)

were associated with concurrent levels of benevolent sexism and longitudinal changes in benevolent sexism over one year. Using latent variable interaction analyses, their findings suggest that under certain conditions, women's endorsement of benevolent sexism increases over time, and that the perceived benefits of benevolent sexism (chivalrous partners, resource provision, etc.) are central to that increased adoption of sexist beliefs which work against their own gender.

Interdependency and intimacy are allied to romantic relationships as core themes in the content of the sexist attitudes outlined in ambivalent sexism theory (Glick & Fiske, 1996). One factor related to those themes, paternalism, is grounded in the assumption that men hold more status and power than women globally (Hammond, 2015). These assumptions generate attitudes which justify the system as it stands by conveying that men should dominate women, and that men are thus responsible for protecting and providing for those women. Further, drastic separation of genders in these ways highlight the existence of stereotypically masculine and feminine traits. These traits are used throughout ambivalent sexism theory to justify the seemingly positive and complementary relationship described (Brandt, 2011). Women are portrayed as warm and nurturing, which suggests they would be better suited to domestic roles. Men are portrayed as strong and competent, thus positioning them as more apt for a career role. The final theme that emphasises interdependency is heterosexual men's dependence on women for the fulfillment of basic relationship needs of closeness, support and reproduction. The suggestion that women are needed for the fulfillment of those needs thus spawns images and idealisations of women's abilities to be warm (benevolent), but also fears that they could use men's needs against them in order to gain social power (hostile; Rudman & Heppen, 2003). In sum, the core of sexist attitudes includes the interdependence and intimacy of men and women. However, as noted above, the majority of research examining the function of sexist attitudes has focused at a group level, rather than investigating the interactions of men and women as romantic partners and thus investigating interpersonal, rather than intergroup interactions.

The Societal Impacts of Sexist Attitudes

Both hostile and benevolent sexism have repeatedly and empirically been shown to work in unison to impact societies and maintain men's established power advantage over women, such as in career and political opportunities (e.g., Brandt, 2011; Chen et al., 2009; Glick et al., 2000; Hammond, 2015). A key facet of how sexist attitudes are theorised to function in these ways is leading people to justify the gender-based interaction system as it

exists, accepting rationalisation of the inequalities (Jost & Banaji, 1994). Indeed, as discussed above, the image of men and women being perfectly complementary and mutually dependent in society holds a lot of power in justifying why men should be in privileged situations (Glick & Fiske, 2001). Moreover, these images suggest that men should be using their improved access to resources to protect and provide for women. Both men and women who endorse these sexist attitudes have been suggested to hold the assumption that both men and women hold an equal chance at success in society (Hammond & Sibley, 2011). Hammond and Sibley's (2011) study investigated the links between sexism endorsement and subjective well-being, utilising a moderated mediation analysis design with a nationally representative (n=6100) sample in New Zealand. Their results suggested that benevolent sexism predicted life satisfaction through different mechanisms for men and women. That is, for men, the effect was direct, while for women, the effect was indirect and conditional; endorsement of benevolent ideology which positioned women as deserving of men's adoration and protection was connected to beliefs that gender relations were just and equitable, which in turn predicted subjective life satisfaction ratings. Similarly, several studies with robust designs and methods have suggested that women who endorse benevolent sexism may not support public policy which is designed to increase their access to career advancement and societal power (Becker & Wright, 2011; Becker et al., 2013; Calogero, 2013). Thus, sexist attitudes are able to maintain the inequalities in access to societal power merely by presenting the idea that society is already relatively fair.

Another suggested way that sexist attitudes function at a societal level is by restricting the ways that women are allowed to exist. Indeed, hostile sexism threatens to punish those women who step outside the traditional role they are prescribed, while benevolent sexism reveres and glorifies women who are willing to accept a traditional, complementary role (Glick & Fiske, 1996; Jackman, 1994). Hostile sexism operates in ways that justifies the derogation of women, including rationalising violence towards women, be they romantic partners (Forbes et al., 2004), or justifying cases of acquaintance rape (Masser et al., 2006). In fact, one of the most consistent findings associated with endorsement of hostile sexism is the justification (or vilification of victims) of rape cases and the 'she was asking for it' narrative (e.g., Abrams et al., 2003; Chapleau et al., 2007; Sakalli-Uğurlu et al., 2007; Viki et al., 2006). The warmth of benevolent sexism, as opposed to the overt negativity and harshness of hostile sexism, has been suggested to incentivise women to accept men's societal power. Benevolent sexism is hypothesised to reward women for accepting loving,

complementary roles. Indeed, the rewards of benevolent sexism are a powerful incentive because benevolent sexism presents an idealised relationship situation compared to the vitriol and derogation of its hostile counterpart (Obeid et al., 2010). Benevolent sexism appears acceptable to some women because the alternative option (punishing women who attempt to overstep traditional roles) is presented as justifiable within the male-dominated power system as constructed.

Sexist attitudes work together to maintain gender inequalities by appealing to women to endorse sexism towards women. While it seems somewhat counterintuitive for women to do this, benevolent sexism seeks women's agreement with traditional ideas such as the idea that men should pay for dinner on a first date, or hold the door open for a woman (Viki et al., 2003). Further, sexist attitudes present chivalrous men as more attractive, such that those who appear to be romantic and protective—rather than hostile sexist—receive more positive evaluations (Barreto & Ellemers, 2005; Riemer et al., 2014; Sarlet et al., 2012). Across five studies with samples of Canadian and American undergraduate women, Sarlet et al., (2012) employed both randomised exposure and endorsement observational designs to investigate how protective paternalism, a specific form of benevolent sexism, is maintained and approved through traditional gender role prescriptions. Their findings asserted that protective paternalism is prescribed for men within romantic contexts, but not work ones. Moreover, Sarlet et al. concluded that protective paternalism is expected of men within relationships as a signal of their true investment in intimacy within the romantic setting. It was perceived as sexist within work contexts. These results were suggested to be influenced by women's own endorsement of benevolent sexism, such that those women who endorsed benevolent sexism more strongly held stronger prescriptions for men. This finding supports women's acceptance and endorsement of benevolent sexism as a key hypothesised mechanism which serves to maintain women's disadvantaged status. If some women are willing to endorse protective limitations of their experience, perhaps their ability to challenge power differences is undermined.

Women's acceptance and endorsement of benevolent sexism is likely vital to its success in maintaining men's advantaged power status. The importance of women's endorsement comes in the form of adjusted behaviours and goals for themselves, and as has been shown, expectations for men. For example, women who more strongly endorse benevolent sexism are less likely to pursue their own goals when their partner provides them practical support (Hammond & Overall, 2015), and are more likely to believe they should be

warm and supportive of their partner's pursuits of individual goals (e.g., Lee et al., 2010). Thus, women's endorsement of benevolent sexism may be the key to the maintenance of men's advantaged status in relationships, because as women endorse such beliefs more strongly, they may become more likely to accept a dependent relationship role at the expense of individual success.

In sum, prior research suggests an extensive impact of sexist attitudes in maintaining gender inequality. However, the literature has focussed on societal attitudes, rather than intimate interpersonal relationships. Intimate relationships and interdependence are important to consider when investigating the impacts and foundations of sexism as they form a core part of the content of sexist attitudes (Hammond, 2015). The consequences of sexist attitudes also shift when looking at an interpersonal versus intergroup level. That is, the consequences of sexism may be more overt at an interpersonal level than at a group level. For example, the threat of women taking power from men at an interpersonal level may increase the risks of domestic violence towards women (Glick et al., 2002). Moreover, by looking at an interpersonal level, interactions between men and women can be captured that may be missed an intergroup level, such as how individuals go about forming relationships or treat others' goals within relationships. In the following section, I review the existing research and introduce the yet-untested questions regarding how sexist attitudes function within intimate relationships in order to establish a theoretical foundation for the examination of sexist attitudes' role in relationship formation.

Sexist Attitudes in Interpersonal Domains

Intimate relationships represent a domain where the ideals, prescriptions, and expectations of individuals laid out by sexist attitudes are prevalent (Hammond, 2015). To clarify, sexist attitudes may script how and what men and women should do, feel, and think about within their intimate relationships. For example, hostile sexism contends that women are seeking to usurp men's power. This concern from men can be extended into romantic relationships by assuming women will exploit their dependence in relationships (Hammond, 2015). Furthermore, the idea that female partners should be 'put on a pedestal' by their male partner because of their complementary and social traits (Glick & Fiske, 1996) suggests that benevolent sexism also extends beliefs and expectations for romantic relationship behaviour. The following section addresses how sexist attitudes may play a role in intimate relationships, and therefore relationship formation, by reviewing existing research on three key questions: (1) why men who endorse hostile sexism tend to be destructive, difficult partners, (2) how benevolent sexism can appear both romantic and pejorative at the same time, and (3) why women endorse benevolent sexism, despite it holding numerous negative consequences for them.

How Hostile Sexism Impacts Men and Women in Intimate Relationships

Much like many other theorised forms of intergroup prejudice, hostile sexism encompasses competitive and dominant attitudes, which can manifest as disparaging and threatening consequences for women who do not assume traditional, complementary roles (Glick & Fiske, 1996). However, unlike those other prejudices, the antipathy towards women seen in hostile sexism is undermined by men's need for women; for closeness, intimacy, and reproduction. Thus, there is a conflict present for men who more strongly endorse sexist attitudes. They are threatened by women's potential to wrest power from them, but at the same time need women to fulfill fundamental needs. According to Glick & Fiske (1996), it is this conflict of needs that leads to the ambivalence in attitudes amongst more sexist men. Men thus have to find a way to navigate the conflict in order to meet both of the needs simultaneously.

This tends to take the form of classing women into subtypes—those who they 'approve' and those they 'disapprove' (Glick et al., 1997). For example, women who pursue career ambitions may be threatening to men in the struggle for power, and so are more susceptible to scrutiny and negative evaluations from those men who endorse hostile sexism more strongly. Sibley and Wilson (2004) sought to expand research on the subtyping of

females that occurs within ambivalent sexism. Utilising a mixed-method design, including a double-blinded randomised exposure quasi-experiment and response surveys, though with a relatively small sample size, Sibley and Wilson observed the differing expressions of hostile and benevolent sexism towards varying female subtypes according to ambivalent sexism—the chaste, sexually positive, and the promiscuous, sexually negative female. 61 undergraduate males from New Zealand of varying ethnicities, aged 17-39 years comprised the sample. Consistent with ambivalent sexism theory, men in the sample demonstrated greater hostile sexism and lowered benevolent sexism towards the negative sexual female subtype. Inversely, the men in the sample reported higher benevolent sexism and lowered hostile sexism towards the positive sexual female subtype, which was consistent with traditional female gender prescriptions. Moreover, men who rated higher in terms of sexual self-schema (more oriented towards conceptualising self in sexual terms) were more likely to categorise women based on sexual subtypes based on limited information, and were more likely to make hostile attributions towards women with less information.

These negative evaluations function to maintain gender equality, not only in relationships, but other contexts. Examples from career pursuits include 'the glass ceiling' and the gender pay gap. Conversely, women who *do* fit the traditional prescriptions of women receive very different responses—warmth, support, and provision—when they accept the 'home-maker' or 'career mother' role (Gaunt, 2013; Glick et al., 1997; Sibley & Wilson, 2004). An important distinction can be made here. Each idealised subtype described here only elicits one type of sexist response. That is, 'home-makers' do not appear to receive negative evaluations from a hostile perspective, just as evaluations of 'career women' do not seem to be impacted by benevolent sexism (e.g., Glick et al., 1997). The ability to shift between restrictive idealised subtypes suggests a capability in men who more strongly endorse hostile sexism to separate their views of women as a group from their intimate partners. However, recent research (Hammond & Overall, 2013b) suggests that this does not seem to be the case, which in turn highlights the vital importance of benevolent sexism in the maintenance of gender inequality. Indeed, there is a growing literature base suggesting that men who endorse hostile sexism are dysfunctional and destructive within relationship settings (Hammond & Overall, 2013b).

Research on men's hostile sexism suggests that men who endorse hostile sexism are distrusting of intimacy and tend to view their partners' behaviour more negatively (e.g., Forbes et al., 2004; Sibley & Becker 2012; Yakushko, 2009). Further, it seems that the

threats and tactics which are effective for men who endorse hostile sexism in career domains (e.g., limiting access, verbal derogation of counter-stereotyped pursuits) appear to be damaging, or, at best, less effective in romantic relationships (Overall & Simpson, 2013). Indeed, men who endorse hostile sexism have been observed to be less comfortable talking about desired changes in their relationships, which tended to lead to more hostility and lower discussion success with partners (Overall et al., 2011).

In sum, research suggests that when men endorse hostile sexism, they are more likely to exhibit a pattern of negativity towards women, which extends to their intimate relationships. In spite of their behaviour being ineffective in achieving their desired goals of fulfilling needs and influencing women, the findings of previous research, in particular Hammond and Overall (2013b), suggest that men who endorse hostile sexism are unable to successfully differentiate between the theoretically prescribed subtypes of women discussed above.

The reported inefficiencies of the adverse and destructive behaviours and perceptions of men who endorse hostile sexism provide a strong reasoning for the ambivalence outlined in ambivalent sexism theory. Men who endorse hostile sexism fail in their attempts to degrade women while simultaneously achieving closeness and intimacy. Indeed, the overt negativity of their behaviour results in women rejecting thoughts of closeness and intimacy, and prompts resistance of men, rather than complementation and support (Hammond, 2015). Benevolent sexism thus represents an attempt to recoup some of the damages caused by hostile sexism by portraying the fairy tale or what *could* be with men as relationship partners (Glick & Fiske, 1996; Jackman, 1994). However, when considering the potential impacts of benevolent sexism, it is important to retain that benevolent sexism is theorised to maintain men's advantaged position within relational settings and is not a mere attempt to reduce negativity returned towards men.

The Functions of Men's Benevolent Sexism in Intimate Settings

Benevolent sexism represents the complementary constituent of ambivalent sexism. Benevolent sexism idolises women who are willing to be the nurturing, caring relationship partner, who is willing to forgo personal gains in the name of relational well-being (Glick & Fiske, 1996). Benevolent sexism is anchored on the idea that men need women in order to fulfill fundamental needs: intimacy, closeness, and reproduction. Indeed, benevolent sexism serves to maintain men's advantaged role in relationships by making them appear to be caring and responsive relationship partners, evoking an image of the chivalrous white knight

rescuing the damsel in distress caused by the hostile sexist dark knight (Glick & Fiske, 2001; Kilianski & Rudman, 1998). Benevolent sexism portrays men and women as 'the perfect match', suggesting that women 'complete' men, and that for their role in men's happiness they deserve to be revered in their relationships.

Though it appears subjectively positive, benevolent sexism maintains gender inequalities by positioning men as the provider and protector, justifying men's receipt of higher-status, better paying jobs (e.g., Viki et al., 2003). Such positioning may place men in charge of deciding career pursuits that impact the relationship (Moya et al., 2007), and to promote women pursuing goals that are relationally focused, rather than individually focused (Chen et al., 2009). Benevolent sexism represents a depreciatory view of women as the fairer but less capable gender (Glick & Fiske, 2001). There has been extensive research pointing towards positive links between benevolent and hostile sexism, both at individual and group levels. These studies have largely been of strong methodological design—employing a range of methods including experimental and observational methods—though in many instances have relied upon convenience university samples. Research has explored a host of outcomes which serve to maintain and extend differences in the treatment of men and women. For instance, when women were exposed to benevolent sexism in an experimental setting, they were more likely to feel greater levels of self-doubt, feel less composed when completing tasks, and ultimately, perform worse in tasks (Dardenne et al., 2007; Dardenne et al., 2013). Further, there has been research to show that women's exposure to benevolent sexism can lower women's cognitive performance (Dardenne et al., 2007; Vescio et al., 2005). Thus, one of the key ways that benevolent sexism may function is to undermine women's progression and pursuits of their own success. Encouraging women to accept roles which propagate their partners' success at the expense of their own positions women in a dependent role. Women who accept complementary roles thus perpetuate men's social dominance.

Benevolent sexism also maintains men's advantages over women by impeding women's sense of efficacy. Research investigating the impacts of exposure to benevolent sexism has suggested that when exposed to benevolent sexism, women demonstrate increased self-objectification and image concerns (Calogero & Jost, 2011; Forbes et al., 2004), leading to greater endorsement of the idea that gender relations are equitable (Glick & Fiske, 2001; Jost & Banaji, 1994; Jost & Kay, 2005) and has been associated with decreased efforts by women to oppose perceived gender-related differences (Becker & Wright, 2011; Jost & Kay, 2005).Therefore, while benevolent sexism, on the surface, appears positive for women in the

form of provision and care, the care and support men who endorse benevolent sexism provide women actually deter women's well-being because they inhibit women's feelings of self-efficacy and pursuits of change. Indeed, research investigating endorsement of benevolent sexism has shown that greater investment in benevolent sexism predicts attitudes that serve to limit women across multiple domains of intimate autonomy, including preventing women from making decisions about contraception (e.g., Bowleg et al., 2000), making choices about pregnancy that could carry risk for the fetus (Murphy et al., 2011; Sutton et al., 2011), and opposition to abortion (Huang et al., 2016; Osborne & Davies, 2012).

Benevolent sexism can seemingly enact simultaneous effects which benefit men and maintain their advantaged position within relationships. Firstly, benevolent sexism facilitates closeness, intimacy, and care. Second, benevolent sexism reduces women's felt competence and self-efficacy, resulting in reduced pursuits of individual success. The results of Hammond and Overall (2015) emphasise the need to understand how sexism functions within dyadic settings. Indeed, the mixed-method dyadic interaction study conclusions that benevolent sexism may prompt men to take over goal pursuits and provide practical support while ignoring their own partner's abilities, leading to decreased feelings of competence and closeness with their partner shows that benevolent sexism restricts the ways women can exist, despite those mechanisms appearing supportive.

In sum, one of the primary causes proposed for women's acceptance of benevolent sexism is the idealised image of romantic relationships and how interactions between men and women *could* be (Glick & Fiske, 1996; Jackman, 1994). Benevolent sexism places women on a pedestal, positioning them theoretically as delightful, delicate relationship 'prizes' for chivalrous men who are prepared to serve and protect them (Glick & Fiske, 1996). However, that protection and provision has been suggested to have significant impacts on women's felt competence and individual pursuits (Hammond & Overall, 2015). The perceived lack of competence has also been suggested to impact women outside of the relationship domain, leading to greater support for men's societal advantages (e.g., Becker & Wright, 2011; Hammond & Sibley, 2011). Despite the disadvantages for some women that benevolent sexism imposes, there has been limited exploration of why some women come to accept and endorse benevolent sexism.

What Leads Women to Endorse Benevolent Sexism

The theorised impacts of benevolent sexism are essential in maintaining gender inequalities. The key to the role of benevolent sexism is that it provides a subjectively positive justification for differences, conveying that men and women work best in a complementary fashion (Glick & Fiske, 1996). It has been suggested that one of the reasons benevolent sexism is successful is that it is more agreeable, or more easily internalised by women (Glick & Fiske, 1996; Jackman, 1994). Indeed, the idea that women are empathetic, socially skilled, and caring is easier for women to internalise and thus endorse, which has been suggested to reduce the resistance women put forth towards changing discrepancies in power (Hopkins-Doyle et al., 2019). Women endorsing attitudes and behaviours that inhibit women's progress is an unusual paradox. However, research into other forms of prejudice at an intergroup level (e.g., racial prejudice) has suggested that women may come to endorse benevolent prescriptions for a number of reasons, including: preserving traditional group differences (Altmeyer, 1981), rationalising the ways the world works (Jost & Banaji, 1994), and an if-you-can't-beat-them-join-them drive to hold similar ideals to the ingroup by members of the outgroup (Hardin & Higgins, 1996; Ridgeway, 2011).

One of the explanations offered from research into women's endorsement of benevolent sexism suggests that benevolent sexism may be the lesser of two evils for women, wherein women may be aware of the pedestal on which they are placed, but accept this position as a means to the end of avoiding the negativity and harshness of hostile sexism (Hopkins-Doyle et al., 2019; Glick & Fiske, 1996). Such a position suggests that women accept reduced pursuits of individual goals and aspirations, effectively accepting that perfect gender balance is not realistic, and accept men's chivalrous provision as a reward for doing so. This also places women as having little agency – there are only two positions to choose from, neither of which are suggested to be positive in outcomes for women. Such a hypothesis has received little direct attention within sexism research; however, it has received indirect support. Indeed, women's endorsement of benevolent sexism appears to be strongest in countries where gendered discrepancies are greatest and men's endorsement of hostile sexism is the highest (Glick et al., 2000). Women's greater sexual self-objectification and cosmetic alteration in the context of greater benevolent sexism endorsement also allies with the idea of pursuing benefits of benevolent sexism through intimacy with men (Calogero & Jost, 2011; Connelly & Heesacker, 2012; Czopp et al., 2015). Thus, it seems women may be

aware of the restrictions and limits imposed by benevolent sexism, and therefore accept the ideology as a means of flourishing within the disparate situation.

Perhaps another consideration in the explanation of some women's acceptance and endorsement of benevolent sexism is that the hypothesised rewards for following prescribed roles mask the overtness of the negative implications and effects of benevolent sexism (Hopkins-Doyle et al., 2019). It has been suggested that some women may hold a false consciousness regarding benevolent sexism—that they assume such a position in order to make the impacts of hostile sexism more palatable (Jost & Banaji, 1994). Thus, benevolent sexism may operate similar to other inequalities that mask prejudiced inequality and justify the system, presenting the interests of men and women in relational dynamics as interdependent (Hopkins-Doyle et al., 2019). Prior research has suggested that benevolent sexism does indeed function in such a way, in that women's endorsement of benevolent sexism has positively linked to group-based esteem and justification of gender-based inequality (Becker & Swim, 2011; Jackman, 1994; Marx & Engels, 2017). Much like the position discussed in the previous paragraph, the false-consciousness hypothesis has received indirect support in previous research. Benevolent sexism has been shown to reduce women's negative affective reactions to unequal treatment (Connelly & Heesacker, 2012) and has also been shown to identify benevolent sexism as sexist when informed of its consequences for women (Swim et al., 2001). Moreover, when presented information on the consequences of benevolent sexism, women have been suggested to endorse benevolent sexism to a lesser degree and have revised initially higher attractiveness ratings of men displaying benevolent sexism traits (Becker & Swim, 2012).

Chapter Conclusion

This section had two primary aims. The first was to illustrate that men's and women's endorsement of hostile and/or benevolent sexism has the power to impact the ways they experience and behave within intimate relationships. Sexist attitudes have been shown to impact relationships in a multitude of ways, though these are characterised by two key themes: ambivalent sexism characterises the interdependence created by romantic relationships as simultaneously beneficial *and* troublesome. As the review of literature in this section has conveyed, hostile sexism transfers the hypothesised fears of closeness between men and women from a group level to a dyadic level. Indeed, men's endorsement of hostile sexism leads to negative biases in perceptions of partner behaviour (Hammond & Overall, 2013b). Conversely, benevolent sexism promotes relationship behaviour which cares for

women, but at the same time undermines their feelings of competence by shifting their pursuits away from individual goals and towards relationship goals.

The other aim of this section was to review the existing understanding of why some women come to endorse benevolent sexism. One of the key reasons benevolent sexism is hypothesised to be so powerful in perpetuating gender inequalities is that it rewards women for justifying a system which maintains their complementary role in society. Indeed, benevolent sexism rewards women who accept traditional roles as the homemaker and carer, by prescribing that their male partner should cherish and provide for them. Benevolent sexism is effective because it presents women with the idea of the true romantic, the fairy tale relationship. Moreover, benevolent sexism presents women these benefits while also portraying men and women as having equal opportunity to succeed in society as complementary partners. Therefore, by shaping the ways people experience and enact relationships, ambivalent sexism is ultimately theorised to uphold and perpetuate gender differences that exist on a group level throughout the world.

