

**SUGAR, SPICE, AND EVOLUTIONARY MOTIVATION:  
AN ANALYSIS OF SUGAR RELATIONSHIPS  
THROUGH SEXUAL STRATEGIES THEORY**

**A Thesis By**

**MARISA MCNAMEE  
ORCID iD: 0009-0000-4203-0847**

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**Department:**

Department of Anthropology

**Approval Committee:**

Elizabeth Pillsworth, Department of Anthropology, Committee Chair  
Sara Johnson, Department of Anthropology  
Aaron Goetz, Department of Psychology

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**Abstract:**

Sugar relationships, an increasingly popular form of transactional relationship, display indications of relevance to evolved mating strategies yet are rarely researched in evolutionary anthropology. In the current study, motivations, benefits, and preferences for sugar relationships are explored in relation to constructs of individual variation and compared with short- and long-term relationships. Motivation and benefit composite variables were constructed by factor analysis, and mate preferences were collected through a budget allocation task; then, each was analyzed for similarities across relationship contexts (sugar, short-term, and long-term) and moderations caused by variables of individual variation (sociosexual orientation, mate value, dating satisfaction level, etc.). Whereas sugar daddies and sugar babies displayed motivations and benefits closer to short-term relationships on average, some constructs of individual variation moderated motivations and benefits closer to long-term relationships. Mate preferences were less influenced by suspected moderating variables, however, female sugar babies preferred a characteristic profile of sugar partners similar to that of long-term partners, while sugar daddies and male sugar babies preferred sugar partners that resembled a combination of short and long-term partners. These findings suggest that individuals in sugar relationships employ mixed mating strategies to identify ideal sugar partners and construct sugar relationships with preferable dynamics.

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## **CHAPTER 1**

### **INTRODUCTION**

Sugar relationships (SRs) are typically defined as transactional relationships occurring between an older (often, but not exclusively, male) partner who offers economic resources in exchange for sexual and emotional intimacy from a younger (often, but not exclusively, female) partner. Benefactors of SRs are referred to as sugar daddies (SD) or sugar mommies (SM), while the recipients are called sugar babies (SB). Partners within the relationship typically define the exact parameters of the intimate exchange, as it is common practice for individuals to negotiate an arrangement that both parties perceive to be mutually beneficial at the onset of the relationship.

Though not always by the same name, transactional arrangements, similar to sugar relationships, have persisted throughout history, offering women (and sometimes men) means to trade their physical, sexual, and emotional capital for economic gain or status enhancement through an ongoing relationship. In recent, as online sugar dating avenues proliferate cross-culturally, more and more people are attracted to what sugar relationships have to offer. Yet, some of the stigma surrounding these types of relationships supposes an exploitative basis for their forming, while contemporary academic notions often consider them an exclusive extension of short-term mating psychology. However, their recurrence throughout written human history, coupled with the sometimes lengthy nature of these relationships, hints at the possibility of a more complex mixture of strategic mechanisms.

The current study focuses on the mating psychology displayed in sugar daters by assessing individuals' implementation of short and long-term mating strategies in general relationship aspects, such as motivations to begin sugaring, acquired benefits that keep individuals in sugar relationships, and characteristics that make certain individuals desirable sugar partners. Additionally, this exploratory study seeks to gather quantitative data on an under-researched community.

## **CHAPTER 2**

### **THEORETICAL FRAMEWORK**

#### **Sexual Strategies**

Sexual selection theory postulates that the ultimate evolutionary goal of reproductive success drives the adaptation of certain characteristics that enhance that reproductive success (Darwin, 1871). Those reproductively advantageous characteristics specialize in enhancing abilities to attract mates (intersexual attraction) or enhancing skills to compete with others for mates (intrasexual competition). Traits that increase success in intersexual attraction or intrasexual competition will persist and evolve by reproductively successful individuals having more reproductively successful offspring (Buss & Schmitt, 1993; Darwin, 1871).

Built on Darwin's theory of sexual selection is Trivers' parental investment theory (1972), which contends that, in a sexually reproducing species, the sex that invests the most effort in their offspring will also be the choosiest in mate selection. Sex differences in parental investment are often exaggerated and highly observable in mammals, as their gestational and post-natal offspring-raising processes demand substantial physical and bodily energetic effort, i.e., internal fertilization and gestation, live births, and lactational feeding continuing through early offspring childhood (Trivers, 1972).

In humans, females expend all the energetic costs inherent to mammalian offspring raising mentioned above to ensure the success of their offspring while also being physiologically limited in the number of offspring they can produce (Buss & Schmitt, 2019). Males are required to exert significantly less physiological effort to reproduce. Though alloparenting and cooperative breeding have evolutionarily relieved mothers of bearing such a hefty energetic weight in post-natal care, the adaptive pressures caused by the sex discrepancies in obligatory parental investment necessary for offspring survival and success have influenced sex-specific adaptations in mating behavior, preferences, and prioritization (Hardy, 2009). Females, as the sex expending significant effort in rearing offspring, are subsequently the sex that is more selective in choosing mates (Buss & Schmitt, 2019). Males are

alternatively less selective, as their role in child rearing and ensuring offspring success is inherently less physiologically and energetically intensive.

By applying parental investment theory to humans, Buss (1989) proposed sexual strategies theory (SST), which theorizes that the evolved differences in female and male investment efforts lead to the adaptation of a multifaceted mating psychology. Within its premise, SST positions that psychological adaptations exist as components of sexually differentiated strategies evolved in response to recurrent adaptive reproductive challenges, resulting in the manifestation of psychological mechanisms oriented toward two separate mating strategies—short-term (STM) and long-term mating (LTM) (Buss & Schmitt, 2019).

Short-term and long-term mating strategies exist concurrently in the human mating environment and influence an individual's mating preferences and behaviors (Buss, 1989). Given their greater effort expenditure to ensure offspring survival, females are evolutionarily more oriented toward a long-term mating strategy, allowing them to increase reproductive success by looking for mates who provide additional resources and parental effort (Buss & Schmitt, 1993). Males, as the lesser investing sex in the physiological processes of child-rearing, ancestrally increased their reproductive success by pursuing sexual variety, leaving them more oriented toward a short-term mating strategy. However, an individual's mating strategy may fluctuate throughout their lifetime, as mating strategies are hypothesized to be context-dependent, including contexts such as individual variation (sociosexual orientation, mate value, personality characteristics), social environments (sex ratios, or the employed strategies of available mates within the surrounding mating environment), and ecological contexts (resource availability or disease prevalence) (Buss & Schmitt, 2019).

Each strategy is the amalgamation of sex-differentiated adaptive problem-solving and increases certain reproductive benefits at the cost of those related to the other strategy (Buss & Schmitt, 2019). In males, short-term mating increases reproductive variety, minimizes costs of parental effort and commitment, and increases the amount of offspring that can be conceived, while a long-term strategy in



males offers an elevated degree of paternal certainty, more access to a single partner's reproductive value, increased access to higher quality mates, and aids in offspring fitness by increasing the parental effort and resource availability allotted to that offspring (Buss & Schmitt, 1993). The adaptive benefits for females enacting a short-term strategy are less studied. Still, the proposed hypotheses are divided into five categories—immediate resource acquisition, access to desirable genetics, mate-switching, mate skill acquisition, and mate manipulation (Greiling & Buss, 2000). The benefits of a long-term strategy in females are increasing male resource and effort investment, gaining additional physical protection, and acquiring partner commitment (Buss & Schmitt, 1993).

A substantial prediction of SST, born from sexual selection theory's emphasis on preferential mate choice, postulates that sex-differentiated mate preferences arose to address recurring adaptive challenges. As such, mate preferences will fluctuate according to an individual's implemented sexual strategy (Buss & Schmitt, 2019). Cross-cultural research has shown that males value physical attractiveness more overall than females regardless of strategy, whereas women place greater value on resources and social status (Buss, 1989). Additionally, the importance of physical attractiveness to both sexes in a potential mate has been observed to be highest in a short-term mating context and decreases in a long-term mating context (Buunk et al., 2002; Muggleton et al., 2017). This effect seems to sustain regardless of sex and sexual orientation (Regan et al., 2001). In long-term mating contexts, females often favor characteristics in a potential partner that are cues to the ability to acquire resources (ambition and social status) and qualities that imply parental effort and reliability (trustworthiness and dependability). In contrast, males favor characteristics that are cues to youth, fertility, and reproductive value (Buss, 2017). Evidence also suggests that the intensity of mating strategy context shifts in mate preferences are moderated by an individual's personal characteristics, i.e., personality, mate value, sociosexual orientation, and intelligence (Edlund & Sagarin, 2010; Muggleton et al., 2017; Schmitt & Shackelford, 2008; Simpson & Gangestad, 1992; Stanik & Ellsworth, 2010). For example, women with

unrestricted sociosexual orientations exhibited more distinctive shifts in mate preferences between short and long-term contexts (Muggleton et al., 2017).

Generally, SST theorizes that males, more than females, should be oriented toward a short-term mating strategy but may also implement a long-term strategy for specific benefits. Females are more oriented toward long-term strategies but still benefit from short-term mating strategies. Though sexual strategies theory and accompanying hypotheses have been studied within general populations, they have yet to be explored in sugar relationships.

### **Sexual Economic Theory**

Sexual economics theory (SET) is built on social exchange theory which examines the cost and benefits accompanying a trade of social resources between two parties (Baumeister & Vohs, 2004). When benefits outweigh the costs for the two parties involved, the relationship will perpetuate. The weight of the cost-to-benefit ratio depends on the preferences of the individuals involved in the exchange, as well as being informed by the cultural marketplace applying pressure to what is desirable and undesirable (Baumeister et al., 2017). It is important to note that constructs outlined in SET imply a system of unconscious mechanisms that support the ultimate goal of reproductive success, whereas more proximate, conscious goals may vary (e.g., attracting desirable partners, pleasure, advantages, or having a fulfilling sexual relationship/partner) (Baumeister et al., 2017; Vohs & Lasaleta, 2008). Additionally, relationships are nuanced and may operate outside the bounds of a general sexual economic marketplace. The predictions made in SET operate under the assumption of generalization.

A central construct of SET is that sex is considered a female resource, one in which males will attempt to trade either material, emotional, or supportive resources to gain (Baumeister & Vohs, 2004). Cross-culturally, more emphasis and value is placed on female sexuality than male sexuality. SET predicts that because females possess the commodity that males want within the sexual marketplace, males will favor lower 'prices' for sex and will actively seek to obtain sex for the lowest exchange value possible. Comparatively, females favor higher 'prices' for their sexual commodities and will seek to

sustain or increase what males are willing to exchange for sexual resources (Whyte et al., 2019). In this context, females are effectively the sellers or suppliers, and males are buyers, where each party attempts to negotiate in their favor. Sexual exclusivity, in addition to sexual access, may be another female resource that males compete and bid for (Baumeister et al., 2017). Observations have shown that in periods where males outnumber females, long-term relationships become the dominant strategy (whereas short-term relationships are the dominant strategy when females outnumber males) (Baumeister & Vohs, 2004; Buss & Schmitt, 2019). In heterosexual, monogamous relationships, males may not only trade their assets for sex but also sexual exclusivity—an asset that increases paternal certainty (Buss & Schmitt, 2017).

The broader community contextualizes the dynamics of a beneficial exchange for either party, but because the actual dynamics of sexual exchanges are kept hidden from public knowledge, each sex is likely to advocate to their benefit, i.e., males suggesting casual sex is typical and females suggesting sex rarely occurs without commitment (Baumeister & Vohs, 2004). Intrasexual communication may reflect similar sentiments, meaning males boast and females downplay.

Consistent with any economic marketplace, SET theorizes that the exchange of sexual activity follows general rules of supply and demand (Baumeister & Vohs, 2004). Fluctuations in the overall value of commodities traded within sexual exchanges are contingent on the external mating environment, i.e., unequal sex ratios, where the minority sex's resource trumps the value of the majority sex's (Vohs & Lasaleta, 2008). However, because females possess the ultimate resource males want, SET suggests that females collectively restricting sexual availability to exclusively the highest bidders could effectively bolster the price of their assets (Baumeister & Vohs, 2004). Although external factors calibrate the standard price and value of sex in a community, individual differences in sexual appetite moderate the relative price of any individual exchange, meaning higher sex drives may alter the value an individual expects to receive in the exchange (Baumeister & Vohs, 2004).

Instances of sex work and transactional relationships are overt examples of sexual exchange.

Whereas in non-transactional sexual exchanges, the resources traded for sex are often social resources and indirect material resources (commitment, attention/affection, protection, short or long-term financial or economic support), individuals in sex work are directly paid for sexual resources. In a typical sex-for-money exchange among sex workers and their clients, the sex may be considered of lower value because of the ease of procurement (Baumeister & Vohs, 2004). Sugar relationships may be regarded differently because of the ongoing nature of the relationship, as well as the usual age discrepancy between sugar parents and babies. The promise of recurring payments might give financially successful, less physically attractive individuals a means to acquire a higher quality mate that may not otherwise be interested, also giving individuals opportunity to exchange material resources for fulfilling emotional and sexual relationships when they do not have the time, desire, or access to offer commitment to a potential mate.

Less is understood about sex work sexual exchanges where females are the clients. However, it has been observed that older female clients will contract younger male sex workers and prefer the direct exchange to be disguised as a brief romantic relationship (Baumeister & Vohs, 2004). SET also explains little in the way of the sexual exchange in homosexual relationships or males as the provider of the sexual resource. However, it can be hypothesized that male sugar babies may put less emphasis on the material benefits gained through the relationship and instead place additional value on sexual benefits alongside material benefits.

## **CHAPTER 3**

### **LITERATURE REVIEW**

#### **Evolutionary and Cultural Context of Sugar Relationships**

Direct evidence of the existence of sugar relationships outside modern society is scarce. The lack of evidence may be due to several factors regarding the nature of the relationship dynamics: (1) their highly secretive and women's accounts may have been kept from written records to protect their own reputations and the social standing of the men involved; and (2) because, historically, documentation of transactional relationships focuses predominantly on the extremely marginalized and slight elevations in social class rendered affairs of this manner less significant comparatively (Barclay, 2015). However, several examples of partnerships under adjacent parameters to sugaring are notable—namely, the mistresses of 17<sup>th</sup> and 18th-century Europe.

Prestigious European palaces, such as Versailles and Whitehall, were not only homes to members of the monarchy but became known to house royal mistresses whose romantic entanglements with the king afforded them power, allowing them to significantly surpass their initial social status (Carlton, 1990). Outside of royal grounds, becoming a mistress to a man with wealth and prestige was a sought-after profession for young women aspiring to elevate their low social standing. Dating back to 17<sup>th</sup> century Edinburgh, similar practices of 'kept mistresses' afforded wealthy men of status intimacy and companionship while raising supplemental income opportunities for women of lower economic classes (Barclay, 2015). In analyzing the few original journals penned by kept mistresses, their desired relationship outcomes can be inferred as they often cite motivations relevant to financial support, status elevation, and emotional security (Barclay, 2015). Similar archival records found in court documentation of colonial Mexico illustrate a recurring practice of women sustaining long-term relationships with men, usually church and state bureaucrats or low-ranking military officials, in exchange for luxury goods, wealth, and influence (von Germeten, 2018). These documents highlight the

circumstances of single women of reputable social classes enjoying comfortable lifestyles with aid from sizable 'donations' offered by men who were contingently afforded companionship in return (von Germeten, 2018).

Despite the historical relevance of comparable relationships and the recent expanse in awareness and engagement in modern sugar relationships, the current research available is minimal and offers little conclusive, systematic data; however, substantial collections of data do exist outlining two distinct markers of sugar relationships: evolutionary strategies underlying age-gap relationships and transactional sex or sex work.

### **Age-Gap Relationships**

Age-gap relationships are a worldwide phenomenon, with women across cultures displaying a preference for partners older than they are (Buss, 1989). In Western cultures, the average age difference within marital relationships is 3 years, with women proclaiming they would consider partners anywhere up to 10 years older (Kenrick & Keefe, 1992). Men show a similar tendency in reverse, choosing partners on average 3 years younger, with preferences for wider age gaps increasing with age. Marital age discrepancies vary widely by population—reaching five or more years in Indian samples and 10 years or more in African samples (Chesnokova & Peer, 2021; Lehmiller & Agnew, 2011).

According to sexual strategies theory (Buss, 1989), men look to cues of youth and fertility when assessing potential mates, while women tend to value cues that indicate resource acquisition, reliability, and likely parental effort (Buss, 2017). Because age in males signals access to economic resources, social status, maturity, and reliability, women's mate choice seems to have adapted accordingly (Buss, 2017; 1989). Although social acceptance seems to play a role in moderating the size of age discrepancies seen in Western age-gap relationships, age differences of 10 years or greater exist in approximately 8.5%, with male-older relationships as the majority of documented heterosexual marriages, according to Lehmiller and Agnew's (2011) interpretation of US census data.

Long-term age-disparate relationships between older men and younger women represent a mutually beneficial social exchange that provides women with economic security and men with reproductive access to fertile mates (Sprecher, 1998). In a short-term mating context, the principles of such relationships are congruently exemplified in sugar relationships, where the younger partner offers emotional and often sexual intimacy in exchange for financial compensation and access to resources provided by the older partner.

### **Sex Work Research**

Much of the current research regarding sex workers comes predominantly from populations in Sub-Saharan Africa, Western Europe, and Eastern regions, such as China, Japan, Korea, Taiwan, and Russia (Lee & Shek, 2013; Perrin et al., 2022). Much of this research focuses on methods of STD transmission and HIV prevention (Steen & Dallabetta, 2003; Argento et al., 2019; Platteau et al., 2022), estimating an approximate population of victims of sex trafficking (Gerassi et al., 2021; Cockbain et al., 2022; Motseki & Mofokeng, 2022), dynamics of abuse and exploitations (Navarrete Gil et al., 2021), legal issues that may complicate or alleviate the lives of sex workers (Graham, 2017; Platt et al., 2018), or their physical or mental wellbeing (Romans et al., 2001).

Academic discourse often represents sex workers' intentions and motivations as purely a means to overcome financial hardship or gain an elevation in social status by opening social networks to new employment opportunities or gaining access to luxury clothes, accessories, and entertainment. However, various forms of sex work have persistently flourished throughout our traceable history, suggesting there may be a complex relationship adjoining the profession with mechanisms oriented toward human mate choice, sexual strategies, and resource acquisition (Birkas et al., 2020). Sex workers have cited pleasure in general and an increased sense of freedom and bodily autonomy as benefits to their profession (Kelberga & Martison, 2013; Jones, 2016). Kelberga and Martison (2023) found that pleasure, physical desirability, experience seeking, and love and commitment were similarly high-rated motivating factors for online sex workers when initiating sex with their real-life romantic partners and virtual clients.

In totality, many studies position women's perceived motivations for entering and sustaining transactional relationships as purely material—as acquiring fundamental benefits in the form of financial resources at the cost of sexual intimacy. Public perception generally pins men's motivations as the reverse—incurring a financial cost for sexual benefits. However, sex work research elucidates additional motivations for participating in such relationships, ranging from gaining sexual experience to emotional security to desires for companionship (Daly, 2017; Gunnarsson & Strid, 2022; Recio, 2022; Upadhyay, 2022). Ultimately, evidence from the studies mentioned above suggests the potential for more emotional involvement in transactional sex rather than a simple exchange of material resources for sex.

### **Current Sugar Dating Research**

In examining online sugar dating profiles from the former platform, seekingarrangements.com (currently seeking.com), Upadhyay (2021) found that sugar babies and daddies advertising on the site were attracted to the mutually beneficial and non-conventional aspects of the sugar lifestyle. Sugar daddy profiles specified desires for relationship aspects similar to those in a traditional romantic relationship. Though they more often cited being accepting of either a long-term or short-term relationship than sugar babies, who were more interested in short-term arrangements, it remains unknown if sugar daddies are more open to long-term arrangements than sugar babies in general or if mentioning an undifferentiated preference for both arrangement/relationship types is merely a tactic for increasing their desirability to and ability to interact with sugar babies who hold either preference. Additionally, most profiles—sugar daddies and babies alike—expressed an explicit desire for ‘emotional/personality’ benefits in conjunction with the desire for financial investments and sexual and physical benefits. For sugar babies, the most sought benefits included mentorship, career advice, stability, affection, and passion. For sugar daddies, the benefits most cited were having someone to provide for, chemistry, connection, and companionship. Primarily, sugar relationships are distinguished from traditional relationships by their openness to discuss expectations.



Sculls (2023) investigated the various modes of entering sugar relationships, identifying drifting (unintentionally starting) in addition to making a conscious decision to begin sugaring as a top mode of entry. The smallest population entered defensively (as a reactive strategy, i.e., pressured by financial struggles). Once sugaring, the most common stigmas were reported as equating sugar dating with prostitution, negative attitudes toward age-gap relationships, and being deemed immoral, dishonest, or lacking self-respect. Scull's (2022) analysis of women's motivations for sugaring in the U.S. found that, aside from the apparent motivation of economic and material resource acquisition, sugar babies cite a repertoire of personal, non-material benefits gained through their experiences. Non-material benefits range from: sexual experience, sexual freedom, or sex with love as a motivating factor; the desire for companionship, friendships, or connection; and finding love or cultivating a romantic connection adjacent to a traditional relationship accompanied by the financial assistance of a sugar relationship. Similar desires for love and intimacy have been reported for men's motivations (Swader et al., 2013).

Through a series of personal interviews and a brief survey questionnaire centered on the expectations of sugar daddies in their sugar arrangements, Gunnarsson and Strid (2022) recognized a consistent theme of desire for sexual and relational mutuality shared between sugar daddies and their sugar babies. The authors argue that, while sugar dating often entails deeper forms of intimacy than are generally found in sex work, it can ultimately be thought of as the 'sugar baby experience'—adapted from 'the girlfriend experience'—and marks a deeper transition into a more intimate-centered faction of the sex industry. Because sugar daddies seek out sugar babies who provide an intimate personal experience where the perceived authenticity satisfies the sugar daddies' need for mutuality, the question is raised about how much the perceived authenticity of the sugar baby's intimate and personal interactions is truly genuine.

In a survey of U.S. and Canadian sugar daters, Metcafe et al. (2023) observed that the dynamics of sugar dating stray from traditional sex work in that they tend to prioritize intimacy over sex. Though sex and economic incentives were found to be structural components and motivating forces for many

sugar relationships, both sugar daddies and babies reported alternative, extrinsic benefits as similarly important (e.g., companionship, mentorship, and the transparent nature of sugar relationships compared to traditional relationships). Just over half of sugar babies cited monetary compensation as their primary motivator, while over 28% of sugar daddies cited increased access to more desirable partners.

Recio (2021) delved into the motivations and benefits of UK college students engaging in sugar relationships and uncovered several shared experiences that prompted students' dive into sugaring—among which their top references were financial difficulties and time poverty, followed by a desire for a more luxurious lifestyle, lowered self-confidence, and dissatisfaction with their regular dating life. Multiple participants relayed that sugar dating was a preferable source of income because it offers personal benefits and fun alongside financial incentives.

Kirkeby et al. (2021) used a comparative study to analyze potential differences in condom usage between a sample of women, both in and out of sugar relationships. Condom usage in sugar relationships was observed to occupy the in-between space, with condom usage at its highest in casual sexual interactions and at its lowest in romantic relationships. Women's perception of power within the sugar relationship proved a moderating factor for consistent condom usage—women who felt they held more power in the relationship reported more consistency in condom usage compared to women who felt a steeper power imbalance.

While the data outlined above implies a more complex relationship dynamic that transpires beyond the exchange of sex for resources, the results reported in Birkas et al.'s (2020) quantitative assessment of the association between acceptance of sugar relationships and psychological traits, sexual motivations, and love styles suggest that positive attitudes toward sugaring reflect a potential opportunity and resource maximizing mating strategy. Though the study lacks a significant sample of individuals with experience in sugar relationships, the analysis contextualizes sugaring and sugar acceptance as possible elements of a goal-directed, short-term mating strategy.

## CHAPTER 4

### HYPOTHESIS & PREDICTIONS

Though the ultimate goal of this research is to conduct an exploratory examination of the potential evolutionary dynamics present in the constructs of modern sugar relationships, the development and analysis of the study were based on a guiding hypothesis and accompanying set of predictions. General theorizations of budding research and speculating scholars suppose that sugar dating is an extension of short-term dating, the mechanisms for which pre-exist as a part of human mating psychology and short-term mating strategy. However, it can be drawn from prior studies highlighting non-material, non-monetary, and non-sexual motivations for entering and maintaining sugar relationships that some individuals' strategies may represent a mixed long-term and short-term mating strategy.

The main hypothesis and predictions fueling this research are as follows: individuals in sugar relationships utilize adaptive psychological mechanisms related to both short and long-term mating strategies, which are displayed across motivations for sugar dating, perception of benefits gained through sugar dating, and sugar partner mate preference.

1. If short-term, long-term, or aspects of both mating strategies are employed, then constructs of individual variation will orient an individual toward one strategy and away from another or will present indicators of both. If individual variation correlates with differing mating strategies implemented in sugar relationships, then:
  - Aspects of strategies exemplified in sugar relationships will relate more to aspects of short-term relationships seen in the general population or more to aspects of long-term relationships seen in the general population.
  - An unrestricted sociosexual orientation will be associated with a short-term mating strategy, where sexual or material motivations and benefits, and character traits in partner mate preferences that emphasize physical attractiveness and outgoingness, will be favored. In opposition, restricted sociosexual orientations will be associated with a long-term strategy, where non-material, non-sexual motivations and benefits and character traits in partner mate preferences emphasizing intelligence and trustworthiness will be favored.
  - Higher self-perception of mate value will positively correlate with aspects of a short-term mating strategy, where material (sugar babies) and sexual (sugar daddies) motivations and benefits, as well as character traits in partner mate preferences

emphasizing social level (sugar baby) and physical attractiveness (sugar daddy), will be favored.

- The level of satisfaction in prior dating experiences will correlate with strategy type. Low levels of satisfaction will correlate with long-term strategy presentations, while high levels of satisfaction will correlate with short-term strategy presentations.
2. (Null) If the motivations, benefits, and sugar partner preferences of individuals in sugar relationships are closely related to short-term mating strategies only, and exhibit little relevance to long-term mating strategies, then:
- Aspects of strategies exemplified in sugar relationships will exhibit a positive correlation only with aspects of short-term relationships seen in the general population.
  - Motivations and benefits will focus on material and sexual items while ignoring items relating to deeper emotion and commitment.
  - Sugar partner mate preferences will favor character traits of attractiveness and outgoing personality.
  - The dominant sociosexual orientation should be unrestricted. In the absence of an unrestricted sociosexual orientation, individuals may view sugaring purely as a means for attaining material resources or sex with little additional benefit.

## CHAPTER 5

### METHODS

#### Participants

Participant recruitment was targeted toward individuals with experience in sugar relationships and the general population (individuals without experience in sugar relationships). Because of the sensitive nature of the research subject, participation was kept completely anonymous and relied fully on a self-report basis. This study was approved by the CSUF Internal Review Board (IRB # HSR-23-24-98). Participants were not compensated in any manner.