Ambivalent Sexism and Dating Application Use

Ambivalent sexism theory suggests that benevolent beliefs deploy insidious effects in close relationships, shaping both men's and women's ideals due to the supposed interdependence between men and women. Conversely, the attitudes embedded in hostile sexism are more plainly linked to power, and exert more direct influence on relationships by shaping the dominant group's requirements for an ideal partner (Lee et al., 2010). A recent study explored the potential impacts of gendered patterns on heterosexual relationship formation within an online dating setting (Kreager et al., 2014). The study utilised longitudinal data from a sample of 14533 men and women enrolled on a dating website in a mid-sized southwestern city in the United States. Kreager and colleagues found that both men and women sent most messages to those prospective partners who most closely met socially prescribed desirability, despite their own reported partner preferences. Additionally, they found that men who adopted more active courtship roles (and therefore fulfilling traditionally prescribed male roles) made more connections with desirable partners than men who were more passive. No such difference was found for women. Women were observed to have sent four times the messages in establishing connection compared to men. The potential impact of ambivalent sexism and its ideological positions on relationship formation and dating applications has only recently receHived research interest. However, frequently this research does not directly assess the impacts of ambivalent sexism endorsement on dating applications. In the following section, I review some of the limited existing research on the effects of ambivalent sexism on dating applications.

Men's Hostile Sexism in Dating Applications

Men's endorsement of hostile sexism has been linked to negative relationship behaviours towards women. The conflicting needs of Men who endorse hostile sexism and the resultant difficulty with navigating romantic relationships through traditional means has been proposed to extend to dating applications (Overall & Simpson, 2013). As discussed in earlier sections of this thesis, research on men's relationship behaviours suggests that men who endorse hostile sexism are uncomfortable discussing intimacy and relationships (e.g., Forbes et al., 2004; Sibley & Becker 2012; Yakushko, 2009). Dating applications depend on two key elements: (1) self-presentation through profile images, and (2) the ability to effectively communicate with prospective partners about relationship desires and expectations. As such, men who endorse hostile sexism may be placed in a challenging situation, forced to make uncomfortable conversation with potential partners with limited

information based on profile pictures. Given their observed tendency to make premature, often derogatory determinations on women's character based on limited information (Fowers & Fowers, 2010; Masser & Abrams, 2004; Sakalli-Uğurlu & Glick, 2003; Sibley & Wilson 2004), dating applications represent a challenging environment for sexist men to navigate.

Despite a generally more egalitarian dating environment (Hall & Canterbury, 2011), many men are still expected to initiate and guide courtship processes (Impett & Peplau, 2003; La France, 2010; Mongeau et al., 2006). One study has suggested that men who have been socialised to hold traditional beliefs about relationship formation and courtship process have been shown to be more active in courtship, while those women who hold more traditional beliefs about relationship formation have been suggested to take a more receptive, subordinate role in courtship (Hall et al., 2010). Prior research has suggested that modern young adult social environments amplify traditional gender roles (Paul, 2006; Paul & Hayes, 2002). Hyperbolic expressions of traditional courtship scripts (e.g., derogating women who refuse their advances or being overtly aggressive in their attempts to pursue intimacy) may afford men the opportunity to demonstrate their control of power within the relational domain. In commandeering relationship formation, hostile sexism advises that men restrict the ways women are allowed to interact and limit women's agency in choosing an ideal partner (Hall & Canterberry, 2011). Indeed, by controlling the process of relationship formation, men who endorse hostile sexism are ideologically charged to limit the theorised opportunities for women to use their sexuality (Glick & Fiske, 2001) or perceived availability to take men's power through intimacy (Boswell & Spade, 1996; Paul & Hayes, 2002). For men who more strongly endorse hostile sexism, courtship pursuits, particularly those on dating applications, may be understood as a competition for status and power. Given that matches on dating applications are easily counted and compared, dating applications may be an environment uniquely designed to exhibit men's competition over women, particularly those who are attractive and/or unavailable. Moreover, recent research suggests that many women negatively experience such competition, with as many as 51% of women reporting feeling sexually harassed (Lopes & Vogel, 2017).

Illouz (2007) suggested that dating applications rely on profile pictures and self-presentation as primary means for women to succeed within the competitive space of mobile dating. Illouz asserts that an intensified focus on presentation may lead online daters—particularly women—towards an overdeveloped awareness of the social capital associated with their bodies, and thus may inspire the perception that they must use their

bodies/appearances to compete with others. Following the assumptions afforded by a metaphor of a sexual marketplace, and according to the prescriptions laid out in hostile sexism ideologies, physical appearance standards are considered far more important for women—especially in dating applications—than for men (Baumeister and Vohs, 2004; Dobson, 2013). Indeed, it has been theorised that women seeking relationships on dating applications may face unprecedented levels of hostile evaluations, whilst being faced with a dating environment that imposes conflicting rules that punish women (Gill, 2008).

The accessibility to romantic and sexual relationships afforded by dating applications may provide a unique opportunity for men who endorse hostile sexism. The use of control and assertiveness in the relationship formation process permits men 's expression of dominance and may restrict women's ability to make their own decisions on potential relationships (Hall & Canterbury, 2011). Hostile sexism may underly such expressions, wherein women are objectified as sexual and relational beings, and are conceptualized as potential milestones in men's sexual histories. Moreover, given that within hostile sexism, relational dynamics are conceived as a competition for status and power, men's competition for women—particularly attractive women—has been conceptualized within the sexism research as a competition for control (Hall & Canterbury, 2011; Lee et al., 2010). However, the stipulations and threat of punishment for women who step outside of traditional roles of courtship appear to necessitate a more positive, agreeable set of behaviours which aid men in their relationship pursuits.

Men's Benevolent Sexism and Dating Application Use

Benevolent sexism theory presents an idealised image of romantic relationships and how interactions between men and women *could* be (Glick & Fiske, 1996; Jackman, 1994). Thus, in the realm of dating applications, benevolent sexism provides a script of what relationship formation should look like. Benevolent sexism prescribes that women are complementary to men, and that they are best suited for a supportive, relationally focused role while men take on the provider and protector role. In reward for accepting this role, benevolent sexism stipulates that men should revere and cherish women (Glick & Fiske, 1996). As discussed previously, this role has both benefits and consequences for women. Women who endorse benevolent sexism are afforded warmth and caring partners but are steered away from individual goals and have been suggested to experience lower levels of felt competence.

Dating applications may extend the expectations of men's engagement with women laid out by benevolent sexism. However, there is an extremely limited research base investigating connections between benevolent sexism and dating applications. Benevolent sexism serves to uphold men's role as the strong provider by making men appear to be good relationship partners (Glick & Fiske, 2001; Kilianski & Rudman, 1998). Indeed, a questionnaire-based study of 262 Spanish adolescents investigated attraction towards various sexist and non-sexist profiles of other-sex targets as potential friends and intimate partners. Results suggested that young women rated benevolent sexist men as the most attractive, while young men considered women holding balanced levels of hostile and benevolent sexism were more attractive (Montañés et al., 2013). Benevolent sexism portrays men and women as 'the perfect match', suggesting that women 'complete' men. Considering that the functionality of many dating applications utilises 'match' terminology, men who endorse benevolent sexism may be more likely to use dating applications to find their 'missing piece'. However, considering the competitive and hostile environment, how might women experience ambivalent sexism within dating applications?

Women's Experiences of Ambivalent Sexism and Dating Applications

Benevolent sexism offers women protection from the harshness and threats of hostile sexism. Indeed, when women accept a complementary role within their relationships, they are offered praise, support, and protection (Glick & Fiske, 1996). However, as discussed in earlier sections, benevolent sexism has a number of costs for women, including reduced felt competence and reduced goal pursuits (Hammond & Overall, 2015). The competitive nature of dating applications seems to enable a relationship environment characterised by displays of toxic masculinity (Hall & Canterberry, 2011). Prior research has suggested that many women find such approaches as undesirable. Timmermans and De Caluwé (2017) found that many women experienced their dating application interactions as harassment. It thus appears that for men who more strongly endorse hostile sexism and utilise assertive, dominant courtship strategies may be less likely to attract women on dating applications. However, it appears that women hold more positive views of men who endorse benevolent ideals (Hammond & Overall, 2015; Hall & Canterberry, 2011; Montañés et al., 2013).

Young adults often demonstrate a belief in traditional gendered romantic scripts. That is, young adults have been observed to support the idea that men should initiate and drive romantic pursuits, and women are the relational and sexual gatekeeper (La France, 2010). Indeed, individuals who more strongly endorse benevolent sexism have been observed to

hold implicit romantic fantasies, such as the prince charming fantasy, in which a chivalrous, masculine partner rescues the beautiful damsel locked in the tower (Rudman & Heppen, 2003). This fantastical script seems to play into individuals' real-life romantic pursuits. Indeed, across three studies of German female undergraduate students aged 19-41 years old (Total n = 326), Bohner and colleagues (2010) observed that prospective partner profiles that were slanted towards benevolent sexism were rated as the most attractive and the least typical, while those profiles demonstrating both hostile and benevolent traits was rated the most typical. Moreover, in a cross-sectional quantitative survey study of 142 students from the University of Kent, Viki et al. (2003) observed that, paternalistic chivalry—a particularly warm and caring form of benevolent sexism—is perceived to predict caring, responsive behaviours towards women during relationship processes, despite the inherent restrictions on women's behaviours during the courtship.

Traditional gendered scripts and encouragements driven by ambivalent sexism may impact the ways women interact with the process of setting up and managing dating application profiles. Indeed, as discussed above, dating applications are highly dependent on self-presentation (Sumter et al., 2017). Ultimately, this may lead to greater self-objectification by women in order to fulfil traditional female stereotypes and facilitate success in such a competitive relationship market. Research by Calogero and Jost (2011) looked at women's exposure to benevolent sexism and self-objectification. Their findings suggested that women experience increased levels of self-objectification when exposed to benevolent sexism and that when exposed to benevolent sexism, women reported an increase in thinking about and planning further behaviours that were considered within the study to pertain to self-objectification, such as cosmetic surgeries to better fit traditional female stereotypes or shifts in the way they presented themselves such as dress or makeup. Furthermore, the way in which women's bodies are sexualized within western cultures appears to have real implications for women, particularly within relationships. These findings align with those of similar research (e.g., Holland & Haslam, 2015; Swami et al., 2010). Calogero and Jost assert that according to objectification theory (Frederickson & Roberts, 1997) as women are exposed to repeated experiences of objectification (such as interactions with hostile sexist men) they begin to focus less on their own experience, taking on a third-person viewpoint of themselves, such that they come to view themselves within that objectified social lens. If women are more likely to take on the third-person perspective and as such focus less on their own feelings and well-being, that may have implications for their

relationships. Indeed, self-objectification has been associated with a number of negative well-being outcomes for women (Bowleg et al., 2004; Calogero & Jost, 2011; Swami et al., 2010) including negative relationship outcomes.

Furthermore, benevolent ideals seemingly predict women's experiences of dating/dating applications. That is, women's willingness to mould themselves to traditional, virtuous and pure prescriptions may predict the feedback they receive from others. Those who fit most closely to the traditional positive subtypes have been found to receive the most benevolent responses from men (Sibley & Wilson, 2004). Meanwhile, women who have broken those norms (for example women who've had premarital sex) receive more negative responses from those who endorse benevolent sexism more strongly (Sakalli-Ugurlu & Glick, 2003). Such responses reinforce the potential rewards for women's self-objectification and presentation management within dating applications. Moreover, increased competition within dating applications (Finkel et al., 2012; Sumter et al., 2013) seemingly places some women under increased pressure to conform to sexist ideals, or at least present themselves as doing so, so as to appear a more viable partner.

In sum, the literature investigating the potential impacts of ambivalent sexism endorsement on dating application use is extremely limited. There is evidence suggesting that both men and women's endorsement and even exposure to ambivalent sexism is likely to impact the way they engage with and experience dating applications. However, previous research on the impacts of ambivalent sexism on dating application engagement is very limited, especially regarding women's dating application use. Prior research has tended to focus largely on men's behaviours within dating applications, and women's responses to that. This perhaps reflects the current status of gendered power dynamics within relationship formation. The current research aimed to investigate whether ambivalent sexism plays a role in young adults' engagement with dating applications and whether people's motivations for using dating applications moderated that relationship.

Overview of the Current Research

Ambivalent sexism has been suggested to have numerous effects on the romantic relationships of young adults. Up until recently, shared understanding within popular psychology and the greater public has held that gender-based differences in relational power were unaffected by social environment and were instead largely a product of immutable and archaic evolutionary mechanisms (Buss & Schmitt, 1993; Conley et al., 2011; Eagly & Wood, 1999). Contrary to such an assumption, psychological research has demonstrated that gender differences are often impacted by societal forces. Indeed, as shown by some of the research reviewed above, psychologists have observed through a range of methodological approaches that gender differences (both societal and interpersonal) may be empirically shifted (Conley et al., 2011). In a literature review by Conley and colleagues (2011) research has suggested that gender differences in experiences of relationships and sexuality are impacted by key facets of ambivalent sexism: stigma against women who self-promote their sexuality and own needs; guiding women towards relational attributes rather than pursuing their own goals; and a relational double standard that celebrates men for sexual promiscuity and prosperity, while simultaneously punishing women who deviate from the chaste and virtuous image construed by benevolent sexism. Thus, it appears that relational differences in experiences of relationship formation appear to be much more than evolutionary relics.

However, despite a wealth of research on existing romantic relationships, there is a dearth of existing knowledge on how interpersonal sexist attitudes impact relationship formation, especially in the realm of dating applications. Understanding the ways in which young adults experience and perceive modern forms of relationship formation is of clinical importance, given the multitude of impacts relationships have been suggested to have for mental health and well-being (Girme et al., 2016). To this end, the current study aimed to extend the existing literature on ambivalent sexism by considering the impacts of hostile and benevolent sexism on the relationship formation process in a modern dating environment. Moreover, the current study extends the very limited research knowledge of dating applications, being among the first to investigate the potential role of theorised gender-based power dynamics in their use.

The current study also explores the motivations people hold for using dating applications, given the limited research available currently in this area. Thus, the current research represents a novel investigation of the role of dating application motivations in

dating application use. Consistent with the research discussed earlier in this thesis, the hypotheses of the current research are represented below:

1. People who use dating applications will demonstrate lower levels of benevolent sexism.
2. People who use dating applications will demonstrate higher levels of hostile sexism.
3. The relationship between benevolent sexism and dating application use will be moderated by level of social approval motivations.
    a. For individuals who endorse greater social approval motivations, the relationship between benevolent sexism and dating application use will be *less* negative.
4. The relationship between benevolent sexism and dating application use will be moderated by level of relationship seeking motivations.
    a. For individuals who endorse greater relationship seeking motivations, the relationship between benevolent sexism and dating application use will be *less* negative.
5. The relationship between benevolent sexism and dating application use will be moderated by level of sexual experience motivations.
    a. For individuals who endorse greater sexual experience motivations, the relationship between benevolent sexism and dating application use will be *more* negative.
6. The relationship between benevolent sexism and dating application use will be moderated by level of socialising motivations.
    a. For individuals who endorse greater socialising motivations, the relationship between benevolent sexism and dating application use will be *less* negative.
7. The relationship between benevolent sexism and dating application use will be moderated by level of peer pressure.
    a. For individuals who endorse greater peer pressure motivations, the relationship between benevolent sexism and dating application use will be *more* negative.
8. The relationship between hostile sexism and dating application use will be moderated by level of social approval motivations.
    a. For individuals who endorse greater social approval motivations, the relationship between hostile sexism and dating application use will be *more* positive.
9. The relationship between hostile sexism and dating application use will be moderated by level of relationship seeking motivations.

   a. For individuals who endorse greater relationship seeking motivations, the relationship between hostile sexism and dating application use will be *less* positive.

10. The relationship between hostile sexism and dating application use will be moderated by level of sexual experience motivations.
   a. For individuals who endorse greater sexual experience motivations, the relationship between hostile sexism and dating application use will be *more* positive.
11. The relationship between hostile sexism and dating application use will be moderated by level of socialising motivations.
   a. For individuals who endorse greater socialising motivations, the relationship between hostile sexism and dating application use will be *less* positive.
12. The relationship between hostile sexism and dating application use will be moderated by level of peer pressure.
   a. For individuals who endorse greater peer pressure motivations, the relationship between hostile sexism and dating application use will be *more* positive.

Method

Participants

Three *a priori* power analyses were conducted: one for a correlation, one for the odds ratio of a moderation effect in a logistic regression, and one for the structural equation modelling. These power analyses revealed that, *n*s of approximately 138, 379 and 849 were required to obtain statistical power at the .95 level with an alpha level of $p < .05$. Given the likely large amount of possible reasons for using dating applications, it was estimated that detectable effects would likely be in the small to moderate range, as is consistent with much research in social and clinical psychology (Cooper & Findley, 1982). Using Uitenbroek's (1997) statistical analysis tool to estimate sample size for the *t*-tests, it was estimated that at least 138 participants were required to reveal a correlation of 0.3 with 95% statistical power. For the logistic regressions which were to be initially used to test hypotheses 3 through 12, Faul et al.'s (2007) statistical software G*Power was used to estimate the necessary sample size to detect a logistic regression with a moderate parameter estimate (Pr (Y=1|X=1) H0 = 0.15) and small odds ratio (1.68, as suggested by Chen et al., 2009). It was estimated that 379 participants would be required to detect such an effect with 95% power and .05 error probability. This value differs from the pre-registered power analysis estimates, as they contained original errors in estimation and have since been corrected.

For the structural equation modelling, which was used following the logistic regressions to again test hypotheses 3 through 12, Soper's (2018) statistical analysis tool was used, to estimate the necessary minimum sample size to detect a 0.15 (small-to-moderate) effect size in a structural model containing at least 3 latent variables (for example, benevolent sexism and social approval motives) and 30 observed variables (dating application use) with at least 95% power and a significance criterion of $p = .05$. A minimum of 849 participants were suggested to reveal the predicted small-moderate effect size. Sample size was determined based on power to detect 'small-moderate' effect sizes in the data, as defined by Cohen's (1992) effect size conventions. Effect sizes were anticipated to be small-moderate in magnitude due to the likely high number of different factors that may drive individuals' decision-making regarding their romantic and social well-being. Given the power estimate of 849, I set the sample size target for the study on Prolific Academic to be 1000, affording additional sample in case of attrition in the sample due to incomplete data. This Power analysis differs from the analysis provided during the pre-registration process. The analysis

reported in the pre-registration included an error in the specification and has now been amended.

One thousand (601 females, 396 males, 3 gender diverse) participants enrolled on Prolific Academic's website (www.prolific.ac) completed the questionnaire. Prolific is a relatively new platform through which researchers can recruit participant pools online. Prolific is thought to combine high quality participants with reasonable researcher costs, while generating a participant pool that is informed from the outset that the data being collected is being used for research purposes (Palan & Schitter, 2018). Prolific has gained popularity over the past few years, with thousands over registered researchers (Palan & Schitter, 2018). Indeed, the research fields of Prolific appear diverse, and have included researchers from fields including economics, psychology, and food science (Palan & Schitter, 2018).

One key element of Prolific's platform is its protection of research participants. The site has detailed rules on the subject of treatment of participants, utilises a user-interface design that is intended to be easy for participants to use, and is aimed to be a user-friendly competitor to Amazon's Mechanical Turk (MTurk). Peer and colleagues (2017) recently compared three crowd-sourced research platforms, including Prolific, MTurk, and CrowdFlower, with a university participant pool. They found that while MTurk and CrowdFlower demonstrated higher response volumes, Prolific retained data quality proficiency over the university participant pool. Moreover, Prolific and MTurk proved able to replicate previous research results and delivered data that was of superior quality to that of CrowdFlower or the university participant pool. Peer et al. concluded that Prolific was able to generate high quality data that was sourced from more experiment-naïve participants, with greater participant diversity than other sources of research subjects. Prolific's research participant pool has grown significantly since its inception. As of January 2020, Prolific listed over 99,000 potential participants on its website. However, Palan and Schitter (2018) note that with increased researcher registration, there is a possible loss of participant naivety. They note that in 2017 there were over 1500 researchers who'd completed at least one study using Prolific. Despite this concern, Palan and Schitter assert that Prolific is indeed a strong candidate to replace or be used as an addition to MTurk.

Ethical treatment of research participants is a key principle of Prolific's platform (Palan & Schitter, 2018). Indeed, clear communication about participants' rights, obligations, and recompense for completing research studies is an important factor in ethical and valid

research. The use of MTurk or other crowd-sourcing platforms thus proposes potential difficulty, as frequently platforms' guidelines regarding these topics are vague for both researchers and participants (Palan & Schitter, 2018). Prolific makes expectations for both researcher and participant very clear upon sign-up.. Moreover, Prolific dictates a minimum compensation for participants, which has increased yearly since its inception (Palan & Schitter, 2018), and was $6.50USD per hour when data for the current study was collected. Participants are also made aware of what the minimum compensation per unit of time is when they register for Prolific, and are informed on a study to study basis before participating. Researchers are required to estimate the time they expect participants to take in completing their study, and this is the listed time for participants to view. This is then updated as participants submit data.

Prolific mirrors many other crowd working research platforms by allowing the rejection of low-quality responses. Moreover, Prolific affords researchers the option to filter for participants with higher acceptance scores. A high rate of response rejection can thus mean that some participants may not be eligible to complete a high number of studies. However, Prolific requires rejections to be reasonable and responsible and can be overturned if the participant is able to justify their submission to Prolific. Subjects on Prolific also may preserve their acceptance score by letting their response time out before submission or by returning their submission as incomplete, informing the researcher they no longer wish to participate. In each scenario, the researcher is not obligated to reward the subject, but may choose to do so. By offering participant these two options, Prolific affords users quick and easy methods to withdraw their consent during a study.

Participants volunteered for the study and self-identified whether they met participation criteria. These criteria were: be aged between 18 and 35 years; have access to the internet to complete the online survey; be able to give fully informed consent; and possess English which is good enough to complete an English-language online survey. These criteria were employed as screening criteria within the Qualtrics survey, re-directing participants who did not meet criteria before they completed the rest of the questionnaire, thanking them for their time. All participants were thus aged from 18-35 years. Young adults are a theoretically preferable sample, as sexual, romantic, and platonic relationships are frequently formed during the 18-35 year old stage of life (Bogle, 2008). Moreover, this generation has grown up with and driven the social media and dating application expansion, making them more likely to be aware of and able to think about using dating applications. All participants passed

attention checks in the form of reverse coded items throughout the survey, and finished within the time limit. Missing data in the sample was less than 1%. They reported their ethnicities as New Zealand European/Caucasian (80.9%), African American (3.5%), Hispanic/Latin American (4.3%), Chinese (2.2%), Indian (1.8%), or Other (7.2%). The New Zealand European/Caucasian label was included in accordance with Massey University North Ethics Committee's suggestions on sample diversity. Other ethnicities commonly present in a New Zealand sample, including Māori, Nieuan, Tongan, Samoan, and Cook Island Māori were included as options in the survey but not present within the sample. Participants were pre-screened to restrict the sample to individuals who had indicated on their profile that they reside in the United States, United Kingdom, Australia, or New Zealand. They were not specifically asked their country of residence within the survey, though estimated longitude and latitude of response was generated within the Prolific Academic response data. Participants primarily completed the survey from either the United States or United Kingdom and Ireland. A small number of participants (less than 1%) were registered on Prolific as residing within the pre-screened countries of the United States, United Kingdom, Australia, and New Zealand, but completed the survey whilst currently in Japan, Hungary, Spain, France, Latvia and Germany. This may have been due to participants either temporarily visiting outside their country of residence (e.g., holidays); participants providing an inaccurate country of residence on their Prolific profiles; or inaccuracies in the latitude/longitude data itself (e.g., due to participants using VPNs). The participants whose longitude/latitude values suggested they were outside one of the pre-screened countries were not excluded. Participants reported their relationship status as single (31.0%), married (26.9%), serious/living together (29.9%), dating (11.8%), or separated/widowed (0.3%). Moreover, they identified their sexual orientations as heterosexual (84.6%), lesbian (1.5%), gay male (2.0%), bisexual (9.6%), or other (2.3%). A majority of participants (79.0%) identified as non-religious, compared to religious (21.0%).