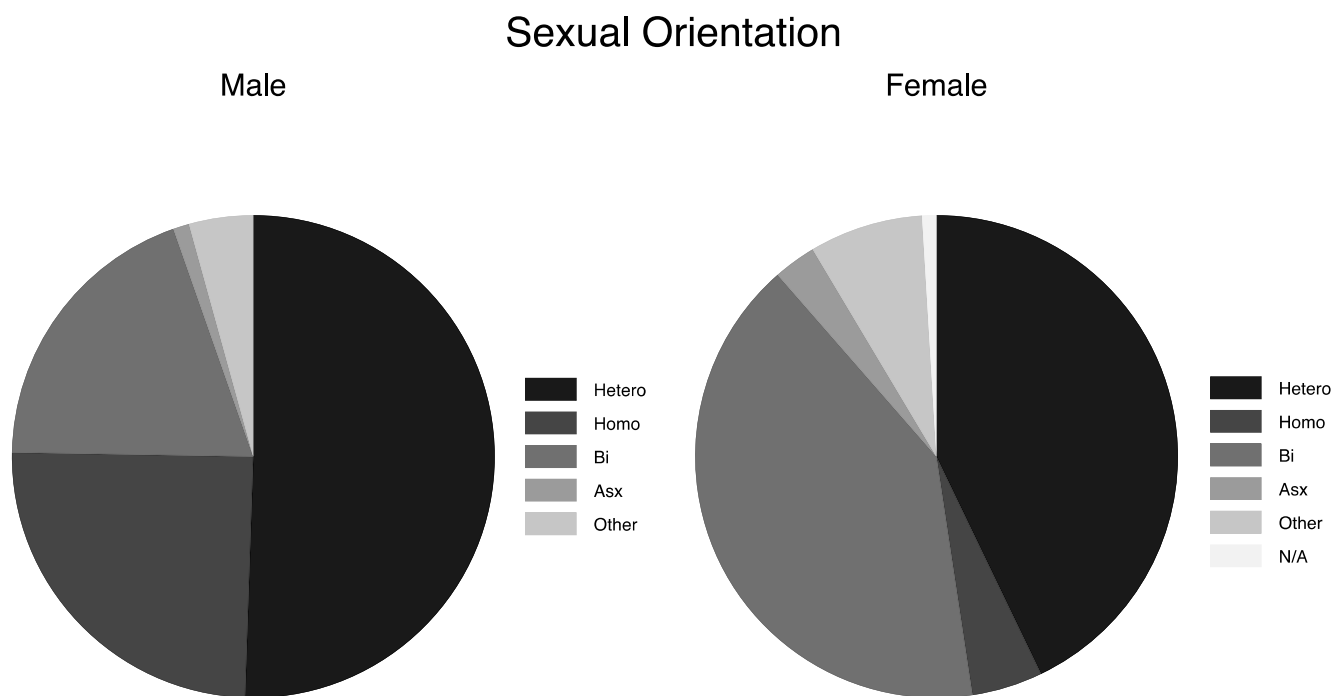
Recruiting was carried out in two forms: in-person flyer distribution and online dissemination. Flyers explaining the nature of the research project were distributed across college campuses and businesses in Orange County, California. Additionally, invitations to participate were posted to online forums willing to participate; these include the subreddits r/sex, r/psychologyofsex, r/sugardatingforum, r/sugarrelationship, r/agegap, r/askgaybroover30, r/uniuk, r/lgbtstudies, r/samplesize. Online recruitment was also facilitated through direct messaging individuals with an invitation to participate found on other applicable forums such as r/sugarlifestyleforum and profiles who indicated involvement in sugar relationships by posting in r/ama, r/iamasfw. Approximately 48% of individuals were recruited through in-person flyers, and 52% were recruited through online invitations. Consistent with previous research, recruiting individuals within this population proved difficult due to the secrecy surrounding these types of relationships.

A total of 344 survey responses were collected, of which only individuals who completed the entire survey were kept for analysis, leaving a final sample consisting of 198 individuals. Of the 198 individuals, 111 (56.06%) had no experience in sugar relationships and were considered the general population group, while 87 (43.94%) indicated previous or current experience in sugar dating and were considered the sugar population group—58 (29.29%) sugar babies and 29 (14.65%) sugar daddies. In

totality, the mean age of the sample was approximately 31.03 (range: 18-76 years) Demographic data is reported by subgroup: General Population, Sugar Daddies, and Sugar Babies.

### **General Population**

The sample population of individuals with no sugar dating experience had a mean age of 28.9 ( $n = 111$ ; range 18- 76 years), with the male general population sample mean age of 35.9 ( $n = 49$ ; range 18-67 years) and the female sample mean age of 23.4 ( $n = 62$ ; range 18-76 years). Indicated ethnicity of the sample was approximately 53 (47.75%) white, 31 (27.93%) Hispanic, 12 (10.81%) Asian, eight (7.21%) Black, 0.90% Native American or First Nation Alaskan, and six (5.41%) other. Heterosexual (38.74%) and bisexual (34.23%) were the dominant sexual orientations, followed by 19 (17.12%) homosexual and three (2.70%) asexual individuals (see Figure 1). The largest portion of the sample described themselves as single (45.95%), while 37 (33.33%) were in a relationship, 12 (10.81%) were currently married, nine (8.11%) were in an open relationship, and two (1.80%) divorced. More than half (52.73%,  $n = 58$ ) described their highest education level as 'some college,' 26 (23.64%) held bachelor's degrees, 11 (10%) master's degrees, and four (3.64%) PhDs, while 11 (10%) reported they had completed some high school or held high school diplomas. The average yearly income for the general population sample was less than \$10,000. The average yearly income of this sample may reflect the sub-sample's younger average age and may not be representative of the wider population's average.



*Figure 1.* Sexual orientation of the full sample displayed by sex. hetero = heterosexual, homo = homosexual, bi = bisexual, asx = asexual, N/A = no answer.

### Sugar Daddies

Sugar Daddy participants had a mean age of 42.7 ( $n = 29$ ; range 19-70 years), and all identified their biological sex as male. The sample's indicated ethnicity consisted of 21 (72.41%) white, three (10.34%) Asian, two (6.90%) Black, one (3.45%) Hispanic, one (3.45%) Native American or Alaskan First Nation, and one (3.45%) other. The predominant sexual orientation was heterosexual (75.86%), with the others identifying as bisexual (10.34%), homosexual (6.90%), and 3.45% asexual. Most participants were either single ( $n = 10$ ; 34.48%) or married ( $n = 10$ ; 34.48%), while four (13.79%) indicated they were in an open relationship, three (10.34%) in a relationship, and two (6.90%) divorced. Approximately 10 (34.48%) held a completed bachelor's degree as their highest level of education, nine (31.03%) had a master's degree, six (20.69%) had some college experience, one (3.45%) had a professional degree, and three (10.34%) had high school diplomas. The Sugar Daddy sample had the highest income at 17 (58.62%), indicating a yearly average of more than \$150,000.

## **Sugar Babies**

The sugar baby sub-sample had an average mean age of 29.3 ( $n = 58$ ; range 18-57 years), consisting of 15 sugar babies identifying as biologically male with a mean age of 37.8 (range: 23-57 years) and 43 identifying as biologically female with a mean age of 26.4 (range: 18-57 years). Of the sugar baby participants, 27 (46.55%) identified their ethnicity as white, 19 (32.76%) Hispanic, 6 (10.34%) other, three (5.17%) Asian, and two (3.45%) Black. Many sugar babies described their sexual orientation as either heterosexual (46.55%) or bisexual (34.48%), the remaining were homosexual (12.07%) and other (6.90%). Most common relationship statuses were single ( $n = 25$ ; 43.10%) and in a relationship ( $n = 20$ ; 34.48%); however, five (8.62%) were married, five were in an open relationship, and three (5.17%) were divorced. Like participants in the general population sample, the largest education level was some college ( $n = 21$ ; 36.21%), and the second largest was completing a bachelor's degree ( $n = 16$ ; 27.59%).

## **Measures & Procedure**

### **Sex & Gender**

Participants were given a four-question measure designed to establish an in-depth representation of the sample's sex and gender diversity. Adapted from Killerman's (2013) Gingerbread Person V.3, the questions pertained to gender identity (a 100-point scale, with 0 = completely feminine and 100 = completely masculine), gender expression (scale), sex assigned at birth or biological sex (male, female, intersex, or other), and sexual orientation (category). By including gender identity and gender expression as two-scaled variables in addition to sex and sexual orientation, the resulting data may hopefully provide a more descriptive glance into the participants' gender identities.

### **Revised Sociosexual Orientation Index (SOI-R)**

Sociosexual orientation data was collected using Penke and Asendorpf's (2008) Revised Sociosexual Orientation Index (SOI-R)—a measure that culminates in the aggregation of three facets: behavior, attitude, and desire. Current sexual behavior is measured by the behavior facet, with items



assessing amount of sexual partners and frequency of casual sexual encounters. The attitude facet measures participant attitudes toward casual sex by asking participants' level of agreement with certain short-term mating concepts, e.g., 'sex without love is ok.' Finally, the desire facet assesses frequency of sexual fantasies and arousal in a short-term context, such as fantasizing about someone who is not a long-term partner. Aggregating the average of the three facets provides a final sociosexual orientation score; higher scores signify an unrestricted, open sociosexual orientation with a higher proclivity toward short-term sexual relationships or casual sex, whereas lower scores indicate a restricted sociosexual orientation with less openness for casual, uncommitted sex and a preference for long term mating.

### **Perceived Mate Value**

Mate value was measured by a short series of questions that assessed the participants' short-term and long-term perceived mate value. For short-term perceived mate value, two items were dedicated to the participants' own assessment of how physically attractive they think they are and how physically attractive they think they are to others. The final two items addressing perceived long-term mate value were taken from The Mate Value Scale constructed by Edlund and Sagarin (2014), which measures an individual's overall perceived partner desirability.

### **Sugar Relationship Dynamics & Dating Satisfaction**

Participants in sugar relationships responded to a series of questions aimed at detailing the specific aspects of sugar relationships, such as current and total number of sugar relationships, length of time since beginning sugar dating, frequency of sexual intimacy and exclusivity, ideal payments (pay per meet and allowance), long term goals, and concept of sugar dating as a form of sex work. Additional items in this section were designed to understand type of dating preferred (sugar or 'traditional') and satisfaction level with sexual, intimate, or romantic life prior to sugar dating (referred to as dating satisfaction level).

## **Motivations**

The motivations measurement was developed by extracting and adapting qualitative interview data found in previous research into the motivations for entering sugar relationships, such as monetary or material compensation, luxury experiences, low self-confidence, low dating satisfaction level, to gain sexual experience, to gain companionship, to mentor or receive mentorship, to provide for someone, to find love, and for passion and affection (Daly, 2017; Gunnarsson & Strid, 2022; Recio, 2022; Upadhyay, 2022).

To interpret the similarities and differences between sugar relationships and long/short-term mating strategies, individuals in the sugar population were asked to select motivations that lead them into sugar dating, while the general population was asked to select from the same motivations in the context of entering short term or long-term relationships.

## **Benefits**

A synthesis of STM hypotheses, LTM hypotheses, and prior sugar relationship research built the foundation of the benefits measurement. Several items followed sexual strategy hypotheses outlined by Greiling and Buss (2019) that propose evolutionary purposes for women's short-term mating, such as immediate resource accrual hypothesis (money and gifts), status enhancement hypothesis (elevated lifestyle), protection hypothesis (protection), and self-esteem hypothesis (validation and confidence). Items such as sex, adventure and excitement, and casual relationships were established from men's short-term mating hypotheses. Items including tenderness and intimacy, love, partnership, commitment, etc., were formulated to represent potential perceived long-term relationship benefits and were adapted from prior research into the perceived benefits gained through long-term relationships (Apostolou et al., 2023). Finally, several items were extracted from previous sugar relationship research (Daly, 2017; Gunnarsson & Strid, 2022; Recio, 2022; Upadhyay, 2022). This includes items such as kink expression and sexual freedom, emotional connection, friendship, career opportunities, and mentorship.

This measure was completed a single time by participants in the sugar population and two times by the general population. Individuals with sugar experience identified benefits expected from a sugar relationship and individuals with no sugar experience identified benefits they might gain from both short- and long-term relationships.

### **Mate Preference**

Mate preference data was collected using Li's (2006) application of Li et al.'s (2002) budget allocation task. Using a given sum of 'mate dollars,' participants applied their mate dollars between five character traits in three (two for the general population group) relationship contexts. The five character traits utilized were Choy et al.'s (2021) adaptation of Li's (2006) budget allocation task character traits and include physical attractiveness, liveliness (outgoing personality), social level (social status, education level, access to resources), intelligence, warmth/trustworthiness, and kindness. Each participant was supplied a list of the characteristics, which gave in-depth descriptions of their meaning.

Participants with sugar relationship experience repeated the task in three relationship contexts (sugar relationship partner, short-term partner, and long-term partner) and participants in the general population repeated the task in two relationship contexts (short and long-term relationship partner). Because the central focus of this measure was to conduct an initial observation of the similarities and differences between sugar partner preference and short/long-term partner preferences, participants were tasked with completing the measure only once with a low-mid level budget of 22 'mate-dollars.' With this number of mate dollars, participants are not able to maximize all desired attributes of a hypothetical partner, thus revealing which traits can be considered "necessities" for the individual, and which are merely "luxuries" (desired, but not critical).

## CHAPTER 6

### RESULTS

#### Individual Variation

##### Sex & Gender

Independent samples *t*-tests were used to assess differences in gender identity by biological sex. When rating their intensity of alignment with a male gender identity (0-10), self-identified biological males had a mean male gender identity of 9.29 ( $SD = 2.0$ ), while biological females had a mean male gender identity of 0.54 ( $SD = 1.5$ ;  $t = 35.31$ ,  $p = 0.000$ ). For female gender identity, biological males had a mean of 0.23 ( $SD = 0.9$ ) and biological females 9.24 ( $SD = 1.8$ ;  $t = -43.82$ ,  $p = 0.000$ ). No significant differences were found in male and female gender identities between the general population and the sugar population. Using correlations, it was found that female gender identity shared 90.74% variability with biological sex, and male gender identity shared 86.42% variability with biological sex. Because of the sample's gender identity congruence with their biological sex, biological sex was used throughout the study as an independent variable.

Participants' gender expressions were slightly more variable. Males' mean masculine gender expression was 8.53 ( $SD = 1.9$ ), and feminine gender expression was 2.13 ( $SD = 2.4$ ;  $t = 11.55$ ,  $p = 0.000$ ). Females' masculine gender expression had a mean of 2.75 ( $SD = 1.9$ ), while the mean of their feminine gender expression was 8.03 ( $SD = 2.2$ ;  $t = -9.94$ ,  $p = 0.000$ ). Again, no significant differences were apparent between the means of the general population's and the sugar population's masculine and feminine gender expressions. Overall, performing a paired *t*-test showed a significant difference between each sex's ratings of male gender identity and masculine gender expression (Females  $t = -9.604$ ,  $p = 0.000$ ; Males  $t = 6.521$ ,  $p = 0.000$ ), as well as each sex's ratings of female gender identity and gender expression (Female  $t = 7.056$ ,  $p = 0.000$ ; Male  $t = -5.215$ ;  $p = 0.000$ ).

## SOI-R

A series of paired *t*-tests were used to compare SOI between sub-samples. The sugar population ( $M = 5.54$ ;  $SD = 1.65$ ) compared to the general population ( $M = 4.06$ ,  $SD = 1.68$ ) had reported a significantly more unrestricted sociosexual orientation (higher score;  $t = -6.20$ ,  $p = 0.000$ ). Upon initial examination, females in sugar relationships had an overall less restricted sociosexual orientation than females in the general population ( $t = -4.25$ ,  $p = 0.000$ ). Two of the three facets—desire ( $t = -3.38$ ,  $p = 0.001$ ) and behavior ( $t = -5.47$ ,  $p = 0.000$ )—were significantly higher than the general population, while the attitude facet displayed little difference between the two female groups (see Figure 2). This indicates that female sugar babies' sociosexual attitudes are consistent with those of the general population, and the differences between the two lie in desire and actual sexual behavior.

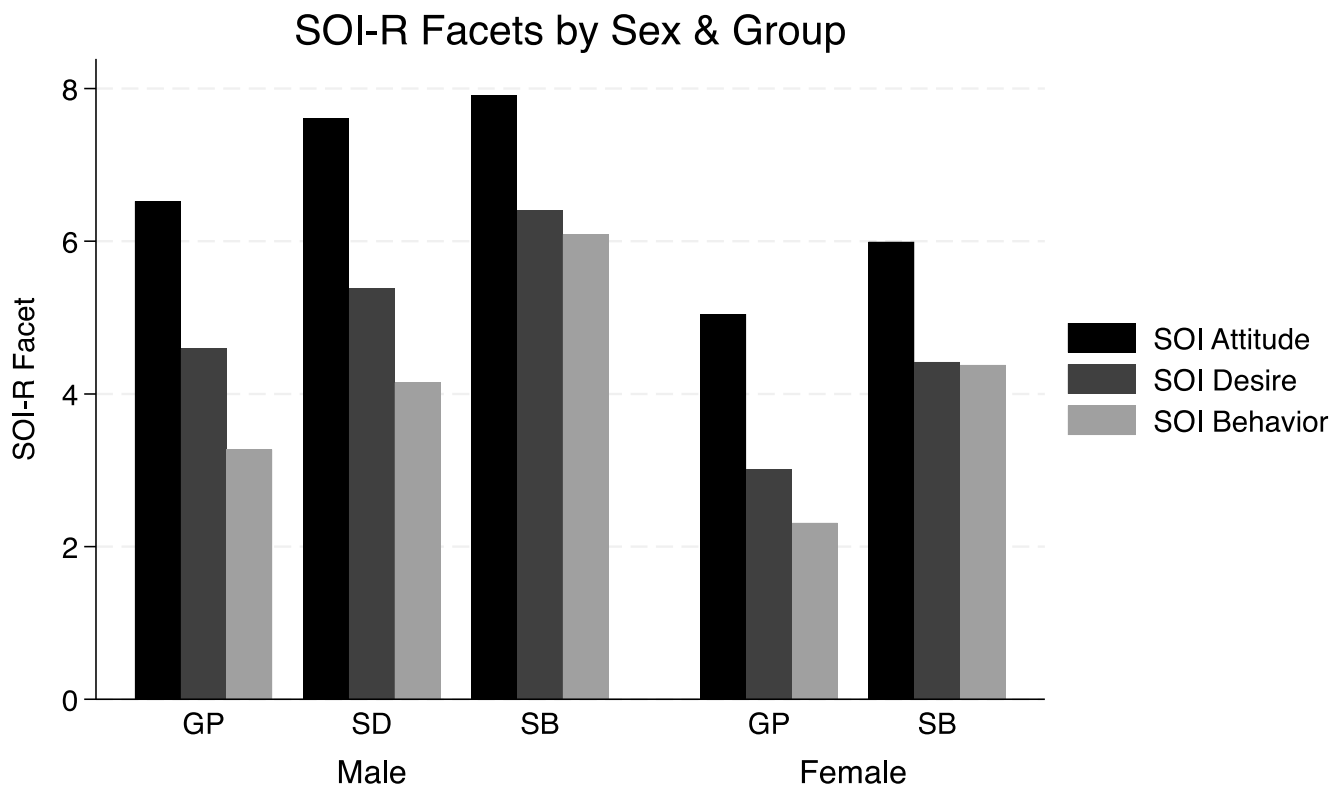


Figure 2. Means of Revised Sociosexual Orientation Index (SOI-R) facet scores (attitude, desire, and behavior) shown by sex and sub-population sample. (GP = general population, SD = sugar daddy, and SB = sugar baby).

The male sugar population group displayed significantly higher SOI scores than the female group ( $t = 3.47, p = 0.001$ ). Sugar population males had a significantly higher overall SOI than the general population of males ( $t = -4.25, p = 0.000$ ). Each facet—attitude ( $t = -2.84, p = 0.006$ ), desire ( $t = -2.79, p = 0.007$ ), and behavior ( $t = -3.46, p = 0.000$ )—was higher in sugar group males than general population males (see Figure 2).

### **Mate Value**

Independent sample  $t$ -tests were again used as an initial assessment of mate value. Sex differences in the population were significant ( $t = -2.364, p = 0.019$ ), with females ( $M = 4.8, SD = 0.1$ ) perceiving their total mate value as higher than males ( $M = 5.1, SD = 0.1$ ). However, once the independent short-term and long-term partner components were assessed individually, the significant differences between males and females lay only in the perceived short-term partner context ( $t = -3.142, p = 0.002$ ). Comparing the general population and the sugar populations, males of each group perceived their total mate value similarly, whereas females in the sugar populations perceived their mate value notably higher ( $t = -2.412, p = 0.018$ ) than those in the general population. When further assessed, a significant difference ( $t = -2.658, p = 0.009$ ) was only found in short-term mate value ratings (see Figure 3).

The same pattern emerged among the sugar group. Sugar babies' perceived total mate value ratings were significantly higher ( $t = -2.459, p = 0.016$ ) than sugar daddies', though, upon deeper inspection, the significance ( $t = -3.028, p = 0.003$ ) only emerged in the short-term mate value facet. In the sugar baby group, perceived total mate value had a moderate sex difference, but the same significant sex difference ( $t = -2.458, p = 0.017$ ) presented when observing short-term mate value (see Figure 3).

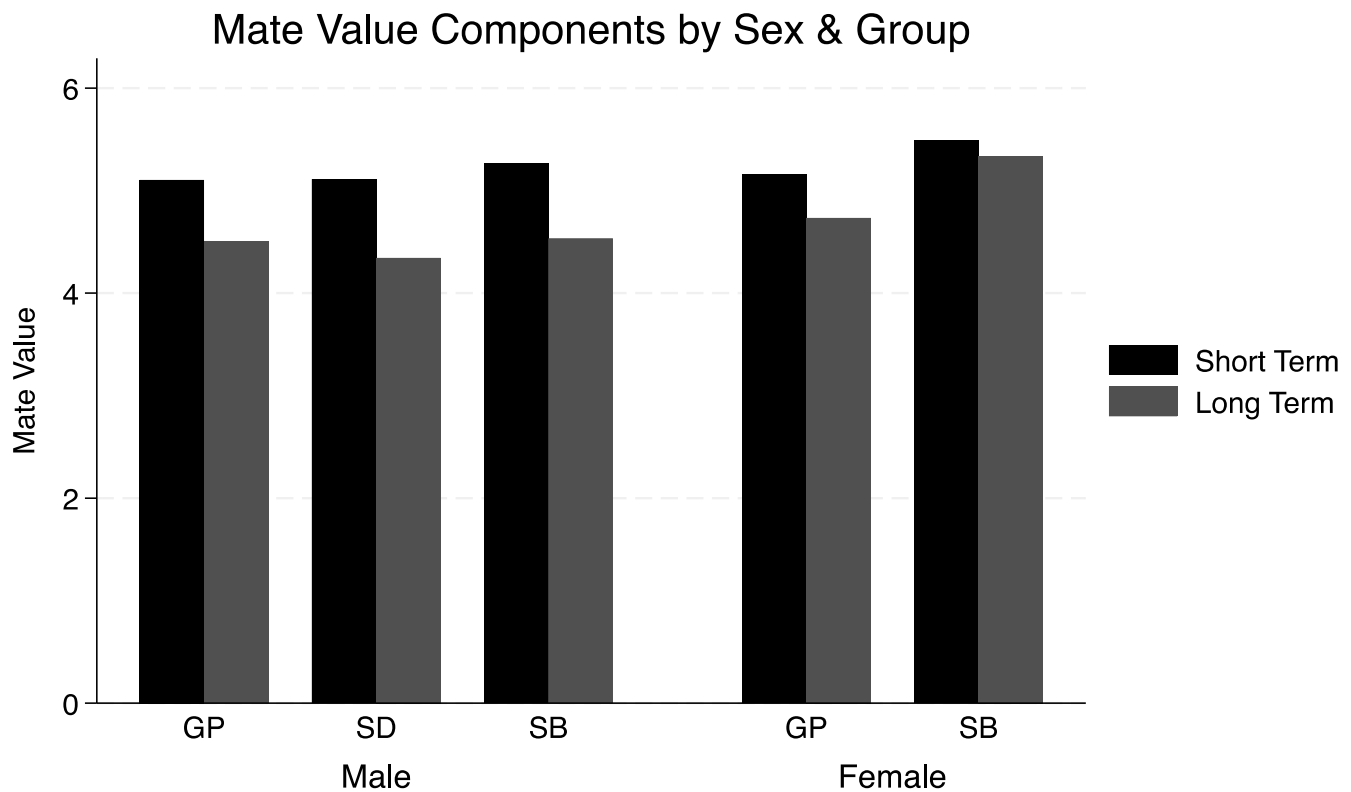


Figure 3. Means of short-term and long-term mate value displayed by sex and sub-population group. (GP = general population, SD = sugar daddy, and SB = sugar baby).

### Motivations

Items pertaining to participants' motivations for engaging in sugar, and short-term and long-term relationships were organized using principal-component factor analysis and rotation. Four relevant factors were identified across relationship contexts. These factors are: resource motivations (includes money and gifts, luxury experiences, and wanting to elevate lifestyle); sexual motivations (includes gaining sexual experience, kink expression, and sexual gratification); dissatisfaction with sexual/romantic life motivations (includes felt used in regular dating life, felt my assets were underappreciated in regular dating/romantic life, and unfulfilling love life); and love/romantic motivations (includes to find love, to find an emotional connection, and to feel cared for). Due to the typical provider/provider dynamic of sugar relationships, two motivation items—*to find someone to provide for me* and *to find someone I can provide for*—were purposely kept as single items to be analyzed independently as not to disproportionately raise the mean of any factor in a way which is not

representative of the actual construct. See Table A1 in appendix to view t-test comparisons between general population and sugar group motivation results. The following are results of a logistic regression model.

The material resource motivation composite variable showed a mild short-term ( $z = 1.82$ ,  $p = 0.069$ ) and significant long-term ( $z = 2.13$ ,  $p = 0.033$ ) sex difference overall. There also appeared to be a significant positive effect (ST  $z = 3.23$ ,  $p = 0.001$ ; LT ( $z = 3.23$ ,  $p = 0.001$ ) of being in a sugar relationship compared to the general population in either context. Surprisingly, there was no sex by sugar status interaction in either context.

In analyzing sexual motivations, a significant negative sex effect ( $z = -2.26$ ,  $p = 0.024$ ) was identified in the short-term relationship context that did not exist in the long-term context. However, sexual motivations in the sugar population compared to the long-term relationship context showed a robust positive effect ( $z = 2.53$ ,  $p = 0.011$ ).

No significant sex effect, sub-sample type effect, or sex by sub-sample interaction existed between the sugar populations' love and romance motivations and the general population's short-term relationship context. The only effect present in the long-term context was a negative sub-sample type effect, representing a lower motivation of love and romance in the sugar population than the general population when assessing a long-term condition.

Motivations of dissatisfaction in current dating or sexual life had positive sub-sample effects in both short ( $z = 1.89$ ,  $p = 0.059$ ) and long-term contexts ( $z = 2.74$ ,  $p = 0.006$ ). Though the effect in the short-term condition is mild, the effect grew in significance ( $z = 2.48$ ,  $p = 0.013$ ) when male sugar babies were removed from the analysis, suggesting that male sugar babies may be less motivated by feelings of dissatisfaction in their regular dating life than sugar daddies and female sugar babies.