Recruitment. Participants all completed the study by accessing the questionnaire through an advertisement on Prolific Academic's website (www.prolific.ac). The questionnaire was built using Qualtrics, access to which was provided by Massey University. The advertisement displayed the name of the project, the potential reward (£1.16 for completion, which in the sample averaged to be £10.55/hr) for completing the questionnaire, the expected time taken, and the number of participants needed. The potential reward was

presented in GBP as Prolific is based in the United Kingdom, and as such presents rewards in GBP as a default. A full copy of the questionnaire can be found in Appendix C.

Measures

Demographic information. Participants began the questionnaire by completing a number of demographic items. These items included: age, gender, ethnicity, relationship status, sexual orientation, and religiosity.

Dating Application Use. Dating application use was assessed by a single yes/no item, reading as follows: "Have you ever used a dating application, such as Tinder, Bumble, or Grindr?".

Hostile and Benevolent Sexism. Participants completed a short-form version of the Ambivalent Sexism Inventory (Glick & Fiske, 1996). Hostile sexism was indexed by the average of six items (three of which were reverse-coded), such as "Women seek to gain power by getting control over men" and "Once a woman gets a man to commit to her, she usually tries to put him on a tight leash" (1 = *strongly disagree*, 7 = *strongly agree, a*=.844). Six items also assessed benevolent sexism (e.g., "Women should be cherished and protected by men; three reverse-coded, α = .69). These short-form scales demonstrate strong correlations (*r*s > .90) with the full scales, and good test-retest reliability (Sibley & Perry, 2010). A study of the psychometric properties of the shortened versions of the Ambivalent Sexism Inventory by Rollero, Glick, and Tartaglia (2014) found that the shortened version of the Ambivalent Sexism Inventory had strong psychometric properties that were consistent with those of the longer original versions. More specifically, Rollero and colleagues found that the shortened versions replicated the factor structures of the original scales, and that individual items showed strong factor loadings, with confirmatory analyses determining good fit. Moreover, consistent with prior research using the original version (e.g., Glick & Fiske, 1997), the hostile and benevolent subscales correlated moderately positively (Rollero et al., 2014). Furthermore, Rollero et al.'s findings suggested that the shortened versions demonstrated invariance across gender and age of respondent. Other research from countries including Mexico, France, and Spain have found that the full version of the Ambivalent Sexism Inventory demonstrates strong validity and reliability across cultures (Dardenne et al., 2006; León-Ramírez & Ferrando, 2013; León-Ramírez & Ferrando Piera, 2014).

Tinder Motives Scale. The Tinder Motives Scale (Timmermans & De Caluwé, 2017) consists of 58 items and shows a replicable factor structure (αs = .74-.95) with 13 reliable Tinder motives, including, for example, social approval, relationship seeking, and sexual

experience. For the current study, participants completed an adapted version of the Tinder Motives Scale, such that five of the original thirteen motives (social approval, relationship seeking, sexual experience, socialising, and peer pressure) were examined, using 25 of the 58 original items. All items were preceded by the stem "I would/have used a dating application…". Social Approval was indexed by the average of six items, such as " to get an ego boost" and "to get compliments" (1= strongly disagree to 7= strongly agree; α = .94). Relationship Seeking was indexed by the average of five items, such as " to find someone for a serious relationship" and "to meet a future husband or wife" (1= strongly disagree to 7= strongly agree; α = .95). Sexual Experience was indexed by the average of six items, such as " to find a one-night stand" and "to live out a sexual fantasy" (1= strongly disagree to 7= strongly agree; α = .94). Peer Pressure was indexed by the average of three items, including "as suggested by friends" and "because my friends thought I should" (1= strongly disagree to 7= strongly agree; α = .84). Socialising was indexed by the average of four items, such as " to make new friends" and "to meet new people" (1= strongly disagree to 7= strongly agree; α = .89).

Self-esteem. Self-esteem was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965), as it is a reliable, valid and short questionnaire consisting of 10 items answered by a 4-point scale (Martín-Albo et al., 2007). The Rosenberg Self-Esteem Scale has been widely used and appears to demonstrate good psychometric properties (Robins et al., 2001). There is a long-standing research base regarding the reliability and validity of the Rosenberg Self-Esteem Scale. Indeed, alpha-reliability estimates for scores from handwritten administrations of the scale have generally ranged from .72 to .88 (for example, Byrne & Shavelson, 1986; Dobson et al., 1979; Fleming & Courtney, 1983; Schmitt & Bedeian, 1982). The measure has been found to demonstrate adequate test-retest reliability (Byrne, 1983; Silber & Tippett, 1965). Moreover, international studies have addressed the instrument's validity across diverse contexts in terms of locale and participant contexts such as socio-economic status and education (Schmitt & Allik, 2005), finding the one-factor structure of the scale was generally invariant and the reliability was substantial overall (Sinclair et al., 2010). Questions included the degree to which participants agreed with statements such as "On the whole I am satisfied with myself" and "I feel I am a person of worth" (α = .92). Five items (items 2, 5, 6, 8, and 9) were negatively worded and reverse coded.

Design and Procedure

Design. The current study utilised a cross-sectional observational design, whereby all of the measured variables involved in the analyses conducted were between-subjects. The dependent variable in the study was dating application use, while independent variables included hostile and benevolent sexism. Moderating variables in the design included five different motivations for using dating applications: social approval, relationship seeking, sexual experience, peer pressure, and socialising.

Procedure. Participants accessed the survey through the study advertisement on Prolific Academic. The survey began with the participant information sheet, consent form and instruction sheet. Due to the potentially sensitive nature of this topic and to provide support to participants, contact information for external mental health services was displayed following the instruction sheet. The primary section of the questionnaire involved a series of questions that took from 1.2-54.1 minutes ($M = 6.75$, $SD = 4.16$) to complete. Once participants completed the primary questionnaire, they progressed to a second questionnaire which displayed support service information a second time, and provided the opportunity to enter an email address should they wish to receive results summaries. The second questionnaire was used to separate identifiable information from the main data. The questionnaire consisted of multiple choice and short written answers. Participants had the right to decline to answer any questions.

Statistical Procedure. Statistical analyses were tailored to investigate whether there was a relationship between levels of sexism endorsement and engagement with dating application use. Analysis comprised of three different statistical techniques: Welch's *t* tests, logistic regressions, and structural equation modelling. The initial dataset contained 1000 participants. Two participants were removed due to excessive missing data on key analysis variables, as per our pre-registered exclusion criteria. These criteria excluded participants who did not provide any data on key the key study variables (ambivalent sexism, dating application use, and the tinder motives scale), were outside of the required age range (18-35), resided outside of pre-screened countries (the United States, United Kingdom, Australia, and New Zealand) or completed the study in over one hour. There were 988 complete responses, with 10 responses missing values from the dating application use variable. In order to address this, as per pre-registration, multiple imputation was conducted using SPSS, completing five imputed datasets.

Two Welch's *t* tests were conducted to determine whether there were statistically significant differences in individuals' endorsement of hostile or benevolent sexism based on whether they used dating applications or not. In these analyses, benevolent and hostile sexism were each dependent variables, while dating application use was the independent variable.

In order to test the hypotheses (Hypotheses 3-12) that the relationships between hostile/benevolent sexism and dating app use are moderated by different motivations for dating application use, a number of logistic regressions were conducted, wherein dating application use was the dependent variable. Either benevolent or hostile sexism was entered as an independent variable with the main effect of the moderator and an interaction term. Interaction terms were generated by generating the product of grand mean centred versions benevolent/hostile sexism and moderator variables. The logistic regression analyses and Welch's *t* tests were conducted using IBM's SPSS Statistics version 26.

Confounding. The primary tests of hypotheses specified above were conducted without any covariates controlled for. However, the robustness of the findings to controls for gender, ethnicity, relationship status, sexual orientation, and self-esteem were examined and reported by running each analysis with controls for each of these covariates included. One of the key strengths of a true experimental research design is the ability to distinguish the effect of a particular independent variable on the outcome or dependent variable from other factors. However, in a cross-sectional non-experimental design such as that used in the current study, correlations between the independent variables of interest and the dependent variable may be explained by spurious effects which are due to confounding variables (Asiamah et al., 2019). The weakness of cross-sectional observational designs is frequently attributed to their susceptibility to alternative explanations for their effects, or the association they have aimed to test (McNamee, 2003). Unlike randomized control trials, the data in observational cross-sectional studies makes it very difficult to establish clear causational relationships between variables because the designs do not allow for the complete elimination of alternative explanations to relationships that might be vulnerable to confounding (Arah, 2017; Skelly et al., 2012; Van der Weele & Shpitser, 2013). Thus it has become convention, indeed an expectation, that all studies utilising cross-sectional data control for potential confounding variables in order to determine valid effects and maximize internal validity (Asiamah, 2017; Van der Weele & Shpitser, 2013).

Adding potential confounding factors as control variables into statistical models has become the conventional approach to addressing spuriousness in the statistical modelling of data generated by non-experimental research designs (Asiamah et al., 2019). Indeed, researchers have suggested that one of the primary motivations for using multivariate analyses is their ability to control for possible confounding variables (Greene, 2000; Wooldridge, 2003). However, as Asiamah and colleagues (2019) have addressed, many researchers' reluctance to control for confounding is something that has been an issue of interest within research methods literature. For example, Jager and colleagues (2008) attempted to explore accurate definitions of what confounding is and attempted to outline steps to manage it. Moreover, some researchers (e.g., Van der Weele & Shpitser, 2013) have analysed common definitions of confounding and confounding variables, and have attempted to apply those learnings to statistical adjustment techniques, the process of statistically controlling for confounding variables (Arah, 2017; Skelly et al., 2012). These statistical procedures have also been discussed by Pourhoseingholi and associates (2012). In the current study, confounding variables are considered those whose presence may affect the relationship between the variables of interest so that the result does not accurately reflect the actual association of interest (Asiamah et al., 2019).

Data analysis affords researchers the opportunity to adjust for potential confounding by selecting appropriate statistical methods through which to control for unwanted effects that may blur the true effect they are attempting to investigate (Asiamah et al., 2019). Asiamah and colleagues assert that the use of the statistical approach of controlling for confounding factors should be mandatory amongst cross-sectional research, given that none of the study design methods employing such data measurement can completely eliminate the possibility of confounding occurring. Moreover, multivariable data analysis methods, such as multiple regression, structural equation modelling, or logistics regression have been suggested (e.g., Pourhoseingholi et al., 2012, Skelly et al., 2012, and Kupek, 2016) as some of the more comprehensive methods for adjusting for confounding or lurking variables.

As mentioned above, gender, ethnicity, sexual orientation, relationship status, and self-esteem were employed as control variables in the current study. Recent research examining the typical users of Tinder, possibly the most prominent dating application in the world, revealed the importance of controlling for most of these variables. According to Iqbal (2020), Tinder users worldwide are strongly more likely to be male, with estimates suggesting that men make up somewhere between 85-90% of the dating pool. Thus, gender

appears to be an important variable to control for in the current study, given its strong connection with dating application use. Moreover, as Sibley and Becker (2012) demonstrated, men are more likely to endorse hostile sexism than women. Gender was controlled for by creating dummy variables with male as the comparison group and female and gender diverse being represented as the dummy variables. Sexual orientation was also a demographic variable that demonstrated stark differences in dating application use (Iqbal, 2020). A study by Johnson, Vilceanu, and Pontes (2017) investigated the use of dating application and online dating services by members of the LGBT community, finding that compared to heterosexuals, members of the LGBT community were significantly more likely to use dating applications. Moreover, LGBT relationships may experience lower levels of gendered expectations with regard to roles within the relationship. That is, relationships comprised of two gay men, or lesbian women or other members of the LGBT community may be more likely to function in ways that differ from traditional heterosexual relationships with regard to the distribution of interpersonal power. Given that the current study included members of the LGBT community, it seemed that results might be impacted by the differing dating application use and ambivalent sexism endorsement amongst sexual orientations and thus was treated as a control variable. Dummy coding was employed in using sexual orientation as a control, using heterosexual as the comparison group in each case.

Relationship status was controlled for on the basis that the majority of dating application users have been suggested to be single. However, some prior research has suggested that perhaps as many as 42% of users were already in a relationship (Iqbal, 2020), though Tinder later asserted this number was more likely to be less than 10% (Iqbal, 2020). Prior research has suggested that those in relationships may come to endorse ambivalent sexism to a greater degree over time (Hammond et al., 2016), and given that I had a sample likely to be more single (and thus possibly lower in sexism) I decided to control for relationship status and its potential impact on dating application use. I again employed dummy coding with the relationship status variable, using single as the comparison group. Despite a relatively even representation of ethnicities in dating application use in the US (Anderson et al., 2020), ethnicity was controlled for because prior research has suggested significant differences across ethnicities in ambivalent sexism endorsement amongst predominantly Caucasian countries, such as the United States and United Kingdom (Glick et al., 2000). Ethnicity was also dummy coded, using European/Caucasian as the comparison group. Finally, there has been mixed responses regarding the role of self-esteem in online

communication and dating application use (Bianchi & Phillips, 2005; Ehrenberg et al., 2008), however there is a growing evidence that some individuals are drawn to use dating applications by self-esteem concerns (Sumter et al., 2017). Moreover, ambivalent sexism has also thought to impact women's levels of self-esteem, particularly endorsement of benevolent sexism. I controlled for self-esteem in order to remove a potential alternative explanation for our results.

In sum, and as mentioned above, the reasons individuals use dating applications is likely highly varied and thus the ability to completely control for confounds is ultimately difficult. The current study has attempted to control for a set of controls which appear to be demographically relevant and potentially theoretically linked, as suggested by Asiamah et al. (2019).

Finally, I conducted additional structural equation modelling analyses in order to test our hypotheses in a way that minimises Type I error via measurement errors and provides more realistic estimates of incremental validity. Indeed, some previous research has identified that common methods of statistical analysis, such as multiple regression can be prone to high levels of Type I error, despite large sample sizes (Westfall & Yarkoni, 2016). As Westfall and Yarkoni identify, psychological research frequently relies on the argument for predictive validity—the ability to predict values in an outcome given a particular value in a predictor or set of predictors. Westfall and Yarkoni suggest that as sample sizes grow larger, there is not necessarily an increase in validity, despite an increase in the likelihood of rejecting the null hypothesis. That is, multiple regression assumes the independent variables are measured without any error. However, when this assumption is not met, the analysis is unable to fully control for the potential effects of control variables, and thus increases in Type I error may result. Given the possibility for measurement error within a multiple regression format, Structural Equation Modelling has been suggested as a robust method of analysis (Wansbeek & Meier, 2000). Within multiple regression, the common method for testing such relationships is to compute mean or standard scores for each variable, and entering them as simultaneous predictors within the regression model. With Structural Equation Modelling, rather than pre-computing sum scores, the measurement model for each latent construct is specified, and the measurement error associated with each factor within the variable is accounted for. Indeed, as Westfall and Yarkoni (2016) explain, one of the key strengths of structural equation modelling is that it accounts for the effects of measurement error when

producing parameter estimates such that measurement error is accounted for and is used by the model to elevate or attenuate parameter estimates accordingly.

In order to maximise incremental validity within our analyses, I constructed structural equation models to test hypotheses 3 through 12. The models were constructed and analysed using Muthén and Muthén's (2019) MPlus editor version 8.3. In each of the models, dating application use was entered as the dependent variable, with hostile or benevolent sexism being entered as one of the independent variables. The models tested are depicted in Figures 1 through 10. The above analyses were pre-registered with the Open Science Framework (https://osf.io/384ug/?view_only=0c41437829d542e8824fdd59f07b95e2). On the project page linked above, the pre-registration, analysis plan, raw data, and the scripts used for the analyses found within the current study can be accessed in the interest of producing replicable, open scientific research.

Results

Descriptive Statistics

Descriptive statistics for the variables used in the core analyses are presented in Table 1. I first examined whether those who use dating applications differed from those who did not use dating applications, with respect to endorsement of hostile or benevolent sexism. Almost half of the sample (472) had engaged with dating applications. Participants also averaged higher ratings on benevolent sexism compared to hostile sexism (3.55 to 3.18, respectively).

Table 1

Descriptive Statistics for Pre-Registered Analyses Variables

Variable	Mean	Standard Deviation
Dating Application Use	.473	.499
Benevolent Sexism	3.55	.967
Hostile Sexism	3.18	1.22
Social Approval	3.60	1.64
Relationship Seeking	4.84	1.61
Sexual Experience	3.10	1.67
Socialising	3.72	1.58
Peer Pressure	2.84	1.46

Note. Dating Application Use Range from 0-1, All Other Variables from 1-7.

Welch's *T*-Tests

Benevolent Sexism.

A Welch's *t*-test was used to examine the question of whether individuals aged from 18-35 who had or had not used dating applications differ with respect to their endorsement of benevolent sexism. The independent variable represented the use of dating applications with two groups being represented: 1) those who had used dating applications; and 2) those who had not. The dependent variable was the average score on a measure of benevolent sexism with a range of 1 (low level of benevolent sexism) to 7 (high level of benevolent sexism). See Table 2 for the means and standard deviations for each of the groups.

Table 2

Means and Standard Deviations of Benevolent Sexism Scores by Dating Application Use

Dating Application Use	*n*	Mean	SD
No	521	3.56	.97
Yes	468	3.54	.97
Total	989	3.55	.97

P-P plots revealed that the distributions within each of the two samples appear to be approximately normally distributed, and lie along a straight diagonal line, with no wild deviation. However, Kolmogorov-Smirnov tests suggested that the data violated the normality assumption in both subsamples. Previous research has demonstrated that breaches of the normality assumption is unlikely to affect results or power when sample size is sufficiently large (Lumley et al., 2002). Indeed, some research has suggested that even small samples are sufficient to withstand a violation of the normality assumption (Sawilowsky & Hillman, 1993). Despite Levene's *F* test providing no evidence to reject a null hypothesis of homogeneity of variance (all *p*s >.1), a Welch's *t*-test was used, as per pre-registration. Prior research has indicated that performing preliminary tests of variance in a two stage approach can adversely impact quality of the subsequent test, and has also demonstrated that the Welch's *t*-test is an appropriate test when variances are unequal (Zimmerman, 2004). Moreover, evidence from previous studies indicates that the Welch's *t*-test affords enhanced control of Type I errors compared to the Student's *t*-test when the assumption of homogeneity of variance is violated (Zimmerman, 2004; Delacre et al., 2017).

An alpha level of .05 was used for all subsequent analyses. The Welch's *t*-test of individuals' average score on hostile sexism revealed no statistically significant difference, $t(976.803) = .274$, $p = .784$, indicating that there was no evidence to reject the null hypothesis for this test and thus I cannot conclude a significant difference in hostile sexism endorsement between those who had used dating applications and those who had not. Cohen's *d* indicator of effect size was 0.021, an extremely small effect. This finding does not support hypothesis 1.

Hostile Sexism.

A Welch's *t*-test was used to examine the question of whether individuals aged from 18-35 who had or had not used dating applications differ with respect to their endorsement of hostile sexism. The independent variable represented the use of dating applications with two groups being represented: 1) those who had used dating applications; and 2) those who had not. The dependent variable was the average score on a measure of hostile sexism with a range of 1 (low level of hostile sexism) to 7 (high level of hostile sexism). See Table 3 for the means and standard deviations for each of the groups.

Table 3

Means and Standard Deviations of Hostile Sexism Scores by Dating Application Use

Dating Application Use	*n*	Mean	SD
No	521	3.12	1.19
Yes	468	3.26	1.25
Total	989	3.18	1.22

P-P plots revealed that the distributions within each of the two samples appear to be appropriate, and lie along a straight diagonal line, with no wild deviation. However, Kolmogorov-Smirnov tests suggested that the data violated the normality assumption (all *p*s= .005 or below). Despite Levene's *F* test providing no evidence to reject a null hypothesis of homogeneity of variance (all *p*s >.1), a Welch's *t*-test was used, as per pre-registration. An alpha level of .05 was used for all subsequent analyses. The Welch's *t*-test of individuals' average score on hostile sexism revealed no statistically significant difference, $t(964.066) = 1.800$, $p = .072$. Moreover, Cohen's *d* indicator of effect size was 0.115, representing a very small effect size. Thus, this finding does not support hypothesis 2.

Logistic Regression

Benevolent Sexism.

Logistic regressions were conducted in order to determine the relationship between benevolent sexism and young adults' dating application use, and whether that relationship was moderated by any of five motivations for using dating applications: social approval, relationship seeking, sexual experience, peer pressure, and socialising. Note that co-efficients for control variables are not presented within tables in order to maintain clarity, given the large number of covariate variables necessitated by dummy-coding. These can, however, be accessed through the open data and code provided on the OSF page.

Benevolent Sexism and Social Approval. Hypothesis 3 suggested that the relationship between benevolent sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse those social approval motives more strongly (as opposed to weakly), the relationship between benevolent sexism and dating application use would be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, social approval motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates.

As Table 4 shows, when holding social approval at its mean value, and holding sexual orientation, gender, relationship status, self-esteem, religiosity, and ethnicity constant, a one-unit increase in benevolent sexism was not associated with a statistically significant difference in the odds of dating app use nor was the interaction of benevolent sexism and social approval. Hypothesis 3 was not supported.

Table 4

Logistic Regression Analysis of Dating Application Use on Benevolent Sexism and Social Approval.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.180	.346	.520	1	.603	1.197	.607	2.361
Benevolent Sexism	-.073	.080	-.913	1	.366	.930	.795	1.088
Social Approval	.355	.047	7.553	1	.000	1.426	1.301	1.563
Benevolent Sexism x Social Approval	.006	.042	.143	1	.883	1.006	.927	1.092

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .146 (Hosmer & Lemeshow) .183 (Cox & Snell) .244 (Nagelkerke). $X^2(1)$= 201.470.

Benevolent Sexism and Relationship Seeking. Hypothesis 4 suggested that the relationship between benevolent sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorsed those relationship seeking motives more strongly (as opposed to weakly), the relationship between benevolent sexism and dating application use would be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, relationship seeking motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates.

As Table 5 shows, when holding relationship seeking at its mean value, and holding sexual orientation, gender, relationship status, self-esteem, religiosity, and ethnicity constant, a one-unit increase in benevolent sexism was not associated with a statistically significant difference in the odds of dating app use nor was the interaction of benevolent sexism and relationship seeking. This result does not support hypothesis 4.

Table 5

Logistic Regression Analysis of Dating Application Use on Benevolent Sexism and Relationship Seeking.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.296	.347	.853	1	.394	1.345	.681	2.657
Benevolent Sexism	.015	.078	.192	1	.845	1.015	.871	1.184
Relationship Seeking	.315	.048	6.563	1	.000	1.370	1.247	1.505
Benevolent Sexism x Relationship Seeking	.073	.045	1.622	1	.105	1.076	.985	1.176

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .136 (Hosmer & Lemeshow) .171 (Cox & Snell) .229 (Nagelkerke). $X^2(1)$= 187.811.

Benevolent Sexism and Sexual Experience. Hypothesis 5 suggested that the relationship between benevolent sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse those sexual experience motives more strongly, the relationship between benevolent sexism and dating application use would be more negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, sexual experience motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, and self-esteem were entered as covariates.

As Table 6 shows, when holding sexual experience at its mean value, and holding sexual orientation, gender, relationship status, self-esteem, and ethnicity constant, a one-unit increase in benevolent sexism was not associated with a statistically significant difference in the odds of dating app use, nor was the interaction of benevolent sexism and relationship seeking. This result does not support hypothesis 5.

Table 6

Logistic Regression Analysis of Dating Application Use on Benevolent Sexism and Sexual Experience.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.183	.339	.540	1	.590	1.200	.618	2.332
Benevolent Sexism	.025	.076	.329	1	.743	1.025	.883	1.191
Sexual Experience	.167	.047	3.553	1	.000	1.182	1.078	1.297
Benevolent Sexism x Sexual Experience	.047	.041	1.146	1	.258	1.048	.966	1.136

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .110 (Hosmer & Lemeshow) .142 (Cox & Snell) .189 (Nagelkerke). $X^2(1)=152.526$.

Benevolent Sexism and Socialising. Hypothesis 6 suggested that the relationship between benevolent sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse socialising motives more strongly, the relationship between benevolent sexism and dating application use would be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, and self-esteem were entered as covariates.

As Table 7 shows, when holding socialising at its mean value, and holding sexual orientation, gender, relationship status, self-esteem, and ethnicity constant, a one-unit increase in benevolent sexism was not associated with a statistically significant difference in the odds of dating app use, nor was the interaction of benevolent sexism and socialising. This results does not support hypothesis 6.

Table 7

Logistic Regression Analysis of Dating Application Use on Benevolent Sexism and Socialising.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.253	.350	.723	1	.470	1.288	.648	2.559
Benevolent Sexism	-.047	.080	-.588	1	.555	.954	.816	1.115
Socialising	.394	.049	8.041	1	.000	1.483	1.348	1.633
Benevolent Sexism x Socialising	.047	.047	1.000	1	.311	1.048	.957	1.149

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .152 (Hosmer & Lemeshow) .190 (Cox & Snell) .253 (Nagelkerke). $X^2(1)$= 209.879.

Benevolent Sexism and Peer Pressure. Hypothesis 7 suggested that the relationship between benevolent sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse those peer pressure motives more strongly, the relationship between benevolent sexism and dating application use would be more negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, peer pressure motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, and self-esteem were entered as covariates.

As Table 8 shows, when holding peer pressure at its mean value, and holding sexual orientation, gender, relationship status, self-esteem, and ethnicity constant, a one-unit increase in benevolent sexism was not associated with a statistically significant difference in the odds of dating app use, nor was the interaction of benevolent sexism and peer pressure. This result does not support hypothesis 7.

Table 8

Logistic Regression Analysis of Dating Application Use on Benevolent Sexism and Peer Pressure.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.265	.343	.773	1	.441	1.303	.665	2.554
Benevolent Sexism	.006	.078	.077	1	.934	1.006	.864	1.173
Peer Pressure	.290	.049	5.918	1	.000	1.336	1.214	1.471
Benevolent Sexism x Peer Pressure	.049	.049	1.000	1	.322	1.050	.954	1.156

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .128 (Hosmer & Lemeshow) .162 (Cox & Snell) .216 (Nagelkerke). $X^2(1)$= 176.102.

Logistic Regression

Hostile Sexism.

Logistic regressions were conducted in order to determine the relationship between hostile sexism and young adults' dating application use, and whether that relationship was moderated by any of five motivations for using dating applications: social approval, relationship seeking, sexual experience, peer pressure, and socialising. Note that co-efficients for control variables are not presented within tables in order to maintain clarity, given the large number of covariate variables necessitated by dummy-coded covariates. These tables can be generated by accessing open data and code found on the OSF project page.

Hostile Sexism and Social Approval. Hypothesis 8 suggested that the relationship between hostile sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse social approval motivations more strongly, the relationship between hostile sexism and dating application use would be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, social approval motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates.

As Table 9 shows, when holding social approval at its mean value, and holding gender, relationship status, self-esteem, religiosity, and ethnicity constant, a one-unit increase in hostile sexism was not associated with a difference in the odds of dating app use, nor was the interaction of hostile sexism and social approval. This result does not support hypothesis 8.

Table 9

Logistic Regression Analysis of Dating Application Use on Hostile Sexism and Social Approval.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.171	.352	.486	1	.627	1.186	.595	2.364
Hostile Sexism	.029	.064	.453	1	.649	1.030	.908	1.168
Social Approval	.347	.046	7.543	1	.000	1.415	1.292	1.550
Hostile Sexism x Social Approval	.027	.036	.750	1	.446	1.028	.958	1.102

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .146 (Hosmer & Lemeshow) .183 (Cox & Snell) .244 (Nagelkerke). $X^2(1)$= 201.454.

Hostile Sexism and Relationship Seeking. Hypothesis 9 suggested that the relationship between hostile sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use would be less positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, relationship seeking motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates.

As Table 10 shows, when holding relationship seeking at its mean value, and holding gender, relationship status, self-esteem, religiosity, and ethnicity constant, a one-unit increase in hostile sexism was associated with a significant increase in the odds of dating app use. However, the interaction of hostile sexism and relationship seeking was positive but not significant. This result does not support hypothesis 9.

Table 10

Logistic Regression Analysis of Dating Application Use on Hostile Sexism and Relationship Seeking.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.182	.352	.517	1	.606	1.199	.601	2.392
Hostile Sexism	.132	.063	2.095	1	.037	1.141	1.008	1.292
Relationship Seeking	.318	.048	6.625	1	.000	1.374	1.252	1.509
Hostile Sexism x Relationship Seeking	.040	.036	1.111	1	.262	1.041	.970	1.117

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .138 (Hosmer & Lemeshow) .174 (Cox & Snell) .232 (Nagelkerke). $X^2(1)$= 190.896.

Hostile Sexism and Sexual Experience. Hypothesis 10 suggested that the relationship between hostile sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use would be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, sexual experience motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates.

As Table 11 shows, when holding sexual experience at its mean value, and holding gender, religiosity, relationship status, self-esteem, and ethnicity constant, a one-unit increase in hostile sexism was not associated with a statistically significant difference in the odds of dating app use. However, the interaction of hostile sexism and sexual experience motives was significant, such that the effect of a one-unit increase in hostile sexism on the log-odds of dating app use is itself 0.085 units larger for every one-unit increase in sexual experience motives (when holding gender, religiosity, relationship status, self-esteem, and ethnicity constant). This result supports hypothesis 10.

Table 11

Logistic Regression Analysis of Dating Application Use on Hostile Sexism and Sexual Experience.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.117	.346	.338	1	.736	1.124	.570	2.214
Hostile Sexism	.068	.064	1.063	1	.288	1.070	.945	1.212
Sexual Experience	.149	.048	3.104	1	.002	1.161	1.057	1.276
Hostile Sexism x Sexual Experience	.085	.035	2.429	1	.015	1.089	1.016	1.167

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .115 (Hosmer & Lemeshow) .147 (Cox & Snell) .196 (Nagelkerke). $X^2(1)$= 158.434.

Hostile Sexism and Socialising. Hypothesis 11 suggested that the relationship between hostile sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse socialising motivations more strongly, the relationship between hostile sexism and dating application use would be less positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates.

As Table 12 shows, when holding socialising motives at its mean value, and holding gender, religiosity, relationship status, self-esteem, and ethnicity constant, a one-unit increase in hostile sexism was not associated with a difference in the odds of dating app use, nor was the interaction of hostile sexism and socialising motives. This result does not support hypothesis 11.

Table 12

Logistic Regression Analysis of Dating Application Use on Hostile Sexism and Socialising.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.171	.357	.479	1	.632	1.186	.590	2.386
Hostile Sexism	.085	.065	1.308	1	.187	1.089	.959	1.236
Socialising	.388	.048	8.083	1	.000	1.474	1.341	1.621
Hostile Sexism x Socialising	.043	.036	1.194	1	.234	1.044	.972	1.122

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .153 (Hosmer & Lemeshow) .191 (Cox & Snell) .255 (Nagelkerke). $X^2(1)$= 211.782.

Hostile Sexism and Peer Pressure. Hypothesis 12 suggested that the relationship between hostile sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse peer pressure motivations more strongly, the relationship between hostile sexism and dating application use would be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates.

As Table 13 shows, when holding peer pressure motives at its mean value, and holding gender, religiosity, relationship status, self-esteem, and ethnicity constant, a one-unit increase in hostile sexism was not associated with a difference in the odds of dating app use, nor was the interaction of hostile sexism and peer pressure motives. This result does not support hypothesis 12.

Table 13

Logistic Regression Analysis of Dating Application Use on Hostile Sexism and Peer Pressure.

Predictor	*b*	SE	Wald	*df*	*p*	*Odds Ratio*	*95% CI Lower*	*95% CI Upper*
Constant	.200	.349	.573	1	.565	1.222	.617	2.419
Hostile Sexism	.084	.062	1.355	1	.178	1.088	.962	1.230
Peer Pressure	.288	.049	5.878	1	.000	1.334	1.212	1.468
Hostile Sexism x Peer Pressure	.020	.039	.513	1	.609	1.020	.945	1.100

Note. Controlling for Gender, Relationship Status, Self-Esteem, Religiosity, and Ethnicity. R^2= .128 (Hosmer & Lemeshow) .163 (Cox & Snell) .217 (Nagelkerke). $X^2(1)$= 177.136.

Structural Equation Modeling

Structural equation modelling was used to provide more robust tests of the hypotheses listed above. Indeed, the models were tested in order to account for measurement error that can impact other estimation methods such as logistic regression. The structural models were tested using maximum likelihood estimation with robust standard errors (MLR) method in the MPlus 8.3 program (Muthén and Muthén, 2019). MPlus does not generate typical model fit statistics for models including latent variable interactions, and as such will not be included. Fit statistics were not pre-registered as the analyses planned were complex and some elements of the study were decided following the pre-registration period. Moreover, the focus in these analyses is not on producing models that fit the sample covariance matrix but rather on estimating specific parameters. The models tested are represented in Figures 1 through 10.

Benevolent Sexism.

Benevolent Sexism and Social Approval. Hypothesis 3 suggested that the relationship between benevolent sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse those social approval motives more strongly (as opposed to weakly), the relationship between benevolent sexism and dating application use would be less negative. Structural equation modelling was used to investigate the model shown in shown in Figure 1. As Table 14 shows, the structural paths from benevolent sexism to dating application use and from the interaction term to dating application use were insignificant. These paths were near zero (ßs = -.030 and .004 ps > .05). This result does not support hypothesis 3.

Benevolent Sexism and Relationship Seeking. Hypothesis 4 suggested that the relationship between benevolent sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorsed those relationship seeking motives more strongly (as opposed to weakly), the relationship between benevolent sexism and dating application use would be more positive. This hypothesis was tested using the path model depicted in Figure 2. As Table 15 shows, all the structural paths were significant except the paths from benevolent sexism to dating application use and from the interaction term to dating application use. These paths were near zero (ßs = .018 and .052, ps > .05). This result does not support hypothesis 4.

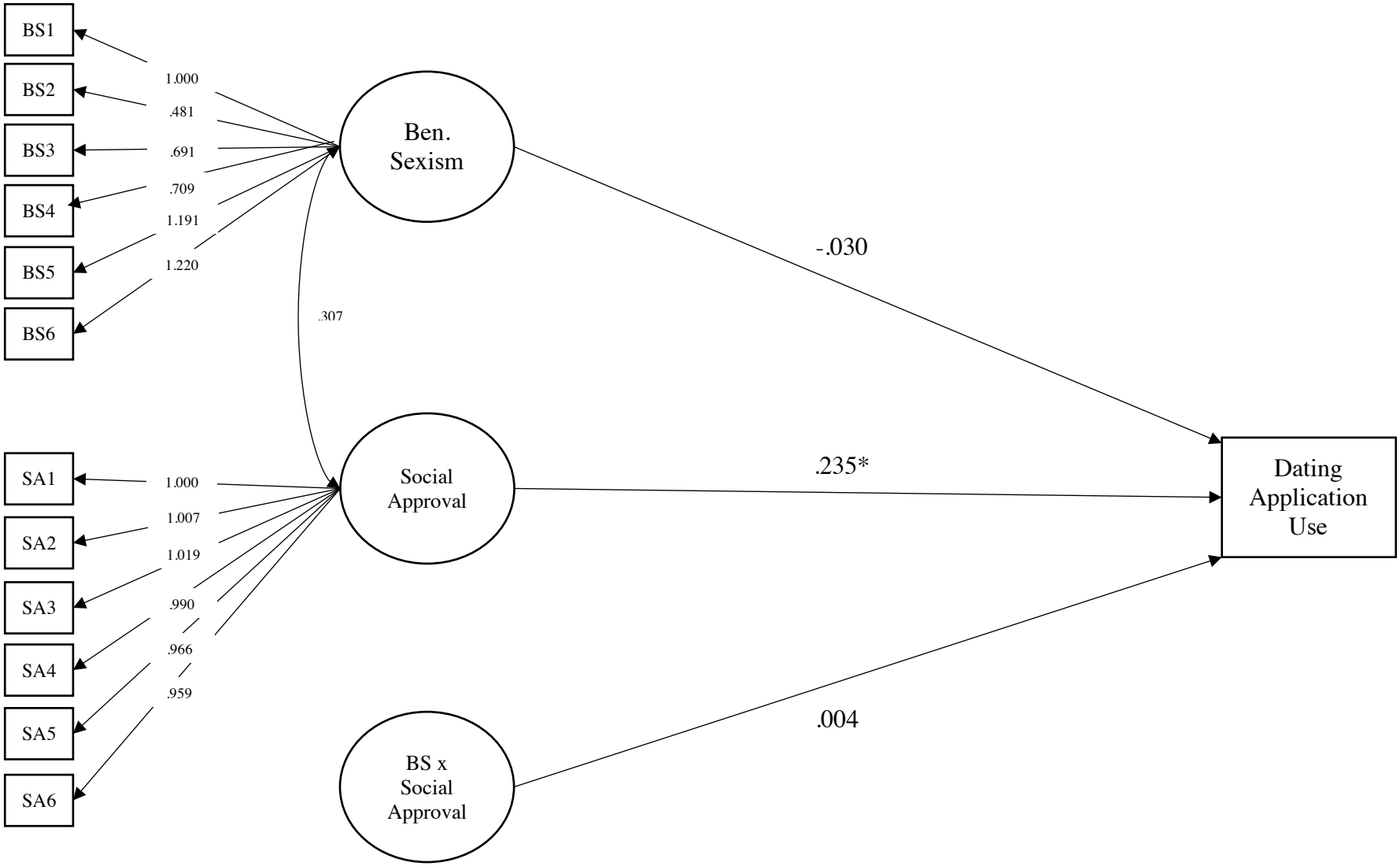
Benevolent Sexism and Sexual Experience. Hypothesis 5 suggested that the relationship between benevolent sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse those sexual experience motives more strongly, the relationship between benevolent sexism and dating application use would be more negative. This hypothesis was tested by analysing the path model depicted in Figure 3. As Table 16 shows, all the structural paths were significant except the paths from benevolent sexism to dating application use and from the interaction term to dating application use. These paths were near zero (ßs = .022 and .016, ps > .05). This result does not support hypothesis 5.

Benevolent Sexism and Socialising. Hypothesis 6 suggested that the relationship between benevolent sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse socialising motives more strongly, the relationship between benevolent sexism and dating application use would be less negative. This hypothesis was tested by analysing the path model depicted in Figure 4. As shown in Table 17, the paths from benevolent sexism to dating application use and from the interaction term to dating application use were not significant. These paths were near zero (ßs = -.017 and .043, ps > .05). This result does not support hypothesis 6.

Benevolent Sexism and Peer Pressure. Hypothesis 7 suggested that the relationship between benevolent sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse those peer pressure motives more strongly, the relationship between benevolent sexism and dating application use would be more negative. This hypothesis was tested by analysing the path model depicted in Figure 5. As shown in Table 18, all the structural paths were significant except the paths from benevolent sexism to dating application use and from the interaction term to dating application use. These paths were near zero (ßs = .005 and .065, ps > .05). This result does not support hypothesis 7.

Figure 1

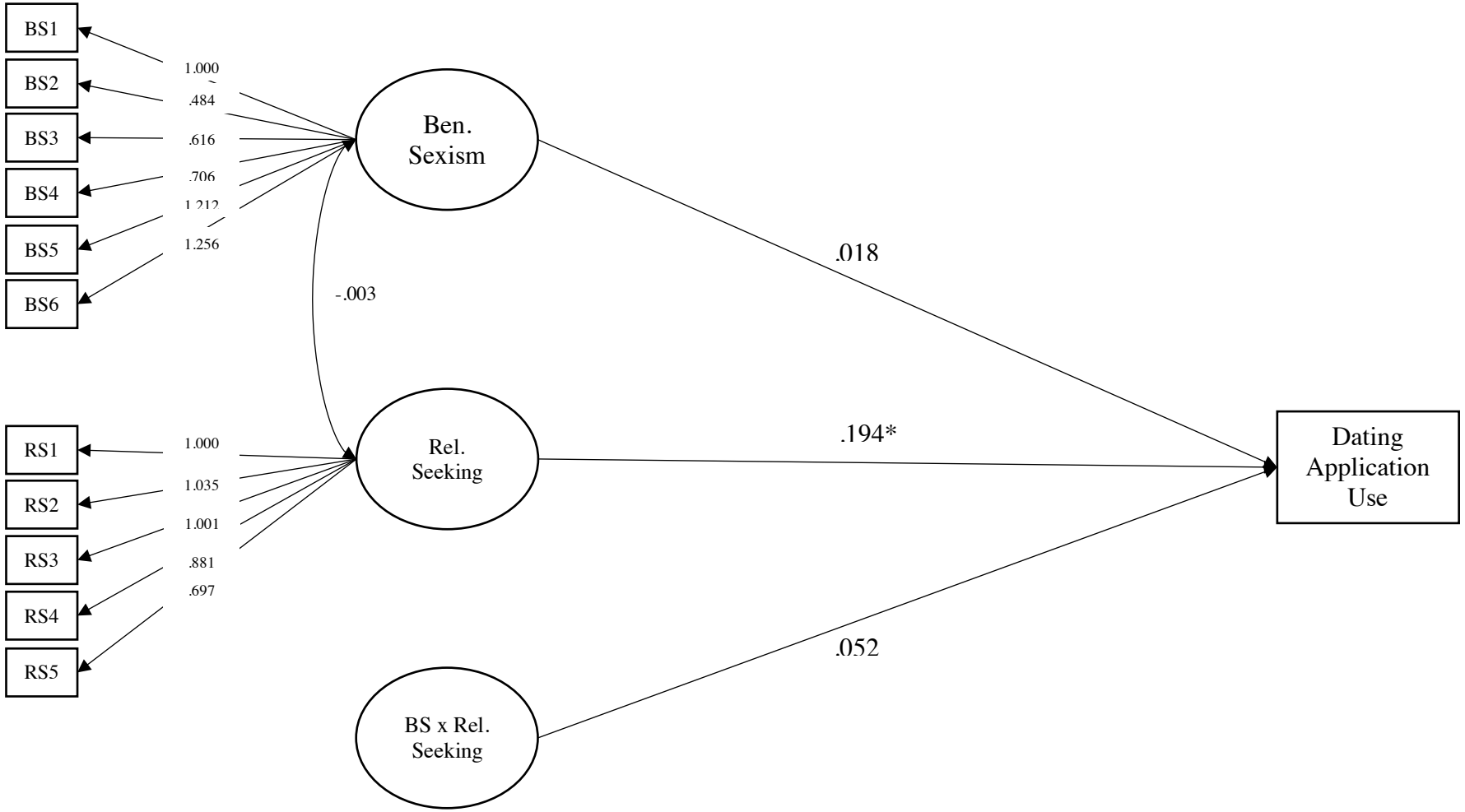
Structural Model of Benevolent Sexism, Social Approval Motives, and their Interaction on Dating Application Use (Hypothesis 3).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. Error terms have been omitted in favour of brevity.

Figure 2

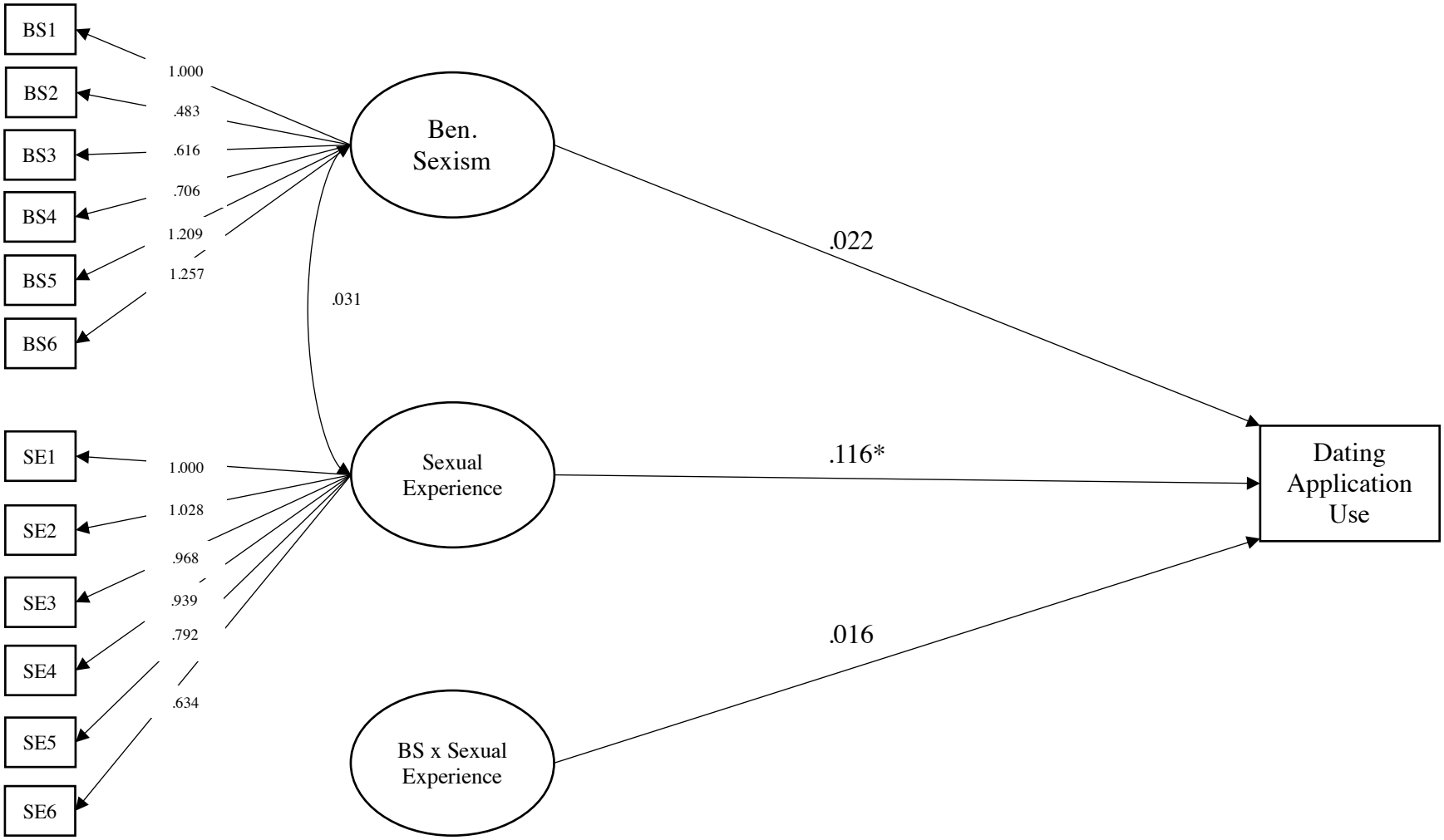
Structural Model of Benevolent Sexism, Relationship Seeking Motives, and their Interaction on Dating Application Use (Hypothesis 4).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. Error terms have been omitted in favour of brevity.