Motivations between sugar groups were assessed using independent samples t-tests. Between sugar daddies and sugar babies, the mean differences in motivations of love/romance and motivations of an unfulfilled dating/sexual life were insignificant. As was indicated in the previous analyses between



all sub-samples, sugar daddies were significantly more motivated by sex ( $t = 3.124, p = 0.003$ ). In contrast, sugar babies were significantly more motivated by material resources ( $t = -6.077, p = 0.000$ ) when entering sugar relationships.

Female sugar babies and male sugar babies also showed insignificant differences in their motivations for love/romance and unfulfillment in dating/sexual lives. However, male sugar babies showed a higher sexual motivation ( $t = 2.714, p = 0.009$ ), and female sugar babies showed slightly more material resource motivations ( $t = -1.983, p = 0.052$ ).

### **Benefits**

Principal-component factor analyses and rotations were conducted to group individual items. Three relevant factors emerged that carried a high scale reliability coefficient when tested across relationship contexts. The material resource benefits composite (SR  $\alpha = 0.7534$ ; GP-ST  $\alpha = 0.6821$ ; GP-LT  $\alpha = 0.5012$ ) was composed of money, gifts, and luxury experiences item, representing extrinsic gain and relating to a short-term mating strategy. Secondly, the relationship benefits composite variable (SR  $\alpha = 0.7095$ , ST  $\alpha = 0.7290$ ; LT  $\alpha = 0.8214$ ) consists of tenderness and intimacy, romantic gestures, love, partnership, and commitment items, representing intrinsic motivations and relating to a long-term mating strategy. A third composite variable was constructed called emotional security (SR  $\alpha = 0.6895$ ; ST  $\alpha = 0.6610$ ; LT  $\alpha = 0.8289$ ) containing items such as emotional connection, companionship, being or feeling cared for, and having someone to depend on. Lastly, A fourth factor was identified in the short- and long-term benefits factor analyses, which combined sexual benefits and kink expression, but the factor was later dropped as it was found to have low scale reliability in the sugar relationship context ( $\alpha = 0.25$ ). This indicated that sex and kink expression may be less related dynamics in sugar relationships than they are in short and long-term relationships. Instead, sexual benefits will be evaluated as a single-item variable rather than a factor variable. A logistic regression model was used to analyze the benefit factor data.

## Material Resources

When analyzing the material resources composite, a significant sex effect was found in all contexts (ST  $z = 2.41$ ,  $p = 0.016$ ; LT  $z = 2.21$ ,  $p = 0.027$ ). A substantial sugar population group effect was noted in the short-term context only ( $z = 2.71$ ,  $p = 0.007$ ), whereas a significant sex by sugar population interaction was apparent in the long-term context ( $z = 3.19$ ,  $p = 0.001$ ), indicating female sugar babies have an elevated value for material resources compared to the general population in the context of a long-term relationship.

## Sexual Resources

For short-term relationships, there was a negative sex effect ( $z = -2.10$ ,  $p = 0.036$ ), where males valued sex more than females, and a mild sex by sugar status interaction ( $z = -1.97$ ,  $p = 0.049$ ) showing female sugar babies placing less importance on sexual resources. In the long-term context, no overall sex difference emerged. A positive effect was identified when comparing the sugar population group to the general population group's long-term emphasis on sex ( $z = 2.68$ ,  $p = 0.007$ ), however a significant sex by sugar population interaction occurred ( $z = -3.54$ ,  $p = 0.000$ ), indicating that sugar daddies and male sugar babies are likely creating the positive effect.

## Emotional Security

A significant sex difference was identified in importance of emotional resources in the short-term context ( $z = 2.17$ ,  $p = 0.030$ ) that did not appear to exist in the long-term context. Only in the long-term context was there a significant negative effect of the sugar population ( $z = -2.10$ ,  $p = 0.036$ ), which did not exist in the short-term comparison. No sex by sugar population interactions were identified.

## Romantic/Relationship

Relationship benefits showed neither a significant sex difference in the short-term nor long-term context overall. The sugar population valued relationship benefits significantly more than the general population in the short-term context ( $z = 3.07$ ,  $p = 0.002$ ), but no significant effect of the sugar population was found in the long-term context. However, sex by sugar population interaction showed

negative significance in both contexts (ST  $z = -2.73$ ,  $p = 0.006$ ; LT  $z = -2.67$ ,  $p = 0.008$ ), where female sugar babies valued relationship benefits less than the rest of the population.

Within the sugar baby population, there appeared to be significant sex differences in most of the benefit composite variables. Female sugar babies place more importance on material resources ( $z = 3.10$ ,  $p = 0.002$ ), whereas male sugar babies place more importance on sex ( $z = -2.79$ ,  $p = 0.005$ ) and mildly more importance on relationship benefits ( $z = -2.03$ ,  $p = 0.043$ ). The only benefit composite without a significant sex effect was emotional security and resources.

### **Mate Preference**

A multi-level mixed linear regression model was implemented for the initial assessment of mate preferences. The overall population was sorted by group: general population, sugar daddy, and sugar baby. Each characteristic was analyzed respectively for the main effects of sex and relationship type, as well as sex by relationship type interaction effects while implementing SOI, mate value, and age as corresponding control variables. Because the sugar daddy group was composed of only one sex, both the sex main effect and sex by relationship type interaction were omitted.

#### **General Population**

In the general population group, significant relationship-type effects were found in each characteristic except social level. Participants allotted more mate dollars to physical attractiveness ( $z = -8.42$ ,  $p = 0.000$ ) and liveliness ( $z = -5.22$ ,  $p = 0.000$ ) in their ideal short-term relationship partners than long-term relationship partners. In contrast, the characteristics of intelligence ( $z = 5.93$ ,  $p = 0.000$ ), warmth/trustworthiness ( $z = 2.95$ ,  $p = 0.003$ ), and kindness ( $z = 2.74$ ,  $p = 0.006$ ) were given higher priority when describing an ideal long-term relationship partner than a short-term relationship partner. Social level was the only characteristic that had a significant sex effect ( $z = 3.15$ ,  $p = 0.000$ ), showing a strong relationship between higher mate dollar expenditure and the female sex. Most character traits did not show a sex by relationship type interaction effect. However, liveliness had a positive interaction

between females and long-term relationship type ( $z = 2.16, p = 0.030$ ), suggesting that an outgoing personality is more desirable for females than males in a long-term relationship partner.

Pertaining to control variables, self-perceived mate value held a strongly positive relationship with physical attractiveness ( $z = 3.52, p = 0.000$ ), while all control variables (SOI  $z = 2.31, p = 0.021$ ; MV  $z = -2.16, p = 0.031$ ; Age  $z = 2.07, p = 0.039$ ) were significantly related to the variability of mate dollar expenditure on intelligence. Using multiple regression analysis to further assess the relevance of the control variables on mate preference mate dollar expenditure in both short and long-term relationship contexts, it was found that in the short-term context SOI-R was significant with social level ( $t = -3.32, p = 0.001$ ) and intelligence ( $t = 2.23, p = 0.028$ ), mate value was significant with physical attractiveness ( $t = 2.27, p = 0.026$ ), and age with social level ( $t = -4.65, p = 0.000$ ) and warmth & trustworthiness ( $t = 2.03, p = 0.046$ ). With relation to the long-term relationship context, SOI-R was significant with social level ( $t = -2.13, p = 0.036$ ) and intelligence ( $t = 2.65, p = 0.009$ ), mate value with physical attractiveness ( $t = 3.47, p = 0.001$ ) and intelligence ( $t = -2.16, p = 0.033$ ), and age with intelligence ( $t = 3.88, p = 0.000$ ).

Because both levels of the sugar population group have three levels in the relationship type factor variable, sugar daddy and baby mate preference data were analyzed with the sugar relationship context as the referential level, as well as additional analyses omitting the short-term relationship type to observe their congruence with the patterns of the general population.

### **Sugar Daddy**

For the sugar daddy group, the ideal sugar baby partner was dissimilar from their ideal short-term and long-term partners in several areas. While no significant results were found in the partner characteristics of social level, warmth/trustworthiness, and kindness, there was a significant positive relationship type effect in ideal physical attractiveness ( $z = 1.97, p = 0.049$ ) and a significant negative relationship type effect in ideal intelligence ( $z = -3.76, p = 0.000$ ) between short term and sugar relationship partners. The opposite effects occurred when comparing preferences of long-term and sugar

relationship partners, where a negative effect was found in physical attractiveness ( $z = -4.04, p = 0.000$ ), and a positive effect was found in intelligence ( $z = 2.93, p = 0.003$ ). Thus, sugar daddies' ideal sugar partner's physical attractiveness and intelligence reside in a medial position between their ideal short-term and long-term partners. Finally, liveliness, or outgoing personality, was prioritized significantly more ( $z = 2.22, p = 0.026$ ) in their ideal short-term partners than in sugar relationship partners yet showed no significant difference between ideal sugar and long-term partners.

When running the same models with the short-term relationship type as the omitted factor level, only some of the same patterns observed in the general population were found in the sugar daddy population between the long and short-term mate preference context. Similar to the general population results, physical attractiveness showed a positive effect ( $z = 6.01, p = 0.000$ ), while intelligence showed a negative effect ( $z = -6.69, p = 0.000$ ) toward short-term relationship partners. There was no significant relationship effect between sugar daddy preferences in social level, warmth/trustworthiness, and kindness between short and long-term relationship types.

Out of all the controls, age was found to be the only one that reliably predicted mate preference variability in the sugar daddy population. Negative relationships were present in the expenditure of mate dollars between age and both physical attractiveness ( $z = -2.97, p = 0.003$ ) and warmth/trustworthiness ( $z = -2.56, p = 0.010$ ), while a positive relationship was present between age and intelligence ( $z = 2.61, p = 0.009$ ).

### **Sugar Baby**

The sugar baby mate preference prioritization sample had few significant main and interaction effects. Sugar babies showed a main relationship effect in the physical attractiveness character trait ( $z = 2.40, p = 0.016$ ), with a higher prioritization in ideal short-term relationship partners than ideal sugar daddies. There was no significant relationship-type effect between ideal sugar and long-term relationship partners. Additionally, no other relationship-type effects between sugar and short- or long-term relationship partners were found in any other character traits. Only a mild to barely existent sex

effect ( $z = -1.77, p = 0.076$ ) appeared in the physical attractiveness character trait. No other character trait--including social level--showed a main sex effect. An interaction effect was present in the liveliness characteristic ( $z = 1.96, p = 0.050$ ), suggesting that liveliness prioritization was elevated for female sugar babies in an ideal short-term relationship partner. Control variables with relevance to sugar baby partner mate preference were SOI-R and age. SOI had a positive significance in predicting variability in sugar baby mate dollar expenditure on liveliness ( $z = 3.45, p = 0.001$ ) and social level ( $z = 3.13, p = 0.002$ ) character traits, yet a negative significance with intelligence ( $z = -3.99, p = 0.000$ ), warmth/trustworthiness ( $z = -2.57, p = 0.010$ ), and kindness ( $z = -2.00, p = 0.046$ ). Age accounted for variability in intelligence ( $z = 2.61, p = 0.009$ ) and social level ( $z = -2.24, p = 0.025$ ), where preference for partner intelligence rose and preference for social level declined with increasing age.

Patterns within sugar babies' ideal short-term versus long-term partner characteristics were mostly dissimilar to the general population. Physical attractiveness showed a positive effect ( $z = 2.92, p = 0.003$ ) toward short-term partners over long-term partners, while intelligence had an opposite, negative effect ( $z = -2.14, p = 0.015$ ). No significant relationship type effect was found when comparing sugar babies' ideal short- and long-term relationship partners in liveliness, social level, warmth/trustworthiness, and kindness character traits. The lack of a significant main sex effect regarding social level in the sugar baby group is especially notable because it differs from the strong significant sex effect ( $z = 4.57, p = 0.000$ ) seen in the general population, as well as the results of previous research. Separate independent samples t-tests were performed between male and female sugar babies' social level prioritization in both short and long-term relationship partner contexts to confirm the insignificant results observed in the larger multilevel mixed linear regression model.