Figure 3

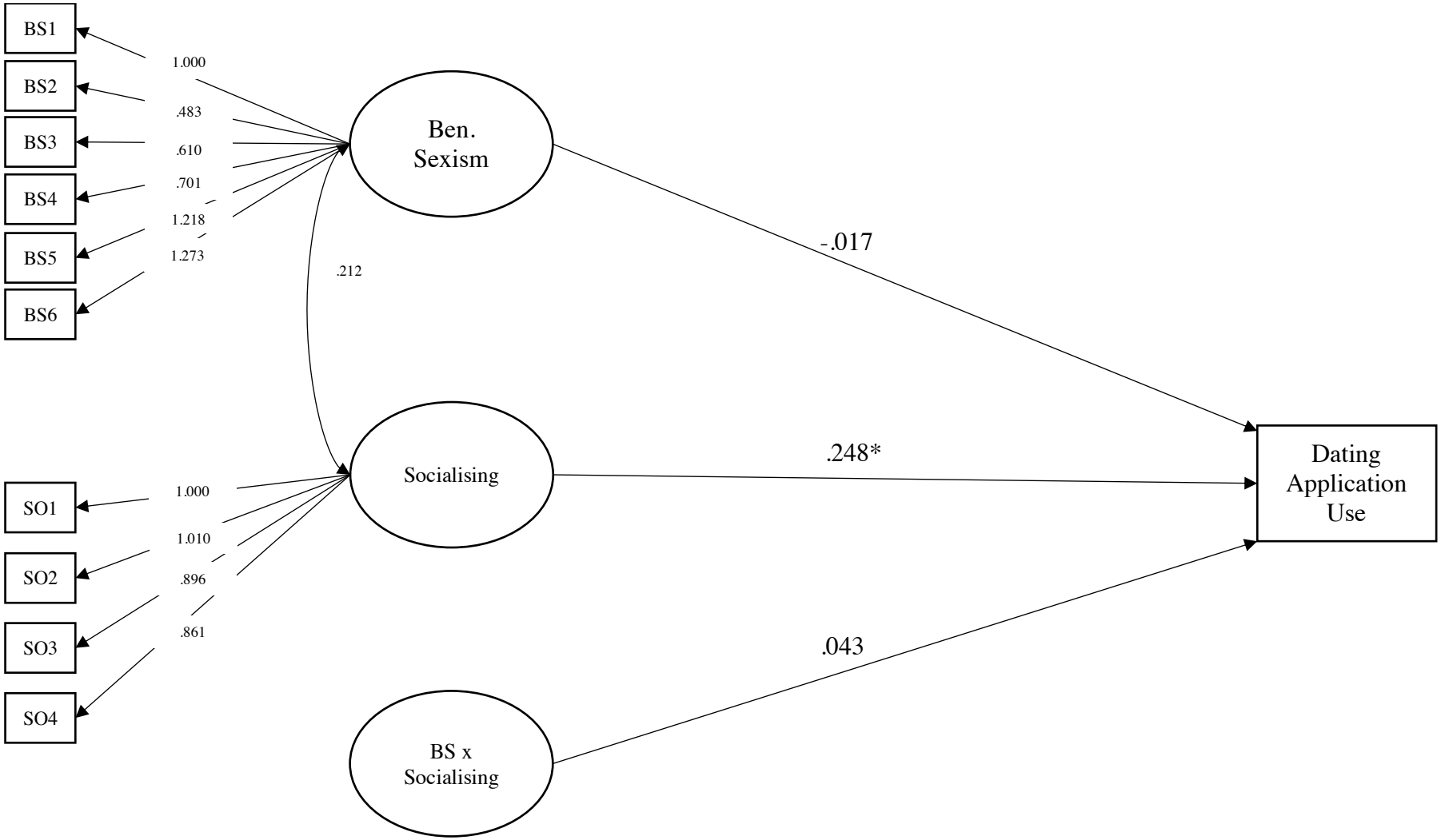
Structural Model of Benevolent Sexism, Sexual Experience Motives, and their Interaction on Dating Application Use (Hypothesis 5).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. Error terms have been omitted in favour of brevity.

Figure 4

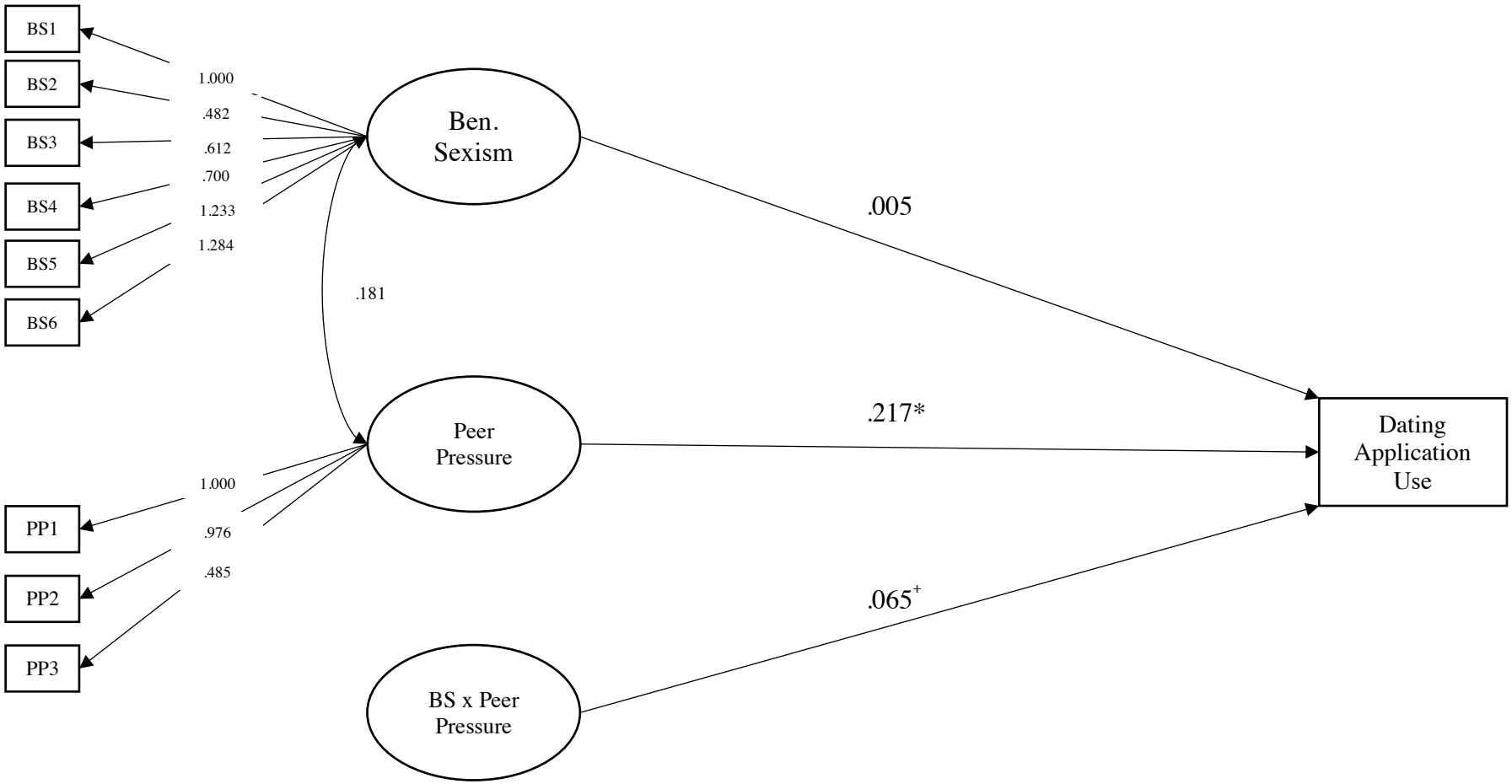
Structural Model of Benevolent Sexism, Socialising Motives, and their Interaction on Dating Application Use (Hypothesis 6).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. Error terms have been omitted in favour of brevity.

Figure 5

Structural Model of Benevolent Sexism, Peer Pressure Motives, and their Interaction on Dating Application Use (Hypothesis 7).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. + = $p < .10$. Error terms have been omitted in favour of brevity.

Table 14

Standardised Estimates from Structural Equation Modelling of Benevolent Sexism, Social Approval, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Benevolent Sexism	-.030 (.037)	-.091	.032	-.790	.429	.970
Social Approval	.235 (.031)	.184	.286	7.557	<.001	1.265
Benevolent Sexism X Social Approval	.004 (.032)	-.048	.056	.131	.896	1.008

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 15

Standardised Estimates from Structural Equation Modelling of Benevolent Sexism, Relationship Seeking, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Benevolent Sexism	.018 (.035)	-.040	.075	.500	.617	1.018
Relationship Seeking	.194 (.030)	.144	.244	6.422	<.001	1.214
Benevolent Sexism X Relationship Seeking	.052 (.033)	--.002	.107	.1571	.116	1.053

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 16

Standardised Estimates from Structural Equation Modelling of Benevolent Sexism, Sexual Experience, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Benevolent Sexism	.022 (.034)	-.034	.078	.639	.523	1.022
Sexual Experience	.116 (.033)	.062	.170	3.542	<.001	1.123
Benevolent Sexism X Sexual Experience	.016 (.034)	-.041	.072	.456	.649	1.016

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 17

Standardised Estimates from Structural Equation Modelling of Benevolent Sexism, Socialising, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Benevolent Sexism	-.017 (.036)	-.076	.041	-.488	.626	.983
Socialising	.248 (.035)	.191	.305	7.142	<.001	1.281
Benevolent Sexism X Socialising	.043 (.033)	-.011	.098	1.300	.194	1.044

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 18

Standardised Estimates from Structural Equation Modelling of Benevolent Sexism, Peer Pressure, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Benevolent Sexism	.005 (.036)	-.054	.065	.145	.885	1.005
Peer Pressure	.217 (.031)	.166	.268	7.029	<.001	1.242
Benevolent Sexism X Peer Pressure	.065 (.036)	-.006	.125	1.799	.072	1.067

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Hostile Sexism.

Hostile Sexism and Social Approval. Hypothesis 8 suggested that the relationship between hostile sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse social approval motivations more strongly, the relationship between hostile sexism and dating application use would be more positive. This hypothesis was tested by analysing the path model depicted in Figure 6. As shown in Table 19, all the structural paths were significant except the paths from hostile sexism to dating application use and from the interaction term to dating application use. These paths were near zero (ßs = .012 and .033, *p*s > .05). This result does not support hypothesis 8.

Hostile Sexism and Relationship Seeking. Hypothesis 9 suggested that the relationship between hostile sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use would be less positive. This hypothesis was tested by analysing the path model depicted in Figure 7. As shown in Table 20, hostile sexism was suggested to have a significant main effect (ß = .066, $p = .046$), the path from the interaction term to dating application use was not significant, with a path estimate near zero (ß = .033, $p > .05$). This result does not support hypothesis 9.

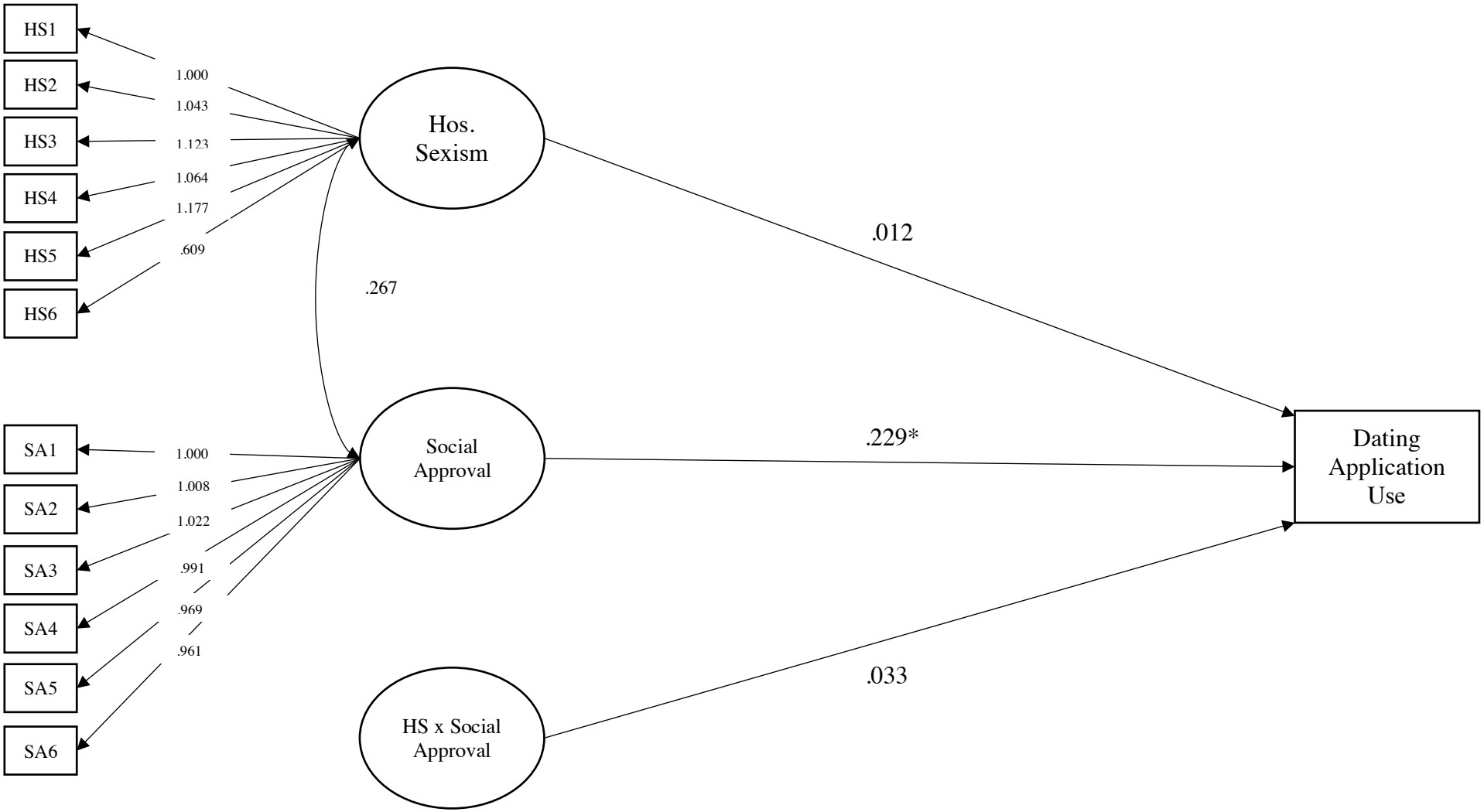
Hostile Sexism and Sexual Experience. Hypothesis 10 suggested that the relationship between hostile sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use would be more positive. This hypothesis was tested by analysing the path model depicted in Figure 8. As shown in Table 21, all the structural paths were significant except the paths from hostile sexism to dating application use. This path was near zero (ß = .036, $p > .05$). The path from the interaction term to dating app use was significant (ß = .076, $p = .017$). The effect of a one-standard deviation increase in hostile sexism on the log-odds of dating app use is itself 0.076 units larger for every one-standard deviation increase in sexual experience motives (and holding gender, religiosity, relationship status, self-esteem, and ethnicity constant). This result supports hypothesis 10.

Hostile Sexism and Socialising. Hypothesis 11 suggested that the relationship between hostile sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse socialising motivations more strongly, the relationship between hostile sexism and dating application use would be more positive. This hypothesis was tested by analysing the path model depicted in Figure 9. As shown in Table 22, all the structural paths were significant except the paths from hostile sexism to dating application use and from the interaction term to dating application use. These paths were near zero (ßs = .041 and .041, *p*s > .05). This result does not support hypothesis 11.

Hostile Sexism and Peer Pressure. Hypothesis 12 suggested that the relationship between hostile sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse peer pressure motivations more strongly, the relationship between hostile sexism and dating application use would be more positive. As shown in Figure 10 and Table 23, all the structural paths were significant except the paths from hostile sexism to dating application use and from the interaction term to dating application use. These paths were near zero (ßs = .043 and .026, *p*s > .05). This result does not support hypothesis 12.

Figure 6

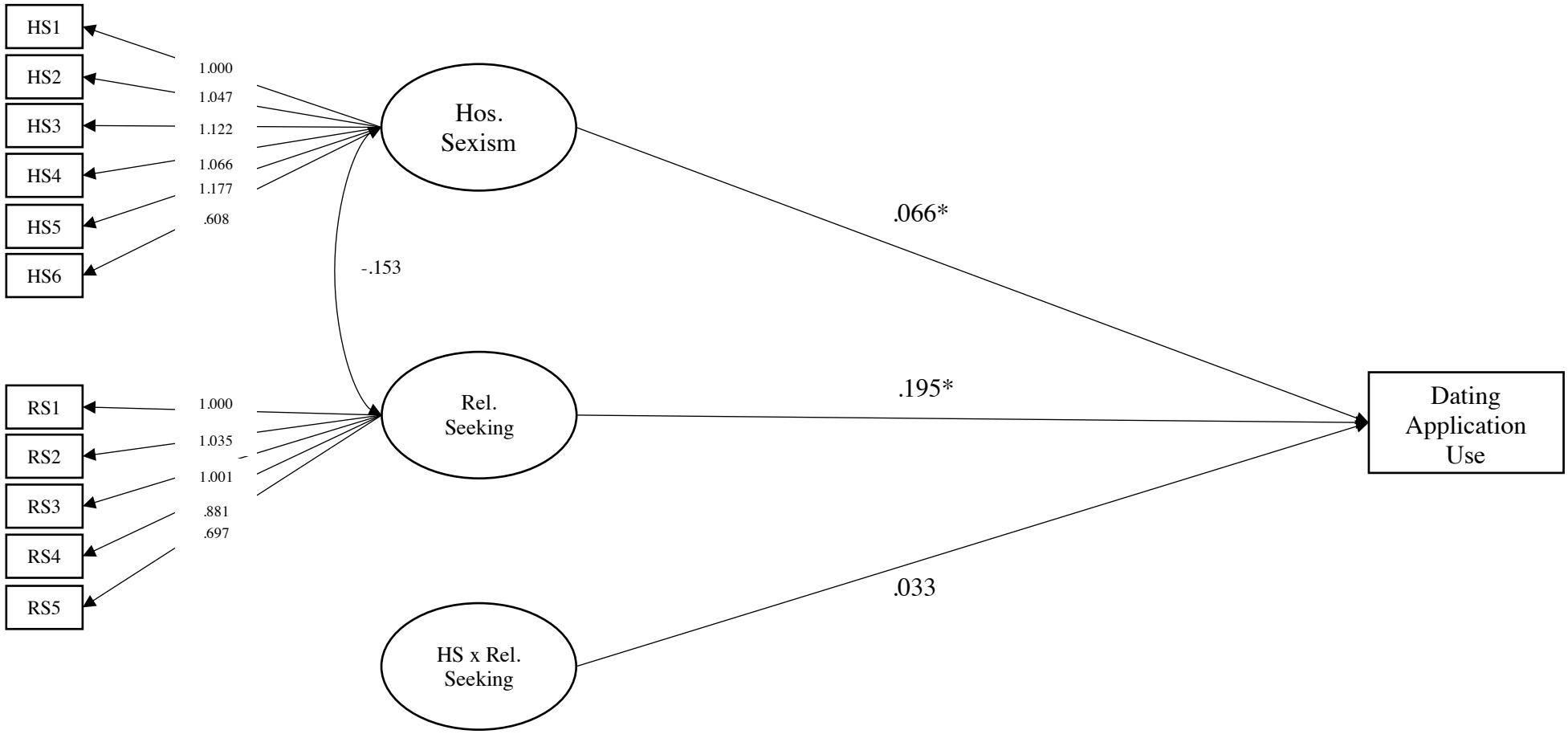
Structural Model of Hostile Sexism, Social Approval Motives, and their Interaction on Dating Application Use (Hypothesis 8).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. + = $p < .10$. Error terms have been omitted in favour of brevity.

Figure 7

Structural Model of Hostile Sexism, Relationship Seeking Motives, and their Interaction on Dating Application Use (Hypothesis 9).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. + = $p < .10$. Error terms have been omitted in favour of brevity.

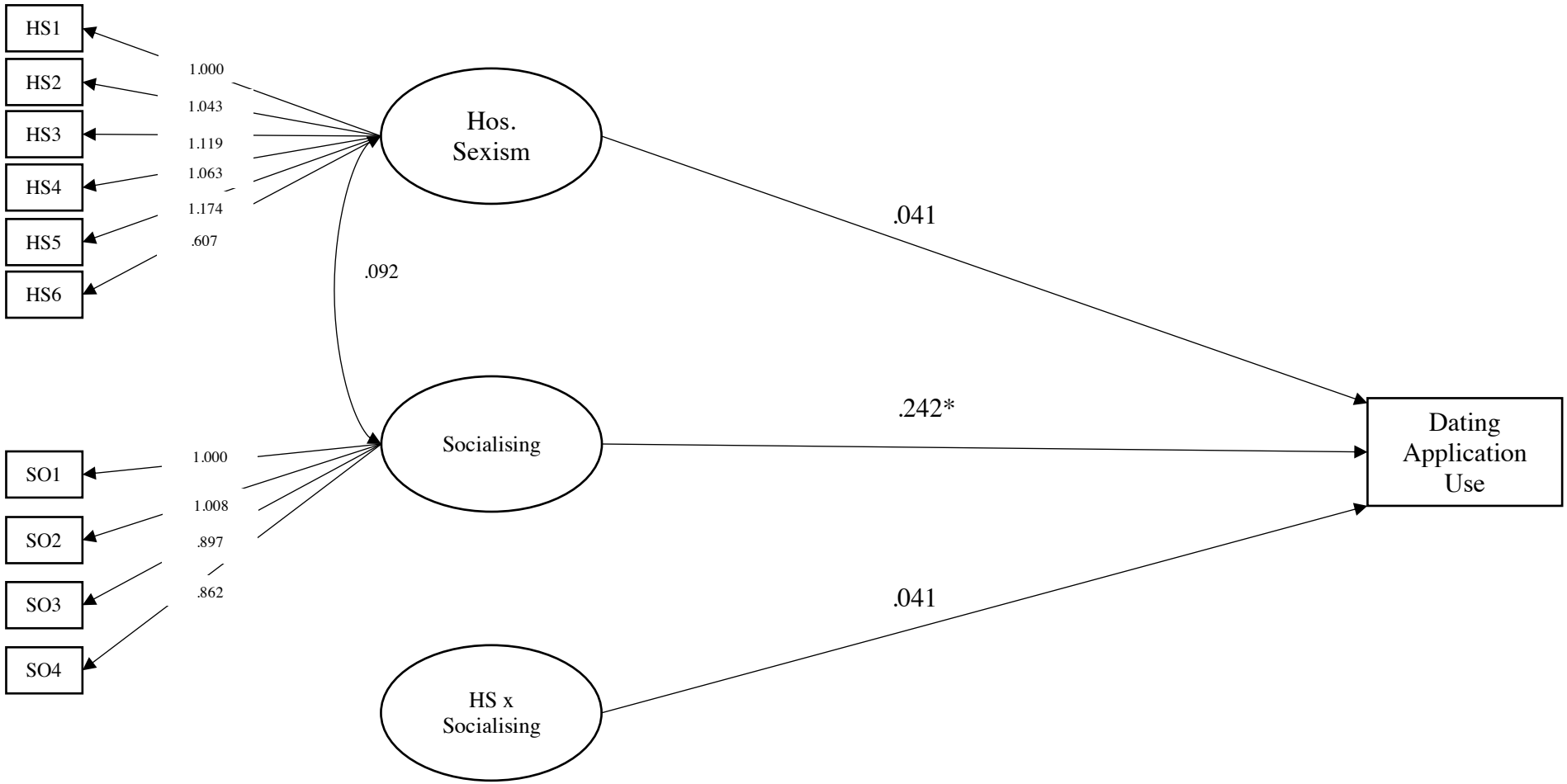
Figure 8

Structural Model of Hostile Sexism, Sexual Experience Motives, and their Interaction on Dating Application Use (Hypothesis 10).

Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. + = $p < .10$. Error terms have been omitted in favour of brevity.

Figure 9

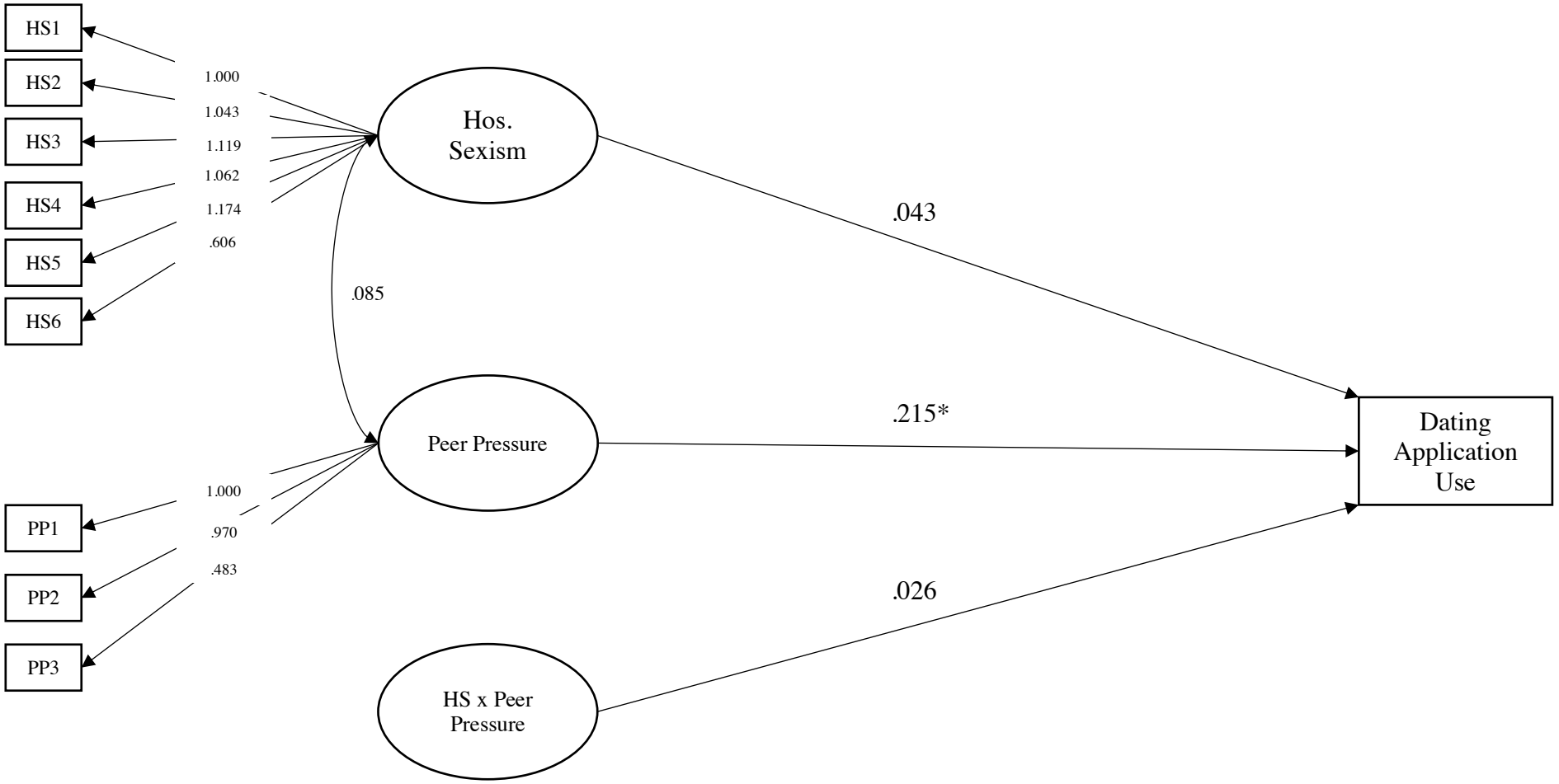
Structural Model of Hostile Sexism, Socialising Motives, and their Interaction on Dating Application Use (Hypothesis 11).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. + = $p < .10$. Error terms have been omitted in favour of brevity.

Figure 10

Structural Model of Hostile Sexism, Peer Pressure Motives, and their Interaction on Dating Application Use (Hypothesis 12).



Note. Covariates Gender, Ethnicity, Sexual Orientation, Self-Esteem, and Religion were included in the model, but are not shown to ensure figure clarity. * = $p < .05$. + = $p < .10$. Error terms have been omitted in favour of brevity.

Table 19

Standardised Estimates from Structural Equation Modelling of Hostile Sexism, Social Approval, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Hostile Sexism	.012 (.034)	-.043	.068	.363	.716	1.012
Social Approval	.229 (.030)	.179	.278	7.625	<.001	1.257
Hostile Sexism X Social Approval	.033 (.031)	-.018	.083	1.063	.288	1.034

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 20

Standardised Estimates from Structural Equation Modelling of Hostile Sexism, Relationship Seeking, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Hostile Sexism	.066 (.033)	.011	.120	1.991	.046	1.068
Relationship Seeking	.195 (.030)	.145	.245	6.440	<.001	1.215
Hostile Sexism X Relationship Seeking	.033 (.030)	--.016	.081	1.109	.268	1.034

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 21

Standardised Estimates from Structural Equation Modelling of Hostile Sexism, Sexual Experience, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Hostile Sexism	.036 (.034)	-.020	.092	1.051	.293	1.037
Sexual Experience	.106 (.034)	.051	.161	3.152	<.001	1.112
Hostile Sexism X Sexual Experience	.076 (.032)	.024	.128	2.393	.017	1.079

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 22

Standardised Estimates from Structural Equation Modelling of Hostile Sexism, Socialising, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Hostile Sexism	.041 (.034)	-.014	.097	1.216	.224	1.042
Socialising	.242 (.034)	.187	.298	7.136	<.001	1.274
Hostile Sexism X Socialising	.041 (.032)	-.011	.093	1.290	.197	1.042

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Table 23

Standardised Estimates from Structural Equation Modelling of Hostile Sexism, Peer Pressure, and their Interaction on Dating Application Use.

Predictor	ß (S.E.)	95% CI Lower	95% CI Upper	Wald	*p*	Odds Ratio
Hostile Sexism	.043 (.033)	-.011	.097	1.322	.186	1.044
Peer Pressure	.215 (.030)	.166	.265	7.134	<.001	1.240
Hostile Sexism X Peer Pressure	.026 (.030)	-.024	.076	.864	.388	1.026

Note. Controlling for Self-esteem, Gender, Relationship Status, Religiosity, and Ethnicity.

Exploratory Analyses

Heterosexual men and women are theorised to be separately guided in different directions with respect to relationship formation. Indeed, prior research has suggested that men are rewarded or encouraged for pursuing multiple casual relationships or "hook-ups" while women are simultaneously punished for such behaviour (Conley et al., 2011). Meanwhile, heterosexual women are guided by ambivalent sexism towards relationally-relevant behaviours and beliefs, positioning women in a role that facilitates long-term committed relationships with them as the emotional driver within those relationships (Barreto & Ellemers, 2005). Moreover, benevolent sexism rewards men who appear to be chivalrous and caring (Bohner et al., 2010) and as such, may also promote the use of dating applications for validation of their benevolent sexism consistent image (e.g., Thompson, 2018). Similarly, heterosexual women who endorse benevolent sexism more strongly may come to desire social connection more strongly and may consider dating applications as an efficient way to meet new people to connect with. I conducted exploratory analyses using Welch's *t*-tests and logistic regressions to test the same 12 hypotheses related to hostile and benevolent sexism and potential interactions with dating application motives in samples of heterosexual men and heterosexual women, respectively. These exploratory analyses were conducted in an attempt to address some of the potential limitations of using the core sample containing those with sexual orientations other than heterosexual, or who identify as genders other than male or female while trying to apply a theoretical model based on binary gendered differences between potential relationship partners. However, given that these analyses were neither pre-registered, nor the main focus of the current thesis, more complex analyses including structural equation modelling were omitted for the sake of brevity.

Heterosexual Men

Table 24

Heterosexual Men's Benevolent and Hostile Sexism by Dating Application Use.

Variable	Dating Application Use	*n*	Mean	Standard Deviation
Benevolent Sexism	No	164	3.729	.075
	Yes	185	3.741	.069
Hostile Sexism	No	164	3.519	1.135
	Yes	185	3.774	1.074

Welch's *T*-Tests.

Benevolent Sexism. A Welch's *t*-test was used to examine the question of whether heterosexual men aged from 18-35 who had or had not used dating applications differ with respect to their endorsement of benevolent sexism. P-P plots revealed that the distributions within each of the two samples appear to be approximately normally distributed, and lie along a straight diagonal line, with no wild deviation. However, Kolmogorov-Smirnov tests suggested that the data violated the normality assumption. Despite Levene's F test providing no evidence to reject a null hypothesis of homogeneity of variance (all ps >.1), a Welch's t-test was used, as per pre-registration.

The Welch's *t*-test of individuals' average score on hostile sexism revealed no statistically significant difference, t (1730.981) = -.113, p = .910, indicating that there was no evidence to reject the null hypothesis for this test and thus I cannot conclude a significant difference in benevolent sexism endorsement between those who had used dating applications and those who had not. Moreover, Cohen's *d* indicator of effect size was 0.167, representing a very small effect size. This result does not support hypothesis 1.

Hostile Sexism. A Welch's *t*-test was used to examine the question of whether individuals aged from 18-35 who had or had not used dating applications differ with respect to their endorsement of hostile sexism. P-P plots revealed that the distributions within each of the two samples appear to be appropriately distributed, and lie along a straight diagonal line, with no wild deviation. However, Kolmogorov-Smirnov tests suggested that the data violated the normality assumption. A Welch's *t*-test was used, as per pre-registration.

The Welch's *t*-test of individuals' average score on hostile sexism revealed a statistically significant difference, t(6753.197) = -2.094, p = .036, suggesting that those heterosexual young men who used dating applications were significantly higher in hostile sexism. Cohen's *d* indicator of effect size was .231, representing a small effect size. This result supports hypothesis 2.

Logistic Regression.

Benevolent Sexism. Logistic regressions were conducted in order to determine the relationship between benevolent sexism and heterosexual male young adults' dating application use, and whether that relationship was moderated by any of five motivations for using dating applications: social approval, relationship seeking, sexual experience, peer pressure, and socialising. Full tables of co-efficients have been omitted for brevity. These tables can be generated by accessing open data and code found in the OSF page.

Benevolent Sexism and Social Approval. Hypothesis 3 suggested that the relationship between benevolent sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse those motivations more strongly (as opposed to weakly), the relationship between benevolent sexism and dating application use will be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, social approval motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use. The interaction of benevolent sexism and social approval was not significant (b = .156, SE = .083, OR= 1.169, p = .060).

Benevolent Sexism and Relationship Seeking. Hypothesis 4 suggested that the relationship between benevolent sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, relationship seeking motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use, nor any significant interaction effect.

Benevolent Sexism and Sexual Experience. Hypothesis 5 suggested that the relationship between benevolent sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be more negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, sexual experience motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status,

religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use, nor any significant interaction effect.

Benevolent Sexism and Socialising. Hypothesis 6 suggested that the relationship between benevolent sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use, nor any significant interaction effect.

Benevolent Sexism and Peer Pressure. Hypothesis 7 suggested that the relationship between benevolent sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be more negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, peer pressure motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use. The interaction of benevolent sexism and social approval was not significant.

Hostile Sexism. Logistic regressions were conducted in order to determine the relationship between hostile sexism and heterosexual male young adults' dating application use, and whether that relationship was moderated by any of five motivations for using dating applications: social approval, relationship seeking, sexual experience, peer pressure, and socialising. Full tables of co-efficients have been omitted for brevity. These tables can be generated by accessing open data and code found in the OSF page.

Hostile Sexism and Social Approval. Hypothesis 8 suggested that the relationship between hostile sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse social approval motivations more strongly, the relationship between hostile sexism and dating application use will be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, social approval motives and their interaction term as the

predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of hostile sexism on dating application use, nor any significant interaction effect.

Hostile Sexism and Relationship Seeking. Hypothesis 9 suggested that the relationship between hostile sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use will be less positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, relationship seeking motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Hostile sexism (b = .235, SE = .110, OR = 1.265, p = .033), demonstrated a significant main effect on the odds of using dating applications, however there was no significant interaction effect and hypothesis 9 is not supported.

Hostile Sexism and Sexual Experience. Hypothesis 10 suggested that the relationship between hostile sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use will be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, sexual experience motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use. The interaction of hostile sexism and sexual experience motives was not significant (b = .132, SE = .070, OR= 1.141, p = .060).

Hostile Sexism and Socialising. Hypothesis 11 suggested that the relationship between hostile sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse socialising motivations more strongly, the relationship between hostile sexism and dating application use will be less positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use, nor any significant interaction effect.

Hostile Sexism and Peer Pressure. Hypothesis 12 suggested that the relationship between hostile sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse peer pressure motivations more strongly, the relationship between hostile sexism and dating application use will be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. There was no significant main effect of benevolent sexism on dating application use, nor any significant interaction effect.

Heterosexual Women

Mean benevolent and hostile sexism scores and their standard deviations based on women's dating application use are shown below in Table 25.

Table 25

Heterosexual Women's Benevolent and Hostile Sexism by Dating Application Use.

Variable	Dating Application Use	*n*	Mean	Standard Deviation
Benevolent Sexism	No	293	3.581	.943
	Yes	202	3.602	.938
Hostile Sexism	No	293	3.069	1.161
	Yes	202	3.065	1.156

Welch's *T*-Tests.

Benevolent Sexism. A Welch's *t*-test was used to examine the question of whether individuals aged from 18-35 who had or had not used dating applications differ with respect to their endorsement of benevolent sexism. P-P plots revealed that the distributions within each of the two samples appear to be appropriately distributed, and lie along a straight diagonal line, with no wild deviation. However, Kolmogorov-Smirnov tests suggested that the data violated the normality assumption. Despite Levene's F test providing no evidence to reject a null hypothesis of homogeneity of variance (all ps >.1), a Welch's *t*-test was used, as per pre-registration.

The Welch's *t*-test of individuals' average score on benevolent sexism revealed no statistically significant difference, $t(1047562.04) = -.239$, $p = .811$, indicating that there was no evidence to reject the null hypothesis for this test and thus I cannot conclude a significant

difference in benevolent sexism endorsement between those who had used dating applications and those who had not. Moreover, Cohen's *d* indicator of effect size was 0.022, representing a very small effect size. This result does not support hypothesis 1.

Hostile Sexism. A Welch's *t*-test was used to examine the question of whether individuals aged from 18-35 who had or had not used dating applications differ with respect to their endorsement of hostile sexism. P-P plots revealed that the distributions within each of the two samples appear to be appropriately distributed, and lie along a straight diagonal line, with no wild deviation. However, Kolmogorov-Smirnov tests suggested that the data violated the normality assumption. Despite Levene's F test providing no evidence to reject a null hypothesis of homogeneity of variance (all ps >.1), a Welch's t-test was used, as per pre-registration.

The Welch's *t*-test of individuals' average score on hostile sexism revealed no statistically significant difference, $t\ (425853.345) = .039, p = .969$, indicating that there was no evidence to reject the null hypothesis for this test and thus I cannot conclude a significant difference in hostile sexism endorsement between those who had used dating applications and those who had not. Moreover, Cohen's *d* indicator of effect size was 0.003, representing a very small effect size. This result does not support hypothesis 2.

Logistic Regression.

Benevolent Sexism. Logistic regressions were conducted in order to determine the relationship between benevolent sexism and heterosexual female young adults' dating application use, and whether that relationship was moderated by any of five motivations for using dating applications: social approval, relationship seeking, sexual experience, peer pressure, and socialising.

Benevolent Sexism and Social Approval. Hypothesis 3 suggested that the relationship between benevolent sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse those motivations more strongly (as opposed to weakly), the relationship between benevolent sexism and dating application use will be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, social approval motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Benevolent sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of benevolent sexism and social approval.

Benevolent Sexism and Relationship Seeking. Hypothesis 4 suggested that the relationship between benevolent sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, relationship seeking motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Benevolent sexism was not associated with a statistically significant main effect on the odds of dating app use. However, the interaction of benevolent sexism and peer pressure (b = .159, SE = .069, OR = 1.173, p = .022) was significant. The effect of a one-unit increase in benevolent sexism on the log-odds of dating app use is itself 0.159 units larger for every one-unit increase in relationship seeking motives (while holding gender, religiosity, relationship status, self-esteem, and ethnicity constant).

Benevolent Sexism and Sexual Experience. Hypothesis 5 suggested that the relationship between benevolent sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be more negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, sexual experience motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Benevolent sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of benevolent sexism and sexual experience motives.

Benevolent Sexism and Socialising. Hypothesis 6 suggested that the relationship between benevolent sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be less negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Benevolent sexism was not associated with a statistically

significant main effect on the odds of dating app use, nor was the interaction of benevolent sexism and socialising motives.

Benevolent Sexism and Peer Pressure. Hypothesis 7 suggested that the relationship between benevolent sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse those motivations more strongly, the relationship between benevolent sexism and dating application use will be more negative. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and benevolent sexism, peer pressure motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Benevolent sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of benevolent sexism and peer pressure motives.

Hostile Sexism. Logistic regressions were conducted in order to determine the relationship between hostile sexism and heterosexual female young adults' dating application use, and whether that relationship was moderated by any of five motivations for using dating applications: social approval, relationship seeking, sexual experience, peer pressure, and socialising.

Hostile Sexism and Social Approval. Hypothesis 8 suggested that the relationship between hostile sexism and dating application use would be moderated by social approval motives, and that for individuals who endorse social approval motivations more strongly, the relationship between hostile sexism and dating application use will be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, social approval motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Hostile sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of hostile sexism and peer pressure motives.

Hostile Sexism and Relationship Seeking. Hypothesis 9 suggested that the relationship between hostile sexism and dating application use would be moderated by relationship seeking motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use will be less positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, relationship seeking motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status,

religiosity, and self-esteem were entered as covariates. Hostile sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of hostile sexism and peer pressure motives.

Hostile Sexism and Sexual Experience. Hypothesis 10 suggested that the relationship between hostile sexism and dating application use would be moderated by sexual experience motives, and that for individuals who endorse relationship seeking motivations more strongly, the relationship between hostile sexism and dating application use will be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, sexual experience motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Hostile sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of hostile sexism and peer pressure motives.

Hostile Sexism and Socialising. Hypothesis 11 suggested that the relationship between hostile sexism and dating application use would be moderated by socialising motives, and that for individuals who endorse socialising motivations more strongly, the relationship between hostile sexism and dating application use will be less positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Hostile sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of hostile sexism and peer pressure motives.

Hostile Sexism and Peer Pressure. Hypothesis 12 suggested that the relationship between hostile sexism and dating application use would be moderated by peer pressure motives, and that for individuals who endorse peer pressure motivations more strongly, the relationship between hostile sexism and dating application use will be more positive. This hypothesis was tested by conducting a logistic regression with dating application use as the outcome and hostile sexism, socialising motives and their interaction term as the predictors. Gender, ethnicity, sexual orientation, relationship status, religiosity, and self-esteem were entered as covariates. Hostile sexism was not associated with a statistically significant main effect on the odds of dating app use, nor was the interaction of hostile sexism and peer pressure motives.

Discussion

The hypotheses of the current research are again presented below. Table 26 summarises the extent to which the results of the current study support these hypotheses.

1. People who use dating applications will demonstrate lower levels of benevolent sexism.
2. People who use dating applications will demonstrate higher levels of hostile sexism.
3. The relationship between benevolent sexism and dating application use will be moderated by level of social approval motivations.
    a. For individuals who endorse greater social approval motivations, the relationship between benevolent sexism and dating application use will be *less* negative.
4. The relationship between benevolent sexism and dating application use will be moderated by level of relationship seeking motivations.
    a. For individuals who endorse greater relationship seeking motivations, the relationship between benevolent sexism and dating application use will be *less* negative.
5. The relationship between benevolent sexism and dating application use will be moderated by level of sexual experience motivations.
    a. For individuals who endorse greater sexual experience motivations, the relationship between benevolent sexism and dating application use will be *more* negative.
6. The relationship between benevolent sexism and dating application use will be moderated by level of socialising motivations.
    a. For individuals who endorse greater socialising motivations, the relationship between benevolent sexism and dating application use will be *less* negative.
7. The relationship between benevolent sexism and dating application use will be moderated by level of peer pressure.
    a. For individuals who endorse greater peer pressure motivations, the relationship between benevolent sexism and dating application use will be *more* negative.
8. The relationship between hostile sexism and dating application use will be moderated by level of social approval motivations.

    a. For individuals who endorse greater social approval motivations, the relationship between hostile sexism and dating application use will be *more* positive.

9. The relationship between hostile sexism and dating application use will be moderated by level of relationship seeking motivations.
    a. For individuals who endorse greater relationship seeking motivations, the relationship between hostile sexism and dating application use will be *less* positive.
10. The relationship between hostile sexism and dating application use will be moderated by level of sexual experience motivations.
    a. For individuals who endorse greater sexual experience motivations, the relationship between hostile sexism and dating application use will be *more* positive.
11. The relationship between hostile sexism and dating application use will be moderated by level of socialising motivations.
    a. For individuals who endorse greater socialising motivations, the relationship between hostile sexism and dating application use will be *less* positive.
12. The relationship between hostile sexism and dating application use will be moderated by level of peer pressure.
    a. For individuals who endorse greater peer pressure motivations, the relationship between hostile sexism and dating application use will be *more* positive.

Table 26

Summary Table of Hypothesis Support.

	Analysis Set		
Hypothesis	Pre-Registered	Heterosexual Men Exploratory	Heterosexual Women Exploratory
One	Unsupported	Unsupported	Unsupported
Two	Unsupported	**Supported**	Unsupported
Three	Unsupported	Unsupported	Unsupported
Four	Unsupported	Unsupported	**Supported**
Five	Unsupported	Unsupported	Unsupported
Six	Unsupported	Unsupported	Unsupported
Seven	Unsupported	Unsupported	Unsupported
Eight	Unsupported	Unsupported	Unsupported
Nine	Unsupported	Unsupported	Unsupported
Ten	**Supported**	Unsupported	Unsupported
Eleven	Unsupported	Unsupported	Unsupported
Twelve	Unsupported	Unsupported	Unsupported

Note. Hypotheses 1 & 2: Welch's *t*-test, Hypotheses 3-12: Logistic Regression (all analyses) and Structural Equation Modelling (Pre-registered analyses).

Overview

The current study investigated whether complementary attitudes regarding the distribution of power within intimate relationships impacts dating application use among young adults, and whether various motives for using dating applications—such as relationship seeking or sexual experience—play any role in the relationship between the two. To do this, I employed a cross-sectional, self-report questionnaire method which was quantitative in design. This chapter opens with a summary of the findings of preliminary analyses regarding the role of ambivalent sexism on dating application use and is followed by findings related to the role of moderating motives for dating application use. Potential limitations are considered, and suggestions for future research considerations are presented. Finally, an executive summary is presented, aiming to capture the key points of the research, and consider the clinical implications of the study's conclusions.

The results here were not able to demonstrate the role of sexist based ideologies in shaping the ways young people think about and engage with dating applications. Individuals who more strongly endorsed hostile sexist attitudes which suggest women as threats to interpersonal power were no more likely to use dating applications. This study was one of the first to investigate possible links between the association of sexist attitudes and dating application use, and if those associations were impacted by common motives given for engaging with dating applications. The relationships of benevolent and hostile sexism on dating application use were unimpacted by motives of social approval, relationship seeking, peer pressure, and socialising. There was some evidence to suggest that the relationship between hostile sexism and dating application use was itself impacted by sexual experience motives. These results advance our understandings of the ways young adults engage with dating applications, such that sexist attitude endorsement largely does not appear to impact individuals' dating application use. I discuss the results in more depth and consider the importance and novelty of the findings next.

Hostile Sexism

One of the primary central aims of the current study was to extend previous research on ambivalent sexism to investigate whether hostile sexism played a role in young adults' engagement with dating applications. In particular, the study was designed to directly test (1) whether those who used dating applications demonstrated higher levels of hostile sexism endorsement, and (2) whether the relationship between young adults' dating application use and their levels of hostile sexism endorsement was moderated by some common motivations people give for using dating applications (Timmermans & De Caluwé, 2017).

Despite an increasing number of studies demonstrating the presence of hostile sexism in the form of 'toxic masculinity' (Hess & Flores, 2018) and unhelpful displays of interpersonal power within dating applications (Hall & Canterberry, 2011), the current study found limited support for a main effect of hostile sexism in dating application engagement. Contrary to the hypothesised effects, the analyses presented in the current study found almost no support for a main effect of hostile sexism on dating applications use across the analyses employed (Welch's *t*-test, logistic regression, or structural equation modelling). Moreover, none of social approval, relationship seeking, socialising, nor peer pressure motives were found to significantly impact the relationship between hostile sexism and dating application use. One finding that did follow the hypothesised effect related to hostile sexism and its interaction with sexual experience motives.

The effect of individuals' endorsement of hostile sexism on their use of dating applications became more positive as sexual experience motive endorsement increased. Such a finding may be consistent with prior research suggesting that dating applications rely on the perception of men's and women's roles in society. Indeed, Illouz's (2007) assertion that dating applications create a competitive environment based on a sexual marketplace aligns with the idea that men's and women's roles in society are impacted by a struggle between a need for intimacy and the need for interpersonal relational power. Dating applications' intensified focus on physical appearance and relational economics would seem to appeal to those who endorse hostile sexism. However, the results of the current study appear to contradict the assumptions afforded by a metaphor of a sexual marketplace, suggesting that the ideals and prescriptions laid out in hostile sexism ideologies—creating an intensified focus on physical appearance standards, especially for women (Baumeister and Vohs, 2004; Dobson, 2013; Salter, 2016)—make dating applications a viable way to engage in relationship formation. Indeed, the current analyses found virtually no support for a main effect of hostile sexism on the likelihood of dating application use.

It appears that for some young adults who use dating applications, the prospect of increased sexual experience is a significant amplifier of the impact of their hostile sexism endorsement. As prior research has suggested, men who endorse hostile sexism are afforded social capital from having more extensive sexual experience, and thus more positive beliefs about men's casual sex and sexual promiscuity (Danube et al., 2014). The results found here appear to provide very limited alignment with the assertion that hostile sexism presents dating applications as a domain typified by competition for social resources and thus power (Illouz, 2007). Indeed, as individuals endorsed sexual experience motives more strongly, the effect of their endorsement of hostile sexism on the odds of dating application use became stronger. Dating applications also seem to present a unique opportunity for those who endorse hostile sexism. Dating applications, and their ability to facilitate exchanges with partners that relieve the need for sexual intimacy and momentary closeness without the other requirements of a romantic relationship, would seemingly be a significant draw for those who endorse hostile sexism, particularly men, although this was not necessarily supported by the lack of strong main effects within the pre-registered analyses.

The current study is one of a few to examine whether gendered power dynamics impact the use of dating applications, to illustrate that hostile sexism more strongly impacts the use of dating applications as individuals' endorsement of sexual experience motives

increases. Prior research has connected dating applications with 'toxic masculinity' (Braziel, 2015) and traditional courtship strategies (La France, 2010). However, prior research had not yet considered the theoretical underpinnings driving these behaviours. Importantly, this study has attempted to apply a theory that has been demonstrated in a number of other relationship behaviours and settings to one example of a process of relationship formation. This study hypothesised that sexist attitudes and the behaviours typified by them may impact engagement in currently popular methods of pursuing new relationships. However, the findings presented here position such a statement as significantly tentative, if not entirely inaccurate.

While the interaction between hostile sexism and sexual experience in predicting dating application use was found to be significant, each of the other hypothesised motive interactions with hostile sexism were not. That is, statistical support for the hypothesised effects were not apparent in either of the logistic regressions or structural models. Indeed, the interactions of each of social approval, relationship seeking, peer pressure, and socialising with hostile sexism (hypotheses 3,4,6, and 7) generated non-significant results, often with near-zero parameter estimates, or confidence intervals overlapping with zero and all with *p*-values above .05. It is possible that the original hypotheses did not accurately capture the theory linking hostile sexism with these moderators, and as such made it difficult to test their relationship in an effective manner. Moreover, it is also possible that other procedures of testing individuals' motives for using dating applications—such as longitudinal analyses of the effects of exposure to hostile sexism on dating application engagement allowing for stronger causational inference —may have proven a more robust test of the hypotheses, given the difficulties of making causational inferences based on cross-sectional data.

Similarly, it is also possible that the theory applied in generating the hypotheses tested was not at all accurate, but that in actuality the only motive relevant to the relationship between hostile sexism and dating application use was the sexual experience motive. That is, it may be that the theory linking hostile sexism with the other four motives was incorrect or not relevant. For example, while hostile sexism is thought to punish women who promote their bodies (Rudman, 1998), and reward men who have had numerous sexual encounters (Allison & Risman, 2013), it may not relate to their use of dating applications for social approval motives in that they may receive those rewards elsewhere, and as such not relate at all to dating application use. It is also possible that the items used to measure some of the motives did not align in a way that was relevant to the theory driving the hypotheses. For

example, the items measuring social approval are largely based on gaining self-validation of appearance through dating applications. For those women who endorse hostile sexism more strongly, self-promotion would appear to have more consequences than rewards (Calogero & Jost, 2011), and as such would be less likely to be endorsed. Other items which captured slightly different social approval motives—for example an item that sought social approval for relationship behaviours—may have been more theoretically consistent and thus led to different results.

Benevolent Sexism

An additional aim of the current study was to extend previous research on ambivalent sexism, investigating whether the more subjectively positive form of sexism—benevolent sexism—played a role in young adults' engagement with dating applications. In particular, the study was designed to directly test (1) whether those who used dating applications demonstrated higher levels of benevolent sexism endorsement, and (2) whether the relationship between young adults' dating application use and their levels of benevolent sexism endorsement was moderated by some common motivations people give for using dating applications (Timmermans & De Caluwé, 2017).

It was predicted that those who endorsed benevolent sexism more strongly would be less likely to use dating applications. However, the findings from the current study found no support for this hypothesis. Indeed, the findings from the core pre-registered analyses in the current study demonstrated no support for a statistically significant main effect of benevolent sexism on dating applications. That is, those who used dating applications did not significantly differ in their levels of benevolent sexism. Moreover, I predicted moderation effects that were largely unsupported by our analyses. That is, I predicted each of social approval, relationship seeking, and socialising motives for using dating applications to make the relationship between benevolent sexism and dating application use *less* negative. However, the current study found no support for such hypotheses. The current study also predicted that when those who endorsed benevolent sexism more strongly also endorsed motives of sexual experience gains more strongly, the relationship between benevolent sexism and dating application use would be *more* negative, such that they would be even less likely to use dating applications. Again, no support for the hypothesis was found.

A statistically significant connection between benevolent sexism and dating application use could not be confirmed in the pre-registered analyses of the current study. Prior research on benevolent sexism has shown that stronger endorsement of the attitudes and

ideals laid out by benevolent sexism guide women towards a relational focus, shaping their efforts and energies towards relationship pursuits and pro-relationship behaviour (Hammond & Overall, 2015). Moreover, benevolent sexism is thought to off-set the negativity of typical hostile sexism—dictating that men revere, cherish, and act chivalrously towards women in order to facilitate closeness, connection, and intimacy (Glick & Fiske, 1996). Thus, it seemed plausible that men who endorse benevolent sexism, could seek to make the most of dating applications' matching utilities to find their 'missing piece', while women sought to find their chivalrous protector. However, it seems that benevolent sexism may not be tied strongly enough to dating application use to demonstrate such a theory.

Moreover, the hypothesised interaction between benevolent sexism and relationship seeking on dating application use was not supported. Indeed, prior research has shown that stronger endorsement of benevolent sexism has been linked to a stronger focus on relationships and relationship-oriented behaviour (Choi et al., 2009; Fernandez et al., 2007). Particularly for women, endorsement of benevolent sexism has been associated with lowered performance on individual task assessments (Dardenne et al., 2013). Such a focus would seem to make it more likely that those who endorse benevolent sexism more strongly would be more likely to use dating applications for relationship seeking. However, it appears that perhaps dating applications themselves are not unique enough in their facilitation of relationship seeking to demonstrate the hypothesised effects in a full sample including men, those of non-binary gender, and non-heterosexual sexual orientations. That is, perhaps this specific process of relationship formation is not quite different enough from in-person or other forms of relationship pursuit to demonstrate such an effect. Similarly, it is possible that the way in which the current study attempted to capture the theory behind this relationship has not been precise enough to show the hypothesised effect. That is, it may be that the relationship between benevolent sexism, relationship seeking, and dating application use exists, however, the outcome of just engagement with dating applications may be too broad to capture the relationship properly.

In sum, the results of the core pre-registered analyses presented no support for the vast majority of hypothesised effects regarding hostile and benevolent sexism. Overall, there was limited support for a main effect of either hostile or benevolent sexism. However, those who endorse hostile sexism more strongly were more likely to use a dating application particularly if they endorsed the use of dating applications to enhance the pursuit of sexual experience. I conducted exploratory analyses using Welch's *t*-tests and logistic regressions to

test the same 12 hypotheses related to hostile and benevolent sexism and dating application motives in samples of heterosexual men and heterosexual women, respectively. These analyses were an attempt to address some of the potential limitations of using the core sample containing those with sexual orientations other than heterosexual, or who identify as genders other than male or female.

Exploratory Analyses

Applying a gender-based theory on the power dynamics of relationships proves inherently difficult when including participants in the research whose relationships are not constructed in the same way as the theory suggests. For instance, a couple comprised of two gay men is less likely to experience the same gendered pressures regarding power (Cowie et al., 2019). Moreover, ambivalent sexism has been theorised to guide men and women in opposite directions in some relationship behaviours. As such, using them in the same sample (and then also investigating motives in which men and women are likely to be influenced in opposite directions) may have impacted the ability to detect results. In an attempt to address these potential limitations of using the core sample, I conducted exploratory analyses using Welch's *t*-tests and logistic regressions to test the same hypotheses related to hostile and benevolent sexism and potential interactions with dating application motives in samples of heterosexual men and heterosexual women.

Hostile Sexism

Heterosexual Women. The exploratory analyses examined the same hypotheses as the core pre-registered analyses. For heterosexual women, a similar pattern to those of the core analyses emerged: that the relationship between hostile sexism and dating application use was not dependent on the levels of social approval, relationship seeking, sexual experience, socialising, or peer pressure motive endorsement. Moreover, there was no main effect of hostile sexism on dating application use. These results would seem to fit well with theory regarding both women's endorsement of hostile sexism (Sibley & Becker, 2012), and their reported experiences of relationship formation on dating applications (Lopes & Vogel, 2017). Indeed, women stand to gain very little from endorsement of hostile sexism (perhaps indicated by their lower scores compared to men on hostile sexism endorsement), beyond the benefits offered to them of benevolent sexism (Hammond et al., 2014). Therefore, it seems reasonable that perhaps heterosexual women's use of dating applications is unaffected by their level of hostile sexism endorsement, or other factors' influence on their use of dating applications overrides any potential impact of hostile sexism. This finding would be

consistent with prior research suggesting that women are punished for challenging men's power dominance in relationships. Specifically, it is perhaps unsurprising that sexual experience motives did not impact the relationship between hostile sexism and dating application use, given that hostile sexism endorses punishing women who pursue multiple sexual encounters (Allison & Risman, 2013).

Lower endorsement of hostile sexism by heterosexual women compared to the full sample may also make it difficult to find associations between hostile sexism and any of the variables included in these analyses. Prior research has suggested that perhaps the primary reason for women's endorsement of hostile sexism stems from system justification—that by accepting the rules of the power-imbalanced relationship system they exist within, women are able to better navigate relationships and avoid the punishment that hostile sexism places upon women who diverge (Hammond et al., 2014). Thus, women's endorsement of hostile sexism may be more about avoiding the repercussions of the relational systems in place (Hopkins-Doyle et al., 2019), and pursuing the rewards of endorsing benevolent sexist beliefs. As such, it may be that hostile sexism endorsement does not drive engagement with dating applications for these women.

Heterosexual Men. The exploratory analyses considering the impact of dating application motives on the relationship between heterosexual men's hostile sexism and dating applications found a significant main effect of hostile sexism. That is, the Welch's *t*-test conducted suggested that heterosexual men who used dating applications reported significantly higher levels of hostile sexism endorsement. Previous research has reported women's experiences of dating applications as characterised by displays of toxic masculinity, driven by traditional assertive male courtship strategies (e.g., Lopes & Vogel, 2017). For heterosexual men who endorse hostile sexism, it appears that relationship formation is perceived as a process in which intergroup differences are more prominent. Dating applications appear to represent a competitive environment in which hostile sexist men can pursue social power (Lopes & Vogel, 2017). Previous research on sexual economics has shown that men, especially those who endorse hostile sexism, more strongly endorse the sexual double-standard, encouraging men to pursue casual sex, while punishing women who do the same (Rudman & Fetterolf, 2014). The results here, however, do not support the assertion that those men who use dating applications are more likely to use dating apps and adopt assertive and restricting courtship communication strategies (Sibley & Wilson, 2004).

Rather, these results suggest that hostile sexist heterosexual men may make up a more significant portion of the prospective dating pool for heterosexual women.

Interestingly, despite theoretical support from previous research (e.g., Olmstead et al., 2013), there were no significant interactions between heterosexual men's hostile sexism and dating application use motives on dating application use. Indeed, the interaction between hostile sexism and sexual experience did not meet our requirement for statistical significance. This finding is surprising given the research base described earlier in this section, suggesting that men who endorse hostile sexism may be more likely to use dating applications to acquire a social resource of sexual experience. It is possible that given the smaller number of participants in the heterosexual male sample, a larger sample size may be necessary to demonstrate such an effect. The difficulty in capturing smaller effects within the context of interactions has been considered in previous data science research. Indeed, Busemeyer and Jones (1983) and Aiken and West (1991) suggested that interactions require greater power (and thus sample size) to detect because creation of interaction terms introduces additional error to the interaction term, and thus can have deleterious effects on the detection of moderation effects (McClelland & Judd, 1993). Given that the current study was an observational cross-sectional design, and thus could not assign conditions to observations, it is seemingly possible that increased measurement error in the interaction terms could have necessitated greater sample size in order to detect the hypothesised effects.

Benevolent Sexism

Heterosexual Women. As mentioned above, there was no significant difference in level of benevolent sexism endorsement between those heterosexual women who used dating applications, and those who had not. Furthermore, many of the dating application motives did not impact the relationship between benevolent sexism and dating application use. However, one key finding from the exploratory analyses was that heterosexual women who endorsed benevolent sexism were more likely to use dating applications when they endorsed relationship seeking motives more strongly. As highlighted in the discussion of the core analyses, benevolent sexism guides women towards a focus on relational goals (Hammond & Overall, 2015). Indeed, as heterosexual women endorsed relationship seeking motives more strongly, the impact of their benevolent sexism on the odds of dating application use became more positive. The result here fits with previous research on ambivalent sexism's impact on women's relationship behaviours. That is, previous research has shown that women are less likely to pursue casual sex or hook-ups and are more likely to pursue long-term relationships.

A relational focus and pursuing relational goals in favour of personal goals (Dennan, 2015) fits with the finding that heterosexual women's endorsement of benevolent sexism more strongly impacted their odds of using dating applications as their endorsement of relationship seeking motives increased.

Dating applications appear to become more appealing to heterosexual women as their relationship seeking motives increase. Moreover, as this endorsement increases, it appears that the impact of benevolent sexist ideals becomes more relevant in impacting the odds of using dating applications. Indeed, the access, immediacy, and location-based utility of dating applications present heterosexual women with a large number of potential relationship partners and relatively fast access. However, the results here suggest that benevolent sexism does not impact heterosexual women's use of dating applications by itself. Indeed, the strength of the relationship between heterosexual women's benevolent sexism and dating application use appears dependent on their relationship seeking motives. These women may be more desirable for heterosexual men on dating applications—if they are more motivated to find committed relationships, their beliefs about how they *should* act and be treated in a dating application may be more relevant to their decision making. Such a finding would appear consistent with prior research suggesting that women who are willing to accept complementary roles are seemingly more appealing to sexist men (Chen et al., 2009). In sum, the finding here fits well with previous theory and research regarding the impacts of benevolent sexism on women's relationship behaviours (e.g., Conley et al., 2011; Hammond & Overall, 2015). When heterosexual women endorsed relationship seeking dating application motives, their benevolent sexism endorsement more strongly predicted their use of dating applications. Moreover, the absence of other significant motive interactions highlights the relational self-focus that benevolent sexism promotes in women.

Heterosexual Men. Similar to the analyses looking at hostile sexism, I conducted exploratory analyses to test the theory of ambivalent sexism more accurately with samples of heterosexual men and women, respectively. The exploratory analyses revealed no significant main effects of benevolent sexism on dating application use for men or women. Moreover, despite both social approval (p=.058) and socialising (p=.066) being close to significance, there were no significant interactions of dating application motivations with heterosexual men's benevolent sexism. The lack of interaction effects for heterosexual men's benevolent sexism is interesting, given that the motives tested here seem to align well with previous research exploring characteristic changes in motives across time associated with differing

levels of sexism endorsement (e.g., Dardenne et al., 2013). Social approval's close, but non-significant impact within these analyses again raises the question of sample size with the heterosexual male sample. That is, men's endorsement of benevolent sexism has been suggested to be driven by a need to appear likeable and caring—something which hostile sexism clearly negates (Bohner et al., 2010). Thus, it would seem that heterosexual men who endorse benevolent sexism may potentially be more likely to use a dating application to see how desirable they were or to better ascertain their attractiveness. However, this was not the case in these results. It appears that perhaps there was not a big enough sample size to demonstrate the effects hypothesised. It may also be plausible that these factors were again not strong enough predictors of variance in individuals' use of dating applications, or perhaps dating application use does not represent a specific enough outcome measure of dating application *engagement* in order to test this relationship.

In sum, neither the results of the pre-registered core analyses, nor to a large degree the exploratory analyses, showed support for the hypothesised effects regarding benevolent sexism and dating application use. Exploratory analyses revealed that benevolent sexism may play a role in heterosexual women's dating application use, depending on whether they endorse using those applications for seeking relationships. Such an assertion—that increasing endorsement of relationship seeking motives elevates the effect of benevolent sexism on dating application use, may align with previous research assertions linking benevolent sexism with women's relational focus.

Strengths, Limitations, and Future Research Considerations

The current study holds some key strengths from both a methodological and theoretical point of view. However, it is also important to acknowledge that the current study has limitations and raises important questions for future research. The current research has aimed to provide a novel investigation into the ways that young people engage with dating applications. Indeed, in testing the impacts of ambivalent sexism on dating application use, the current study is one of the first of its kind, expanding an understanding of both the growing field of dating applications research, and providing a new way to explore the impacts of interpersonal gender dynamics. The current study has shown that those young adults who engage in dating applications may be no more likely to endorse hostile sexism than those who do not. Moreover, the current study is amongst the first to explore the potential factors impacting a possible relationship between ambivalent sexism and dating application use, finding extremely limited evidence supporting the idea that the relationship

between sexist beliefs and dating application use was influenced by dating application motives—sexual experience motives was the only motive of the set tested that seemed to significantly change the relationship between hostile sexism and dating application use. The methodological approach to the current study is a key strength. The current study employs a statistical approach that is largely beyond what previous research on these topics have previously employed. Moreover, by using a multi-analysis approach allowing for the testing of robustness of findings across different analysis strategies combined with a relatively large sample size affording relatively high statistical power, the current study has aimed to maximise its ability to make appropriate conclusions about the data. Furthermore, by preregistering our method protocols, I sought to contribute to the practice of scientific psychology, particularly in relation to the need to ensure that analyses and findings are replicable, clear, and valid (Hussey & Hughes, 2019).

In the context of the above strengths, this study also has several limitations that should be acknowledged. Firstly, the generalisability of these findings may be limited by characteristics of the sample as well as the methodological design. Participants were recruited from a convenience sample of individuals wanting to complete surveys/questionnaires. Moreover, many of the sample identified as from either the United States or Britain, two relatively gender-egalitarian countries in which gendered differences in relationship decision-making are perhaps less obvious than in some other countries and cultures (Glick et al., 2000). In these countries, where sexism endorsement has been suggested to be lower than in other countries (Glick et al., 2000), men and women may experience more freedom in relationship formation processes. Previous research has indicated that in developed 21st century societies, women are largely less dependent on men for economic resources. Indeed, findings of sexism research across cultures has indicated that increases in women's empowerment has been associated with decreased gaps in relational attitudes and behaviours (Eagly & Wood, 2005; Lippa, 2009; Schmitt, 2005) and in mate preferences (Eagly & Wood, 1999; Zentner & Mitura, 2012). It is important to note, however, that despite demonstrating strong reliability and validity values in other languages (e.g., Glick et al., 2002; León-Ramírez & Ferrando, 2013; León-Ramírez & Piera, 2014), country of residence may play a potential role in the levels of sexism endorsement, or indeed exposure to sexism, that occurs in participants' contexts. Future research may want to explore whether ambivalent sexism plays a role in dating application use within cultures where women and men have more distinct or refined roles in relationship decision making.