### **Sugar by Sugar & General Population (Overall Sample) Group**

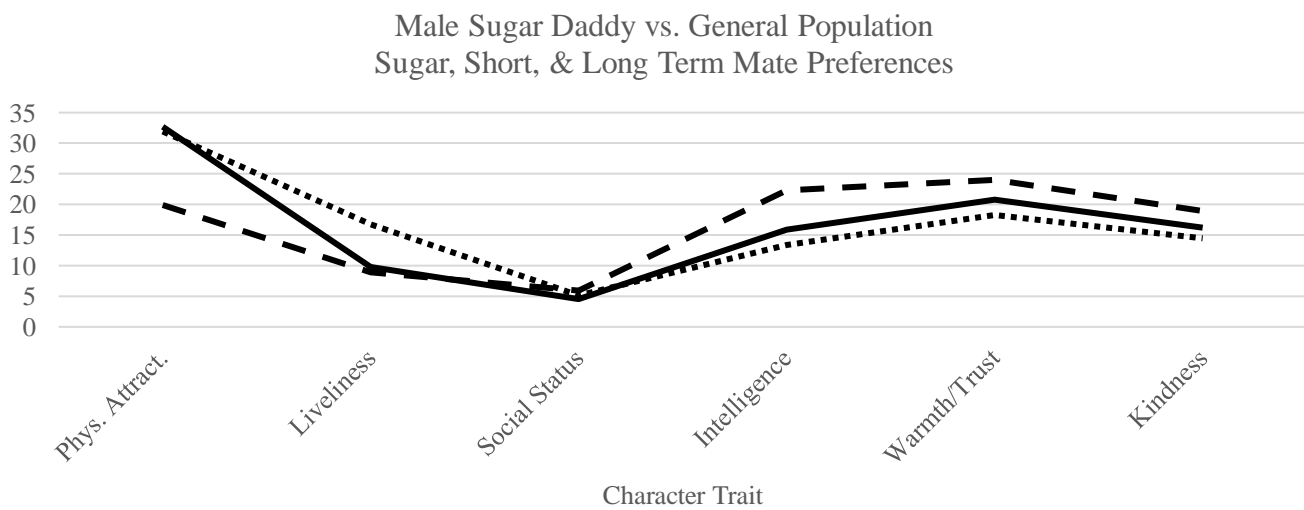
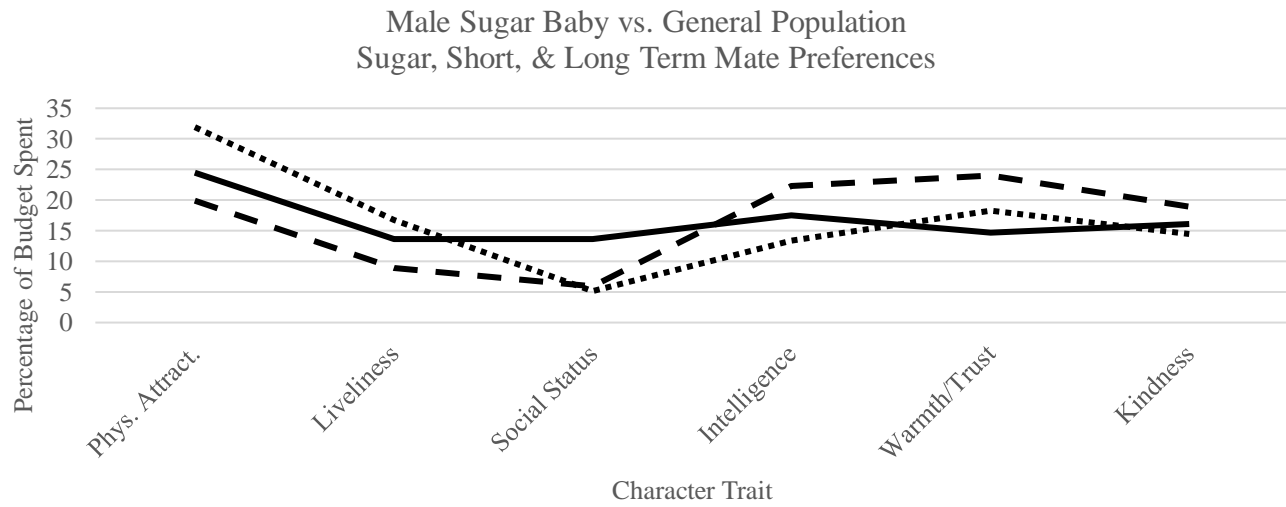
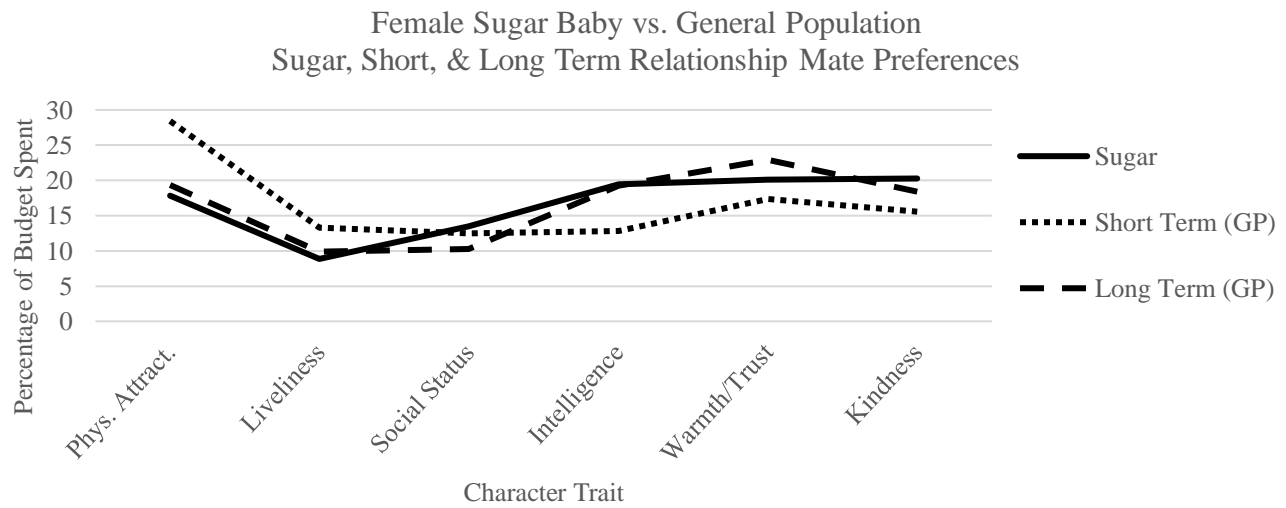
Before analyzing mate preferences between different groups, a multiple regression model was implemented to check for the differences in overall short-term and long-term relationship context scores. Male and female mate preferences were run independently of each other. All mate preference character

traits were significantly different between short and long-term contexts, except social status, which showed no significant difference between the contexts for either sex (see Table A2 for results).

Additionally, independent sample t-tests were conducted to check for significant differences in short and long-term character trait spending between the sugar and general population groups of each sex. This was to confirm the short and long-term overall sample scores, combining the scores of the sugar and general population group, were not drastically skewed by large discrepancies in group expenditure. No significant difference existed between the groups in either short or long-term contexts, except for the male sugar and general population groups' expenditure on physical attractiveness in the long-term context.

A multiple regression model, formulated with character trait dependent variables and relationship status and sample group independent variables, assessed the potential differences or similarities between sugar relationship character trait preferences and those of short/long relationship contexts (sorted by sex) (see Figure 4 for visual representation of results).

Female sugar babies' preferences for character traits in sugar daddies both conformed and strayed from the overall female samples' preferences for short and long-term partners. Expenditure of male dollars on physical attractiveness ( $t = 4.70, p = 0.000$ ), liveliness ( $t = 2.24, p = 0.029$ ), and intelligence ( $t = -3.65, p = 0.000$ ) were significantly different between sugar babies' ideal sugar daddy partners and the female samples' ideal short-term partners. Yet, expenditure on those traits showed no significant difference compared to the female samples' ideal long-term partner. Alternatively, the reverse pattern was identified in the social level character trait, where female sugar babies' expenditure on social level in an ideal sugar daddy ( $t = -1.99, p = 0.048$ ) showed a significant difference from the sample expenditure on an ideal long-term partner but no difference from the ideal short-term partner. Female SB expenditure on both warmth/trustworthiness and kindness were not significantly different from either other relationship context.



*Figure 4.* Percentage of mate dollar budget spent on character traits compared between sugar subgroup and general population group, sorted by sex. (Phys. Attract. = Physical Attractiveness).



Among the male sugar population sample, spending on physical attractiveness and intelligence in the sugar population was significantly different from spending in the overall samples' short ( $t = 3.09$ ,  $p = 0.002$ ) and long ( $t = -2.41$ ,  $p = 0.017$ ) relationship contexts. Considering the character traits across all relationship contexts, sugar daddies spent more on physical attractiveness than male sugar babies ( $t = 2.48$ ,  $p = 0.014$ ) and males in the general population group ( $t = 3.56$ ,  $p = 0.000$ ), while male sugar babies spent more on social level and less on warmth/trustworthiness than sugar daddies (social level  $t = 3.21$ ,  $p = 0.002$ ; warmth/trustworthiness  $t = -1.98$ ,  $p = 0.049$ ) and the male general population group (social level  $t = 3.36$ ,  $p = 0.001$ ; warmth/trustworthiness  $t = -2.64$ ,  $p = 0.009$ ).

### **Moderators**

#### **SOI-R**

##### ***Sugar Relationship Dynamics (Frequency)***

In sugar relationship dynamics, the total count of sugar relationships and the frequency at which individuals in sugar relationships reported experiencing exclusivity in their sugar relationships were both affected by participants' SOI-R scores. Using simple linear regression, total number of sugar relationships participants reported having over their lifetime was analyzed against SOI-R score as a predictor variable, showing a significant positive relationship ( $t = 2.58$ ,  $p = 0.012$ ) through the overall sugar population group. Investigating SOI-R scores effects on total sugar relationships through sugar group levels, it was found that the positive relationship carried through the sugar daddy ( $t = 2.20$ ,  $p = 0.037$ ) and female sugar baby ( $t = 2.76$ ,  $p = 0.009$ ) groups, but the effect was insignificant in the male sugar baby group. Frequency of reported exclusivity in sugar relationships showed an opposite relationship with SOI-R score than was identified with total amount of sugar relationships. However, no significant relationship was detected in the overall sugar group level. A closer inspection revealed a negative relationship in the sugar daddy group ( $t = -3.73$ ,  $p = 0.001$ ) and mild significance in the female sugar baby group ( $t = -1.97$ ,  $p = 0.059$ ). SOI-R score showed no relationship with exclusivity frequency in male sugar babies.

### ***Benefits & Motivations***

SOI-R score had a significant positive relationship with sex as both a relationship motivation and benefit throughout the general population and sugar population. SOI-R score and sexual benefits had a positive relationship in sugar relationships ( $t = 2.70, p = 0.008$ ) and short-term relationships ( $t = 7.09, p = 0.000$ ), but was insignificant in long-term relationships. With sexual motivations, sugar relationships ( $t = 2.68, p = 0.009$ ), general population short-term relationships ( $t = 8.82, p = 0.000$ ), and general population long-term relationships ( $t = 2.78, p = 0.006$ ) all had a positive relationship with total SOI. In female sugar babies, a less restricted sociosexual orientation coincided with less emphasis on romantic/long-term type benefits ( $t = -2.64, p = 0.012$ ). Upon breaking down the total aggregate score into facets, the relationship existed in the attitude ( $t = -3.86, p = 0.000$ ) and behavior ( $t = -2.06, p = 0.045$ ) facets, but was not present in the desire facet. An opposite relationship was identified between SOI and material resource motivations ( $t = 2.18, p = 0.035$ ), with the behavior ( $t = 2.57, p = 0.014$ ) and attitude ( $t = 3.00, p = 0.005$ ) facets composing the relationship.

### **Mate Value**

#### ***Sugar Relationship Dynamics (Payment)***

Mate value seemed to have much less correlation with sugar relationship ideal pay per meet and allowance than originally hypothesized. This could be due to the simplistic version of mate value assessment implemented in data collection. However, it is possible that an individual's ideal amount of payment is more complex than simply considering how well that individual perceives themselves as a partner (e.g., short-term mate value and allowance ( $t = 2.35, p = 0.021$ ) had a significant relationship when the sugar population was assessed as a whole, however, analyzing the sugar population by level showed no significant results). Alternatively, sex and the interaction between sex and age seemed to be more influential on allowance than mate value. Females in the sugar population group preferred higher allowance rates than males ( $t = 2.47, p = 0.016$ ), and though age on its own did not have a significant

main effect on allowance, there was a moderately significant negative interaction effect between the two variables ( $t = -2.04, p = 0.046$ ).

### ***Benefits & Motivations***

Effects of mate value on motivations and benefits were also minimal. Total mate value, as well as short-term mate value, had a positive relationship with material resource motivations (Total MV  $t = 2.71, p = 0.008$ ; ST MV  $t = 2.86, p = 0.005$ ) in sugar relationships, yet, when the sugar population was separated into sub-groups (SD, Male SB, Female SB), the positive correlation between total MV and material motivations was only significant in male sugar babies ( $t = 4.70, p = 0.000$ ). Additionally, there was also a negative relationship in sugar relationships between total and short-term mate value and sexual motivations (Total MV  $t = -2.20, p = 0.030$ ; ST MV  $t = -3.16, p = 0.002$ ). These relationships were not reflected in the general population group, with the exception of short-term mate value and motivations for material resources in a short-term context ( $t = 2.12, p = 0.036$ ).

Assessing mate value's effect on individual benefit factor variables showed a negative relationship between total mate value and sexual benefits in the sugar population group ( $t = -2.36, p = 0.021$ ), but further analysis showed the relationship only existed in female sugar babies ( $t = -2.31, p = 0.026$ ). Short-term mate value in the sugar population group negatively correlated with both sexual ( $t = -2.60, p = 0.011$ ) and romantic/relationship ( $t = -2.15, p = 0.035$ ) benefits. A positive relationship in the general population group between mate value and sexual benefits emerged in the long-term context ( $t = 2.10, p = 0.038$ ). Also, in the long-term relationship context of the general population group, romantic/relationship benefits and total mate value produced a significant positive effect ( $t = 3.29, p = 0.001$ ). Short-term mate value in the general population showed a positive effect on material benefits in a long-term relationship context ( $t = 2.57, p = 0.012$ ), yet also showed an additional positive relationship with romantic/relationship benefits ( $t = 2.20, p = 0.030$ ). The only benefit found to be significantly affected by long-term mate value was the general population groups' romantic/relationship benefit factor in the long-term relationship context ( $t = 3.51, p = 0.001$ ).

## Mate Preference

### *Motivations*

To assess how mate preference character traits were affected by specific motivations and benefits between groups, several multiple regression analyses were run with different group variables.

In observation of the general population group, mate preference characteristics had only minimal relations to the motivation factors. Considering the short-term relationship motivations in conjunction with short-term partner mate preferences, increased material resource motivations elevated expenditure on a social level ( $t = 2.33, p = 0.022$ ) and lowered expenditure on warmth & trustworthiness ( $t = -2.03, p = 0.045$ ), sexual motivations decreased expenditure on social level ( $t = -2.46, p = 0.016$ ) and motivations of being provided for increased expenditure on social level ( $t = 2.71, p = 0.008$ ). Long term partner mate preferences showed little effect with motivations, but sexual motivations were found to raise expenditure on liveliness ( $t = 2.65, p = 0.009$ ). Motivations of love and romance, dissatisfaction in current sexual or romantic life, and providing for someone else bore no effect on mate preference character trait expenditure in either relationship context presented to the general population group.

Motivations were significantly more impactful on mate preference choice in sugar relationships. Assessing the group overall, material resource motivations had a positive relationship with social level ( $t = 3.71, p = 0.000$ ) and negative relationship with physical attractiveness ( $t = -3.63, p = 0.001$ ), sexual motivations had a positive relationship with physical attractiveness ( $t = 3.28, p = 0.002$ ) and negative relationships with intelligence ( $t = -2.94, p = 0.004$ ) and kindness ( $t = -2.21, p = 0.030$ ), and dissatisfaction in sexual or romantic life showed no significance with any trait. Both motivations of being provided for and providing for someone were initially assessed by sugar group due to all sugar babies selecting the motivation of being provided for and no female sugar babies selected providing for someone. Being provided for was found to raise expenditure on social level in the male sugar population altogether ( $t = 2.95, p = 0.006$ ), as well as raise social level ( $t = 2.62, p = 0.015$ ) and lower physical attractiveness ( $t = -2.44, p = 0.023$ ) expenditure in the sugar daddy group.

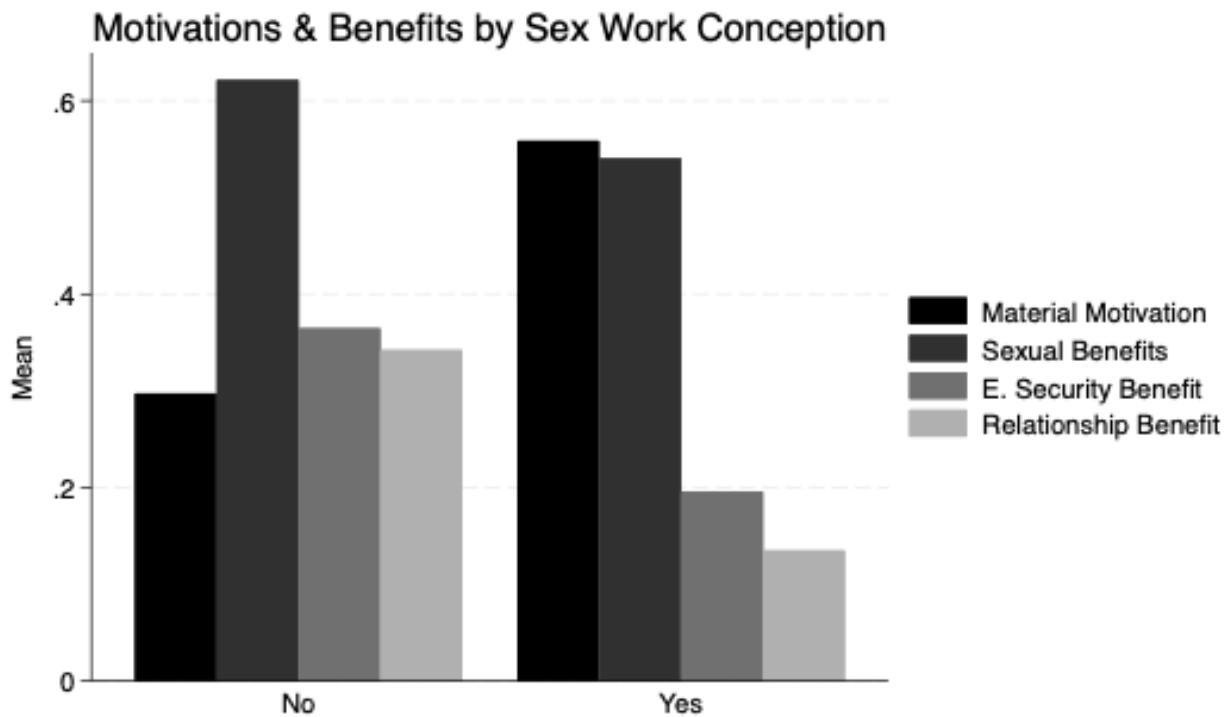
## ***Benefits***

The four benefit factors were poor moderators of mate preference character trait selection in the general population group. Material benefits showed a positive relationship with social level in the short-term relationship context ( $t = 4.06, p = 0.000$ ), and sexual benefits had a positive association with liveliness in the long-term relationship context ( $t = 2.50, p = 0.014$ ). No other factors were found to carry any significance in the variability of mate dollar expenditure.

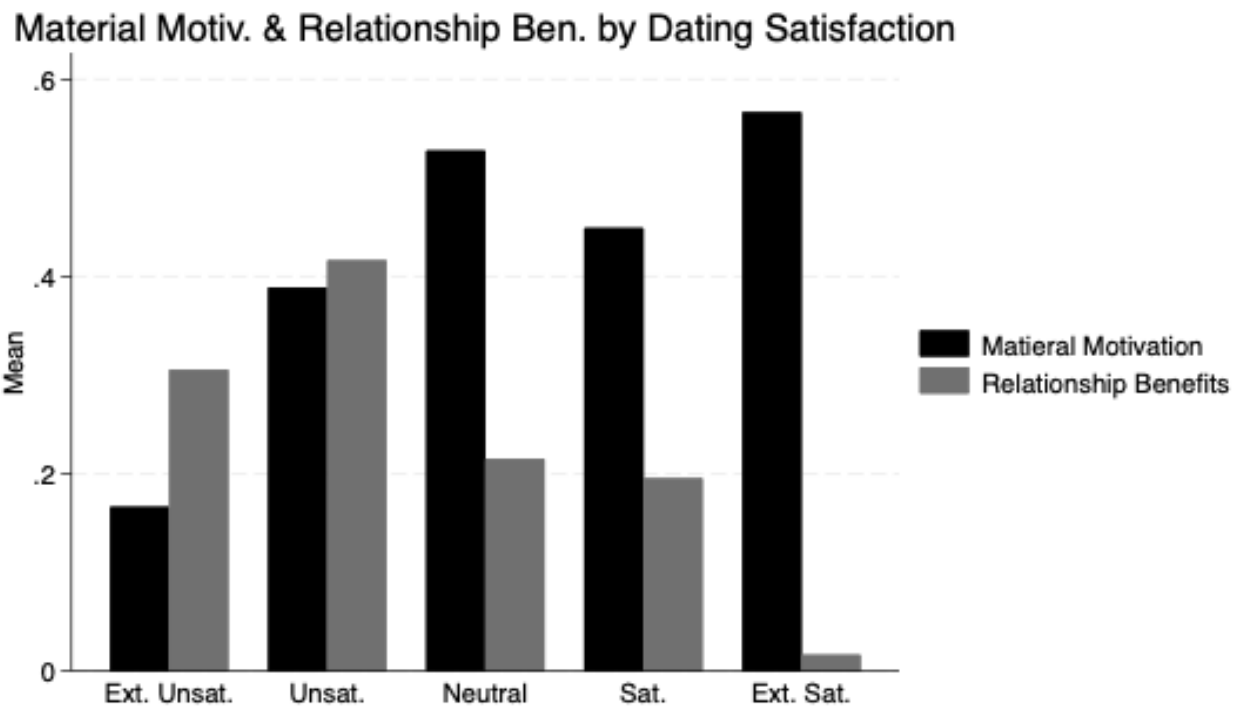
Mate preferences for sugar relationship partners were more affected by perceived benefits than the non-sugar relationship contexts. Elevations in material resource benefits were related to elevations in expenditure on social level ( $t = 2.76, p = 0.008$ ) yet decreased expenditure on physical attractiveness ( $t = -4.62, p = 0.000$ ). Higher levels of importance on sexual benefits increased expenditure on physical attractiveness ( $t = 2.99, p = 0.004$ ), while higher spending on emotional security benefits decreased expenditure on physical attractiveness. No significant findings were associated with romantic/relationship benefits; however, sorting the sugar population group by sex showed increased spending on intelligence and decreased spending on physical attractiveness.

## **Prior Dating Satisfaction & Concept of Sex Work**

To test the emphasis that contentment and satisfaction in prior sexual or romantic relationships before beginning sugar dating, as well as an individual's ideological perception of sugar dating as a form of sex work, has on the sugar population group's preferences in sugar relationships, a series of ANOVA analyses were run using prior dating satisfaction and individual concept of sex work in sugar dating as independent variables and motivations, benefits, and mate preference as dependent variables (see Figures 5 and 6 for bar graphs comparing significant dependent variable means).



*Figure 5.* Means of motivation and benefit composite variables (material resource motivation, sexual resource benefit, emotional security benefit, and relationship benefit) are shown by sugar group participant's agreement (yes) or disagreement (no) with the statement 'sugar relationships are a form of sex work.'



*Figure 6.* Means of material resource motivation and relationship benefit (y-axis) among the sugar group are shown by satisfaction level with pre-sugar intimate relationships (x-axis). (Ext. Unsat. = extremely unsatisfied, Unsat. = unsatisfied, Sat. = satisfied, and Ext. Sat. = extremely satisfied).

Using the motivation factors as dependent variables in ANOVA analyses, the motivation of dissatisfactory prior sexual or romantic life was expected to be significant as a dependent variable because of the direct relation with the satisfaction in prior relationships independent variable. In the overall model with both independent variables, it was found to be significant ( $f = 3.43, p = 0.008$ ), however when running the analyses with each independent variable respectively, the model testing the dissatisfaction motivational factor with ideation/conception of sugar relationships as a form of sex work was not significant on its own. The alternative model comparing means of the dissatisfaction motivational factor by general satisfaction in prior relationships showed a descending trend with extremely dissatisfied holding the highest mean (.4M) of dissatisfaction as a motivation for sugar dating and extremely satisfied holding the lowest (0M). The model with the material resource motivational factor showed significant differences in mean with both independent variables ( $f = 3.02, p = 0.016$ ). Material resource motivation increased as satisfaction in prior sexual/romantic relationships increased (low sat. 0.2M to high sat. 0.6M) and was found to be lower in individuals who did not consider sugar dating to be sex work (0.3M) than those who did (0.6M). Sexual motivations were also significant in the overall model ( $f = 3.08, p = 0.015$ ) but were found to only relate to prior relationship satisfaction upon tabulation checking, which showed sexual motivation declining as satisfaction increased (low sat. 0.5M to high sat. 0.3M). Romantic/Relationship motivations were not significant within the model.

Benefit factors were input in the same ANOVA model as motivational factors with prior relationship satisfaction and sex work conception as independent variables. Romantic/relationship benefit factor within the model was significant ( $f = 5.15, p = 0.0005$ ), and post-model tabulation checks showed a general decreasing trend from low satisfaction to high, while increasing slightly between the lowest and second lowest levels of satisfaction (low sat. 0.3M; 2nd lowest sat. 0.4M; high sat. 0.01M). Differences between means of the romantic/relationship benefit factor were also highest in individuals who disagreed with sugar dating as a form of sex work (0.3M) and were lowest in those who agreed (0.1M). Emotional security benefit was only significant with sex work conception as an independent

variable ( $f = 7.29$ ,  $p = 0.0009$ ), with individuals disagreeing having the high mean ( $0.4M$ ) and agreeing with the low mean ( $0.2M$ ).

Motivational and benefit variables that were not composite variables were assessed using Fisher's Exact test, testing each variable individually against prior relationship satisfaction and sex work conception. However, the only significant relationship was that of the motivation to provide for someone else with prior relationship satisfaction ( $p = 0.032$ ).



## CHAPTER 7

### DISCUSSION

#### General Discussion

While this research was explorative, considering sugar relationships from a broader evolutionary and sexual strategies perspective, the foundational hypothesis proposing that sugar dating exemplifies short-term, long-term, or a combination of both mating strategies was considered over the course of data analysis. In alignment with the individual predictions presented, the results suggest alliance with the multiple strategy employment hypothesis. Constructs of individual variation within the sugar population group did cause fluctuation in how motivations, benefits, and mate preferences presented, altering the degree to which they aligned or misaligned with the general population group's short-term and long-term motivations, benefits, and mate preferences.

Considering the motivation composite variables without influence of individual variation constructs, the general state of the sugar population group was to be more motivated by material resources and dating dissatisfaction, while being less motivated by romantic/relationship motivations than the general population stated they were motivated by when considering either a short term, casual relationship or a long term, committed relationship. The sugar group's average motivation results align most closely with a short-term mating strategy, both as exemplified by the general population and as stated in previous research. However, by introducing constructs such as SOI, mate value, and age, the overall motivations of the sugar group shifted. Individuals with restricted sociosexual orientations were less motivated by material and sexual resources than were those with more unrestricted orientations. Similarly, older individuals across all groups were less motivated by material resources than were younger participants. Though individual variation moderated material and sexual resources to closely resemble the importance of material and sexual motivations for beginning long-term relationships, individual variation variables still did not increase romantic/relationship motivations among the group. This may suggest that people are not often motivated to sugar date by the same processes that motivate

people into long term relationships. Instead, because dissatisfaction was a major motivation in sugar dating, it may be considered a primary motivation that remains consistent across constructs of individual variation. Motivations of dating dissatisfaction were not significantly different between sugar relationships and short-term relationships, implying that, on average, individuals might be motivated predominantly by short-term strategy-type motivations when entering sugar relationships.