Moreover, whilst our sample was limited to those individuals between the age of 18 and 35, age was collected as a demographic rule out—collected categorically rather than continuously. That is, age was collected in a way to ensure that the sample were all within the same age bracket, rather than collecting age in a way that enabled specific analysis of the age variable. This may have impacted our final sample as there is no current clarity as to whether our sample was comprised largely of those on the younger end of this range—who may be more likely to be looking for relationships—or those on the later end of this range-who are perhaps more likely to already be in relationships or settling down. This lack of clarity with age may have shifted the results in a particular direction without our knowledge, and as such may confound some of our results. For example, prior research has indicated that individuals' endorsement of sexist beliefs shifts across the lifespan (Hammond et al., 2018). Men's endorsement of benevolent sexism has been suggested to increase over time. Women's sexism endorsement has been suggested to demonstrate a U-shaped pattern along with men's hostile sexism endorsement. Therefore, our current sample may be comprised of individuals who may demonstrate differences in sexism endorsement related to age that I did not capture and thus may have impacted our results.

In terms of methodological limitations, it is important to note the difficulty with making causal inferences with cross-sectional data. As mentioned earlier in this thesis, prior methodological research has demonstrated that non-experimental cross-sectional designs are frequently subject to spurious effects due to confounding variables (Asiamah et al., 2019). While I have attempted to rule out some relevant alternative explanations, such as self-esteem, gender, and sexual orientation, due to the correlational nature of the data and the vast amount of possible reasons someone might use a dating application, it is possible that the cross-sectional approach made it difficult to make causational claims. There is a wealth of research that has identified the difficulties of making causational claims from correlational data (e.g., Van der Stede, 2014), given that there is no true way to know for sure that the predictor variables used actually caused the shift in the outcome measured (Nichols, 2007). Indeed, one of the key weaknesses of cross-sectional data is its susceptibility to confounds due to the lack of longitudinal evidence for the effect of variable X on variable Y. With an outcome such as dating application use, there are likely a large number of potential reasons driving the variance in that decision-making; as such, there are a multitude of potential confounding variables. While the current study has employed multivariate analysis methods in order to try to enhance causal inference ability (Asiamah et al., 2019), it must be

acknowledged that the control of confound variables is by no means exhaustive and indeed there may be other potential confounds at play that led to the observed results.

Furthermore, it is possible that the relationships investigated in the current study may have been present but explain such a small amount of the differences in dating application use that they were unable to achieve statistical significance. Indeed, by using a relatively unrefined outcome of dating application use, it is possible that the outcome tested was too broad, and as such may have been difficult to test with precise dependent variables. That is, as alluded to above, the outcome of dating application use is highly likely to have an expansive range of factors—including, for example, personality, other social influences, demographic variables—that may impact use. Thus, an attempt to cross-sectionally infer that relatively precise explanatory variables such as benevolent and hostile sexism impact use of dating applications may have been difficult or may have only explained such a small amount of variance that the relationships could not be shown.

Future research should consider the nature of the hypothesised relationships. That is, the current study has looked at the relationships between sexism and dating application use and whether those relationships are dependent on those individuals' endorsement of dating application motives. However, such a position perhaps overlooks the impact of sexism on those variables, and perhaps thus overlooks an indirect effect of sexism on dating application use via those dating application motives. For instance, as has been explored above, hostile sexism encourages men to pursue sexual relationships, while benevolent sexism simultaneously encourages women to become relationally-focused (Glick & Fiske, 1996). These motives (sexual experience and relationship seeking) have been shown in a small amount of research to reliably predict individuals' use of dating applications (Timmermans and De Caluwé, 2017). Thus, the theory applied in constructing the current study may have been along the right lines, however may have conceptualised the relationships incorrectly, and may be better explained as an indirect mediation effect. The counter to such an assertion, however, would be that the current study found no evidence of a main effect of either hostile or benevolent sexism on dating app use.

The current study has highlighted the need for further research into the factors that influence young adults' use of dating applications. Indeed, given their popularity, and the growing use of mobile technologies to facilitate connection and romantic endeavours, further understanding of how and why people engage in dating applications seems important. The theory explored here may be applied to other aspects of relationships—such as a longitudinal

look at the relationships formed on dating applications, and whether there are differences amongst partners' ambivalent sexism. Moreover, a study similar in design to Bohner et al. (2010) could be conducted to investigate whether there are differences in perceptions of sexist prospective partners (either benevolent or hostile) on dating applications. As discussed in the introduction of this thesis, relationship formation through dating applications offers different avenues for self-presentation and communication; as such, it may give rise to different interpretations of ambivalent sexism than in traditional relationship formation methods. Moreover, further research may continue to investigate factors that influence romantic relationship formation and experience—such as ambivalent sexism—in order to understand how people experience romantic pursuits. For example, one such factor not explored within this thesis is attachment style. The impacts of attachment style from early life are frequently explored within traditional relationship processes (e.g., Cross et al., 2016); however, there is scant research looking at how attachment style might influence individuals' experiences with dating applications.

In sum, dating applications, and the impact of social dynamics upon their use, is a burgeoning psychological research field. In order to better understand young people and their experiences of relationship formation, there is a need to continue conducting research in topics relevant for them if we are to appropriately support them within the clinical field. The current study is an attempt to expand the currently narrow field and has demonstrated how there is still much room for the development of understanding.

Implications for Working as a Clinical Psychologist

The current study explored the potential impacts that gender-based ideologies regarding power distribution within relationships impact young adults' engagement with dating applications. As presented within the literature review of this thesis, ambivalent sexism has been demonstrated many times to impact the ways that young adults conceptualise and behave within relationships. Moreover, the current study has aimed to explore how these sexist ideologies might impact young adults' use of dating applications. Young adults are faced with relational exploration, many for the first time, as they negotiate the transition to adulthood, exploring intimate connection to those outside of the family group (Erikson, 1968). For some, such a time may be negotiated successfully; however for those who struggle, such a time may well lead to difficulties that are both intra- and inter-personal in nature.

While the results of the current study mainly did not support the hypotheses raised, in a broader sense, the current study provides further empirical data relating to young adults' use of dating applications. Such information could be helpful for clinicians in considering the lives of young adults in much the same way that empirical knowledge regarding other developmental issues impact this age group.

Dating applications have rapidly become one of the most common ways of engaging in relationship processes, regardless of the type of relationship. This is perhaps highlighted by almost half of the sample in the current study having used a dating application. I, like many of my clinical psychologist colleagues, have been in a committed long-term relationship since before the days of Tinder, Bumble, and many of the other dating applications we see dominate application stores today. As such, the ways I spoke about and conceptualised the relationship formation process was different than today's young adults. As clinical psychologists, maintaining a strong understanding of the ways people form and maintain relationships is central to the work many of us do with clients all across the lifespan. The current study represented an attempt to add further knowledge about this domain and it would appear that negative results still represent valuable advancement of the clinical literature.

Indeed, perhaps highlighted by the varied endorsement of dating application motives, a clinical factor arising from this research is that young people use dating applications for a variety of reasons—over and above the commonly assumed 'hooking-up' motive (Timmermans & De Caluwé, 2017). The choice to engage with a dating application—as highlighted by the general lack of support for the hypotheses tested here—are likely to be driven by a wide variety of factors. Assuming individuals' intentions when discussing their use of dating applications would thus seem to be a potentially unhelpful means of conceptualising clients' social experiences.

Conclusion

The current study aimed to investigate the possible impacts of ambivalent sexism endorsement on dating application use among those aged 18-35. Moreover, the current study aimed to investigate whether five common dating application use motives moderated any relationships between ambivalent sexism and dating application use. Overall, this study found extremely limited support for hypotheses regarding the impact of benevolent or hostile sexism on dating application use, or the moderating role of common dating application motives. That is, the analyses in the current study found no support for main effects of hostile or benevolent sexism on dating application use, and support for only one of the ten

interaction hypotheses tested. However, this study provides novel evidence that as individuals endorse sexual experience motives for using dating applications more strongly, the impact of their endorsement of hostile sexism on the odds of using dating applications becomes stronger. Moreover, this study provides some of the first evidence that for heterosexual women, the impact of their benevolent sexism endorsement on dating application use becomes positive as their endorsement of relationship seeking motives increases.

The impact of relationships on clinical well-being is well-established throughout clinical and social psychology literature (e.g., Overall et al., 2010), yet our understandings of dating applications and their use is currently limited. The current study has aimed to be among the first to explore the process of dating application engagement among young adults, who find themselves in a developmental stage where relationships—both romantic and otherwise—gain increased importance. The effects explored here highlight the importance of considering interpersonal and intergroup dynamics that young people encounter when exploring dating applications.

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Appendix A

Participant Information Sheet

Title of Project: A Swipe with Authority: Does Ambivalent Sexism Impact Young Adults' Engagement with Dating Applications?

Principal Investigators:
Aramis Dennan supervised by Associate Professor Paul Merrick, Dr Kirsty Ross, and Dr Matt Williams School of Psychology, Massey University.

To the Participant,

My name is Aramis Dennan, I am currently conducting my research for the partial fulfillment of the degree of Doctor of Clinical Psychology at Massey University. I, along with my supervisors, invite you to participate in a study aiming to examine how young people think about and engage in sexual and romantic relationships, and the role that social media plays in those processes. If you have any questions please direct them towards myself, or if you wish, my supervisor Associate Professor Merrick in the School of Psychology (contact details provided above).

Individuals who are aged between 18 and 35 years old and have been involved in sexual or romantic relationshipsand have used a dating application are invited to participate in this research. The research will take around 20 minutes to complete. You may withdraw from this project at any time prior to the submission of your response data.

Participants for this study will be recruited through social media platforms such as Facebook, Instagram, and Twitter; and through on-campus paper advertisements across Massey University campuses. The study hopes to recruit between eight hundred and one thousand participants to attempt to best represent the opinions of the population of interest (young people).

Project Procedures

An online questionnaire will first ask you some demographic items. You will then complete a series of questionnaires related to how you think and feel about yourself, attitudes about sexual and romantic relationships, and dating applications. All responses provided will remain confidential at all times.

Data Management

Please note that your questionnaire responses in this research will be kept strictly confidential. Your online questionnaires will be collected in a password-protected file and only Aramis Dennan and his research supervisors will have access to the data. All data will be stored for 10 years for research purposes but will at no time be identifiable as yours. Online questionnaires will be collected in a password-protected file. De-identified data will be accessible to other interested researchers who wish to access it, as per Massey's code of responsible research conduct, the APA ethics code, and Massey's revised ethics code. All data will be stored for 10 years for research purposes but will at no time be identifiable. Finally, results from this research will be published, but your identity will never be revealed or associated with the data. This study is part of Aramis Dennan's ongoing research program in partial fulfilment for the degree of Doctor of Clinical Psychology.

At the end of the study we will provide you with a summary of the research aims and any findings of this study. This can be found on our Facebook page **http://fb.me/whenstrings attach** or by contacting the researchers directly.

Participant Risks and Rights

This study involves thinking and reporting about your sexual and romantic relationships. It is therefore possible that the questionnaires could be stressful or embarrassing if you have experienced difficulties with your sexual or romantic relationships. Please note that you are under no obligation to accept this invitation. If you decide to participate, you have the right to:

· decline to answer any particular question;
· withdraw from the study (prior to the submission of responses);
· ask any questions about the study at any time during participation;
· be given access to a summary of the project findings when it is concluded through the study's Facebook page.

If at any stage you experience distress, either during or following participation, free counselling services may be available through your university's student health centre, Youthline Zealand (www.youthline.co.nz), 7cups.com, or you could seek assistance through your family doctor.

For Māori participants, kaupapa māori services can be accessed through the New Zealand Family Services Directory. This directory offers connection to several services across the country, many of which a free of charge. This directory can be accessed using the link below.

https://www.familyservices.govt.nz/directory/searchresultspublic.htmsearchTerms=Kaupapa+Maori&cat1=-1&searchRegion=-1&search=Search

For any questions regarding this project, please contact: Aramis Dennan
Email: massey.relationship.research@gmail.com or;

Associate Professor Paul Merrick
Email P.L.Merrick@massey.ac.nz Phone 094140800 ext. 43109.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 17/30. If you have any concerns about the conduct of this research, please contact Dr Ralph Bathurst, Acting Chair, Massey University Human Ethics Committee: Northern, email humanethicsnorth@massey.ac.nz

Appendix B

Participant Consent Form

A Swipe with Authority: Does Ambivalent Sexism Impact Young Adults' Engagement with Dating Applications?

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

☐ I agree to participate in this study under the conditions set out in the Information Sheet.

Appendix C

Questionnaire Sample

A Swipe with Authority: Does Ambivalent Sexism Impact Young Adults' Engagement with Dating Apps

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Start of Block: PIS

Q1 **Participant Information Sheet**
Title of Project: A Dominant Swipe: Does Ambivalent Sexism Impact Young Adults' Engagement with Dating Applications?

Principal Investigators: Aramis Dennan, supervised by Associate Professor Paul Merrick, Dr Kirsty Ross, and Dr Matt Williams, School of Psychology, Massey University.

To the Participant, My name is Aramis Dennan. I am currently conducting my research for the partial fulfilment of the degree of Doctor of Clinical Psychology at Massey University. I, along with my supervisors, invite you to participate in a study aiming to examine how young people think about and engage in relationships, and the role that dating applications play in those processes. If you have any questions please direct them towards myself, or if you wish, my supervisor Associate Professor Merrick in the School of Psychology.

Individuals who are aged between 18 and 35 years old and have been involved in sexual or romantic relationships are invited to participate in this research. The research will take no more than 20 minutes to complete. You may withdraw from this project at any time prior to giving your consent.

Project Procedures

An online questionnaire will first ask you some demographic items. You will then complete a series of questionnaires related to how you think and feel about yourself, attitudes about sexual and romantic relationships, and dating applications. All responses provided will remain confidential at all times. At the end of the survey you will be taken to a page where you can submit an email address in order to receive a results summary at the end of data collection, and be provided with a completion code which you can enter into Prolific Academic.

Data Management Please note that your questionnaire responses in this research will be kept strictly confidential. Your online questionnaires will be collected in a password-protected file and only Aramis Dennan and his research supervisors will have access to the data. De-identified data will be accessible to other interested researchers who wish to access it, as per Massey's code of responsible research conduct, the APA ethics code, and Massey's revised ethics code. All data will be stored for 10 years for research purposes but will at no time be identifiable. Any email addresses submitted are stored in a separate file and will at no time be linked to any questionnaire response data. Finally, results from this research will be published, but your identity will never be revealed or associated with the data. This study is part of Aramis Dennan's ongoing research program in partial fulfilment for the degree of Doctor of Clinical Psychology.

If you submit an email address, at the end of the study we will provide you with a summary of the research aims and any findings of this study.

End of Block: PIS

Start of Block: Support Services

Q2
Support Services
Participant Risks and Rights

This study involves thinking and reporting about your sexual and romantic relationships. It is therefore possible that the questionnaires could be stressful or embarrassing if you have experienced difficulties with your sexual or romantic relationships. Please note that you are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study (prior to the submission of consent);
- ask any questions about the study at any time during participation;
- be given access to a summary of the project findings when it is concluded.

If at any stage you experience distress, either during or following participation, free counselling services may be available through:
Youthline New Zealand (www.youthline.co.nz),
7 Cups of Tea (www.7cups.com),
Lifeline New Zealand (www.lifeline.org.nz) or,
Your family doctor.

For Māori participants, kaupapa māori services can be accessed through the New Zealand Family Services Directory. This directory offers connection to several services across the country, many of which are free of charge. This directory can be accessed using the link below.
https://www.familyservices.govt.nz/directory/

For any questions regarding this project, please contact:
Aramis Dennan:
Email: massey.relationship.research@gmail.com

Associate Professor Paul Merrick:
Email: P.L.Merrick@massey.ac.nz

Dr Kirsty Ross
Email: K.J.Ross@massey.ac.nz

Dr Matt Williams:
Email: M.N.Williams@massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 17/30. If you have any concerns about the conduct of this research, please contact Dr Ralph Bathurst, Acting Chair, Massey University Human Ethics Committee: Northern, email humanethicsnorth@massey.ac.nz

End of Block: Support Services

Start of Block: Consent

Q3
A Dominant Swipe: Does Ambivalent Sexism Impact Young Adults' Engagement with Dating Applications? PARTICIPANT CONSENT FORM - INDIVIDUAL I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

- ○ I agree to participate in this study under the conditions set out in the Information Sheet. (1)
- ○ I do not agree to participate in this study under the conditions set out in the Information Sheet. (2)

End of Block: Consent

Start of Block: Does not consent

Q27 *As you do not wish to participate in this study, please return your submission on Prolific by selecting the 'Stop without completing' button.*

End of Block: Does not consent

Start of Block: General Information

Q4 **General Instruction Sheet**
Thank you for participating in this study. To ensure that your data can be used as part of this research program it is important that you follow the instructions outlined below: Read each item carefully to make sure you understand it before answering. You must always select only **ONE** option on each scale. If you change your mind once you have selected a number, please go back and tick the new selection you have made. There are no right or wrong answers. Some of the questions may be difficult but please try your best to answer as honestly and accurately as you can. **Remember that all your answers are strictly confidential**. Your data will be entered into a file without any identity, and your questionnaires will be held in a secure place with no accompanying name attached.

End of Block: General Information

Start of Block: Prolific ID

Q26 Please enter your Prolific ID below:

_____

End of Block: Prolific ID

Start of Block: Demographics

Q5 Please pick the category that best describes your current relationship status.

- Single (1)
- Dating (2)
- Serious / Living Together (3)
- Married (4)
- Separated / Widowed (5)

Q6 Please pick the category that best describes your Gender.

- Male (1)
- Female (2)
- Gender Diverse (3)

Q7 Please pick the category that best describes your Sexual Orientation.

- Heterosexual (1)
- Lesbian (2)
- Gay Male (3)
- Bisexual (4)
- Other (5) _____

Q8 Please tell us your age:

- ○ 0-17 (1)
- ○ 18-35 (2)
- ○ 35+ (3)

Q10 Please pick the category that best describes your ethnicity:

- ○ New Zealand European/ Caucasian (308)
- ○ Māori (309)
- ○ Samoan (310)
- ○ Cook Islands Māori (311)
- ○ Tongan (312)
- ○ Niuean (313)
- ○ African American (314)
- ○ Hispanic/ Latin American (315)
- ○ Chinese (316)
- ○ Indian (317)
- ○ Other (Please state: e.g. Dutch, Japanese, Tokelauan) (318)

_____

Q11 Please pick the category that best describes your religiosity:

- ○ Not religious (1)
- ○ Religious (e.g., Buddhist): (2)

_____

End of Block: Demographics

Start of Block: Screener validation fail

Q28 *You are ineligible for this study, as you have provided information which is inconsistent with your Prolific pre-screening responses. Please return your submission on Prolific by selecting the 'Stop without completing' button.*

End of Block: Screener validation fail

Start of Block: AST

Q12 **Below is a series of statements concerning men and women and their relationships in contemporary society.**
Q13 **Please indicate the degree to which you agree or disagree with each statement using the following scale:**

	Strongly disagree (204)	Disagree (205)	Somewhat disagree (206)	Neither agree nor disagree (207)	Somewhat agree (208)	Agree (209)	Strongly agree (210)
No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman. (1)	○	○	○	○	○	○	○
In a disaster, women ought not necessarily to be rescued before men. (2)	○	○	○	○	○	○	○
Most women interpret innocent remarks or acts as being sexist. (3)	○	○	○	○	○	○	○
Feminists are not seeking for women to have more power than men. (4)	○	○	○	○	○	○	○
Women should be cherished and protected by men. (5)	○	○	○	○	○	○	○
Women seek to gain power by getting control over men. (6)	○	○	○	○	○	○	○

Men are complete without women. (7)	○	○	○	○	○	○	○
Women exaggerate problems they have at work. (8)	○	○	○	○	○	○	○
When women lose to men in a fair competition, they typically complain about being discriminated against. (9)	○	○	○	○	○	○	○
There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances. (10)	○	○	○	○	○	○	○
Women, compared to men, tend to have a superior moral sensibility. (11)	○	○	○	○	○	○	○

Women, as compared to men, tend to have a more refined sense of culture and good taste. (12)	○	○	○	○	○	○	○

End of Block: AST

Start of Block: Tinder Motivations Scale

Q14 **In this next section, we are interested in how you think about and engage with social media and dating apps. Rate each item below considering how you have usually thought about and used social media and dating apps. Please be sure to read the questions carefully.**

Q25 Have you ever used a dating application, such as Tinder, Bumble, or Grindr?

- ○ Yes (4)
- ○ No (5)

Q15 I would/have used a dating application....

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
To get an "ego-boost". (1)	○	○	○	○	○	○	○
To get self-validation from others. (2)	○	○	○	○	○	○	○
To see how desirable I am. (3)	○	○	○	○	○	○	○
To get compliments. (4)	○	○	○	○	○	○	○
To be able to better estimate my own attractiveness. (5)	○	○	○	○	○	○	○
To get attention. (6)	○	○	○	○	○	○	○
To find someone for a serious relationship. (7)	○	○	○	○	○	○	○
To fall in love. (8)	○	○	○	○	○	○	○
To meet a future husband or wife. (9)	○	○	○	○	○	○	○
To build an emotional connection with someone. (10)	○	○	○	○	○	○	○
To seek out someone to date. (11)	○	○	○	○	○	○	○
To find a friend-with-benefits/fuckbuddy. (12)	○	○	○	○	○	○	○

To find a one-night-stand. (13)	○	○	○	○	○	○	○
To see how easy it is to find a sex partner. (14)	○	○	○	○	○	○	○
To increase my sexual experience. (15)	○	○	○	○	○	○	○
To live out a sexual fantasy. (16)	○	○	○	○	○	○	○
To find a lover/mistress. (17)	○	○	○	○	○	○	○
Because my friends thought I should use Tinder. (36)	○	○	○	○	○	○	○
As suggested by friends. (37)	○	○	○	○	○	○	○
Because someone else made me a Tinder profile. (38)	○	○	○	○	○	○	○
To make new friends. (39)	○	○	○	○	○	○	○
To broaden my social network. (40)	○	○	○	○	○	○	○
To meet new people. (41)	○	○	○	○	○	○	○
To talk to people I don't know personally. (42)	○	○	○	○	○	○	○

End of Block: Tinder Motivations Scale

Start of Block: Sexual contact outcomes

Q16 Please record the appropriate answer for each item, depending on whether you strongly disagree, disagree, agree, or strongly agree with it.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I expect there to be a sexual element when establishing new relationships. (1)	○	○	○	○	○
I expect to have sexual contact within three dates with a new partner. (2)	○	○	○	○	○
The possibility of sexual contact is a key reason for forming a new relationship. (3)	○	○	○	○	○
The expectation of sexual contact in relationships makes me nervous about relationships. (4)	○	○	○	○	○
Sexual contact plays an important role for me when forming new relationships. (5)	○	○	○	○	○

Other people put too much emphasis on sexual contact in new relationships. (6)	○	○	○	○	○

End of Block: Sexual contact outcomes

Start of Block: Self-Esteem

Q17 **In this final section, we are interested in how you think about yourself.**
Q18 Please record the appropriate answer for each item, depending on whether you strongly disagree, disagree, agree, or strongly agree with it.

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
On the whole, I am satisfied with myself. (1)	○	○	○	○
At times I think I am no good at all. (2)	○	○	○	○
I feel that I have a number of good qualities (3)	○	○	○	○
I am able to do things as well as most other people. (4)	○	○	○	○
I feel I do not have much to be proud of. (5)	○	○	○	○
I certainly feel useless at times. (6)	○	○	○	○
I feel I am a person of worth. (7)	○	○	○	○
I wish I could have more respect for myself. (8)	○	○	○	○
All in all, I am inclined to think that I am a failure. (9)	○	○	○	○
I take a positive attitude toward myself. (10)	○	○	○	○

End of Block: Self-Esteem

End of Survey