Among the benefit composite variables, the average positions of the sugar group before moderation by individual variation variables are consistent with those of short-term relationships (pulled from the general population), where material resources were highly beneficial to females and sexual benefits were highly beneficial to males (whether they be sugar daddy or sugar baby). Interestingly, also in the sugar group's average position was a similarity in the importance of romantic/relationship benefits among the sugar group's male population (sugar daddies and male sugar babies) and the general population's romantic/relationship benefit importance in long-term relationships, indicating that males in sugar relationships value relationship-oriented, emotionally intimate benefits as they are valued in long term relationships. Female sugar babies placed less importance on relationship benefits overall. However, female sugar babies with more restricted SOIs placed less importance on material benefits and more importance on romantic/relationship benefits. Romantic/relationship benefits were also more important in female sugar babies with lower mate values. Female sugar babies' perceived benefits fluctuated from short-term to long-term, aligning with factors of individual variation. Sugar daddies and male sugar babies appear to have more consistent benefits regardless of the moderating variables included in this study.

Satisfaction level in sexual and romantic experiences prior to beginning sugar dating, combined with individual perceptions of sugar dating as sex work, were consistent moderators for the motivation and benefit composite variables that predicted orientation toward short or long-term strategies. Individuals with lower satisfaction levels in pre-sugar relationships were most likely to disagree with the sentiment that sugar relationships are a form of sex work. Those individuals were also less motivated by

material resources, as well as perceived emotional security and romance/relationship-type components more beneficial in sugar relationships. It appears that individuals in sugar relationships who were previously dissatisfied in the dating world implement and benefit more from a long-term strategy in their sugar relationships. Potentially, lower dating/romantic satisfaction levels may subconsciously influence individuals to search for long-term benefits and characteristics in sugar relationships as a functional attempt to circumvent negative emotions that accompany not having a stimulating intimate partner. Research under sexual strategies theory has theorized that because long-term partners have been evolutionarily beneficial to human fitness and reproductive success, it is likely that a suite of emotional adaptations exists to motivate individuals to seek out such long-term partners (Apostolou et al., 2023). In the absence of a long-term partner, sparked by initial motivations for material or sexual gains, sugar dating may be a beneficial alternative to a traditional long-term relationship, acting to satisfy not only the emotional benefits that accompany having a long-term partner but also myriads other benefits that are found through atypical kinds of relationships.

Mate preferences in the general population group were predictable, where physical attractiveness and outgoing personality were more valued in short-term relationships, and intelligence, warmth/trustworthiness, and kindness were more valued in long-term relationships. Most variation in the general population group's mate preferences hinged on strategy type. In sugar group mate preferences of sugar partners, variability was most predicted by sex and individual variation. Using the general population as a comparison for the sugar population group, female sugar babies' expenditure on sugar partner character traits conformed more to females' long-term relationship trait expenditure than short-term, while sugar group males' expenditure on sugar partner characteristics lay in a medial position between short term and long-term partner preferences. Both groups, in their averages, showed tabulation between mating strategies. When choosing sugar daddies, female sugar babies generally implemented psychological mechanisms related to long-term mating strategies. Sugar daddies and male sugar babies

exemplified a combination of short and long-term strategic mechanisms when considering sugar partners.

Female sugar babies, as the group that appears to be moving between primarily two opposing states—valuing economic gain with secondary emotional benefits versus primarily valuing emotional/relationship benefits with secondary economic benefits—had mate preferences that were predominantly moderated by SOI, where restricted sociosexual orientations predicted closer alignment with long term mate preferences. Male sugar babies followed a similar pattern with SOI moderation. Age predicted the most variability in sugar daddy mate preferences, where older age sugar daddies selected mate character traits closer to long-term partners. These results indicate that the two mating strategies exist on opposite sides of a spectrum in sugar relationships, where individual moderators such as SOI and age adjust a person's orientation between either spectrum ends in a way that is closer to a stereotypical short-term or long-term strategy. Individuals in the sugar group's mate preferences also correlated with their motivations for sugaring and items they found most beneficial in such relationships, such that those who were motivated by and benefitted from short-term items spent more on short-term partner characteristics (e.g., more motivational and beneficial value of sex showed a trade-off where more physical attractiveness was preferred at the behest of intelligence).

The sugar partner mate preference findings assert that central assumptions of sexual strategies theory, such as sex-differentiated and context-dependent mating strategies and preferences evolving through recurrent adapted challenges, apply to alternative relationship types besides traditional short-term or long-term relationships (Buss & Schmidt, 1993). Because all sugar sub-groups displayed an alignment with short-term and long-term preferences, it is likely that individuals in sugar relationships are using some level of mixed mating strategies to identify desirable sugar partners, likely defined in part by an individual's sociosexual orientation, self-perception of mate value, motivations, and benefits.

Considering that strategies displayed in sugar relationships are highly dependent on individual variation, it can be inferred that specific aspects of sugar relationship dynamics may also be dependent

on individual variation, such as the amount sugar daddies expect to pay, and the amount sugar babies expect to be paid. For sugar daddies, allowance payment was dependent on age. For sugar babies, the amount desired for allowance was dependent on mate value and sex. Because there was no significant association between mate value and allowance in sugar daddies, it is likely that the positive correlation between age and allowance does not represent attempts to compensate for lack of physical desirability but rather may relate to the increasing value for more long-term partner characteristics and relationship benefits in older sugar daddies. In sugar babies, however, a significant association between mate value and allowance did exist, representing a relationship between finding oneself more physically attractive and expecting a higher value trade for one's sexual resources. Additionally, females, compared to male sugar babies, expected a higher allowance overall, exemplifying sexual economics theory's characterization of female sexuality as is generally considered of higher value in the sexual marketplace (Baumeister & Vohs, 2004).

While some constructs were able to explain variation in allowance amount, there was an overall lack of variability in pay-per-meet payment pricing. This could be the result of stronger cultural influences rather than the influence of individual variation on payment. Baumeister and Vohs (2004) predict that community configurations of the sexual marketplace inform how individuals place value on their commodities for trade, but long-term relationships grow less swayed by cultural pressures and form more individualistic exchange values. Further research would be required to elucidate if expectations of payment shift as individual sugar relationships persist over time.

Overall, the findings of this study support predictions of mixed mating strategies in sugar relationships. Though these relationships are characterized by an exchange of sex for resources, the similarities to and variabilities between short-term and long-term mating strategies suggest the implementation of mechanisms relevant to broader human mating psychology—in both sugar babies and sugar daddies. Aspects of individual variation can be utilized to predict an individual's preference for short-term or long-term resembling sugar relationships, asserting that sexual strategies theory's

theoretical assumptions may be applied to atypical relationships, even those that may be transactional in nature.

### **Limitations & Future Directions**

Several limiting factors may have handicapped this study. Because of the secretive nature of sugar relationships, participant recruitment proved exceedingly difficult and rendered a less-than-ideal sample size (although consistent with other sugar dating research). The male sugar sub-groups consisted of the least participants, making them a poor representation of the population. Additionally, because a large portion of the male sugar baby participants identified themselves as heterosexual, any future research should consider asking participants the usual sex of their sugar partners.

The implemented variables and survey design also proved to be a limiting factor. Because the study had more than many constructs to focus on, it was spatially impractical to include a full budget mate preference analysis procedure where participants repeat mate preference measures with low, medium, and high budgets (Li et al., 2002). Future research may consider implementing the full budget prioritization analysis to clearly delineate tradeoffs in character traits and distinguish necessities from luxuries.

Further, researchers may consider the potential for dual mating strategies. Collecting more data specifically on relationship status outside of sugar dating would allow researchers to observe whether mating strategies in sugar relationships change in accordance with an individual's relationship status. Hypothesis surrounding dual sexual strategies proposes that individual long-term relationships may seek to fulfill short-term mating benefits in transactional or alternative relationships, while single individuals may be seeking aspects more related to long-term mating (Butterworth et al., 2023).

### **Conclusion**

This explorative research sought to unravel the beneficial and motivational dynamics of sugar dating while considering their potential alignment or misalignment with perceptions of motivations and

benefits within non-sugar, non-transactional short- and long-term dating. Overall, the findings suggest that sugar relationships bear a resemblance to either mating strategy, respectively, or simultaneously.

From a general perspective, this study supplies novel quantitative data on a nuanced, diverse community that has received minimal focus in academic research. From an evolutionary perspective, this study opens the dialogue for considering some forms of sex work or transactional relationships as potentially exercising adaptive mechanisms beyond those related to short-term mating psychology. Additionally, findings relevant to dissatisfaction with sexual and romantic relationships may speak to a larger, societal problem within the current dating atmosphere. Losing patience with traditional, modern relationships may cause people to seek out atypical forms of sexual and romantic relationships that better suit their needs.

**APPENDIX**  
**ADDITIONAL MATERIAL**

Table A1. Male and female motivation and benefit factors by group

		Short-Term				Long-Term			
		GP	SG	Diff	t(p)	GP	SG	Diff	t(p)
Female Participants	Motivations								
	Material	0.06(.03)	0.64(.06)	0.31	-9.77***	0.12(.03)	0.64(.06)	0.34	-8.54***
	Sexual	0.27(.04)	0.19(.04)	0.08	1.35	0.15(.03)	0.19(.04)	-0.04	-0.72
	Relationship	0.31(.05)	0.23(.05)	0.28	1.14	0.75(.04)	0.23(.05)	0.51	7.65***
	Dissatisfied	0.10(.02)	0.29(.05)	-0.19	-3.77***	.09(.02)	0.29(.05)	-0.20	-4.08***
	Provider	0.06(.03)	0(0)	0.06	1.71	0.29(.06)	0(0)	0.29	4.15***
	Providee	0.11(.04)	0.51(.08)	-0.40	-4.95***	0.40(.06)	0.51(.08)	-0.10	-1.09
	Benefits								
	Material	0.11(.03)	0.64(.05)	-0.53	-9.41***	0.18(.03)	0.64(.05)	-0.46	-7.89***
	Sexual	0.52(.06)	0.35(.07)	0.18	1.70	0.58(.06)	0.35(.07)	0.23	2.38*
	E. Security	0.25(.03)	0.32(.04)	-0.07	-1.29	0.67(.04)	0.32(.04)	0.35	5.51***
	Relationship	0.18(.03)	0.16(.04)	0.02	0.38	0.75(.04)	0.16(.04)	0.59	10.12***



		Short-Term				Long-Term			
		GP	SG	Diff	t(p)	GP	SG	Diff	t(p)
Male Participants	Motivations								
	Material	0.01(.01)	0.23(.05)	-0.22	-4.66**	0.04(.02)	0.23(.05)	-0.19	-3.60***
	Sexual	0.42(.05)	0.46(.05)	-0.04	-0.58	0.25(.04)	0.46(.05)	-0.21	-3.21**
	Relationship	0.31(.05)	0.33(.05)	-0.03	-0.38	0.73(.05)	0.33(.05)	0.39	5.45***
	Dissatisfied	0.10(.03)	0.23(.04)	-0.13	-2.49*	0.06(.02)	0.23(.04)	-0.17	-3.58***
	Provider	.04(.03)	0.32(.07)	-0.28	-3.76***	0.29(.07)	0.32(.07)	-0.03	-0.34
	Providee	0.02(.02)	0.16(.06)	-0.14	-2.43*	0.12(.05)	0.16(.06)	-0.04	-0.50
	Benefits								
	Material	0.01(.01)	0.16(.04)	-0.15	-3.60***	0.9(.03)	0.16(.04)	-0.07	-1.37
	Sexual	0.71(.07)	0.82(.06)	-0.10	-1.17	0.56(.07)	0.82(.06)	-0.27	-2.84**
	E. Security	0.13(.03)	0.24(.04)	-0.11	-2.33*	0.48	0.24(.04)	-0.24	3.71***
	Relationship	0.17(.04)	0.32(.04)	-0.16	-2.75**	0.70(.05)	0.32(.04)	0.38	5.59***

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Table A2. Multiple regression model output of mate preference character trait expenditure between short and long-term partner contexts by sex

Character Trait	Female		Male	
	Coefficient	t(p)	Coefficient	t(p)
Physical Attractiveness	-2.14	-5.85***	-2.49	-7.53***
Liveliness	-0.83	-2.39*	-1.31	-3.51***
Social Level	-0.38	-1.22	-0.09	-0.31
Intelligence	1.58	5.28***	2.21	6.23***
Warmth/trustworthiness	0.98	2.75**	0.95	2.71**
Kindness	0.78	2.27*	0.73	2.16*

## REFERENCES

- Apostolou, M., Christoforou, C., & Lajunen, T. J. (2023). What are romantic relationships good for? An explorative analysis of the perceived benefits of being in a relationship. *Evolutionary Psychology*, 21(4), 1-11. <https://doi.org/10.1177/14747049231210245>
- Argento, E., Goldenberg, S., & Shannon, K. (2019). Preventing sexually transmitted and blood borne infections (STBBIs) among sex workers: a critical review of the evidence on determinants and interventions in high-income countries. *BMC Infectious Diseases*, 19, 212. <https://doi.org/10.1186/s12879-019-3694-z>
- Barclay, K. (2015). Illicit intimacies: The imagined ‘homes’ of Gilbert Innes of Stow and his mistresses (1751–1832). *Gender and History*, 27(3), 576-590. <https://doi.org/10.1111/1468-0424.12151>
- Baumeister, R. F., Reynolds, T., Winegard, B., & Vohs, K. D. (2017). Competing for love: Applying sexual economics theory to mating contests. *Journal of Economic Psychology*, 63, 230-241. <https://doi.org/10.1016/j.joep.2017.07.009>
- Baumeister, R. F., & Vohs, K. D. (2004). Sexual economics: Sex as female resource for social exchange in heterosexual interactions. *Personality and Social Psychology Review*, 8(4), 339-363. [https://doi.org/10.1207/s15327957pspr0804\\_2](https://doi.org/10.1207/s15327957pspr0804_2)
- Birkás, B., Meskó, N., Zsidó, A.N., Ipolyi, D. & Láng, A. (2020). Providing sexual companionship for resources: Development, validation, and personality correlates of the acceptance of sugar relationships in young women and men scale (ASR-YWMS). *Frontiers in Psychology*, 11(1135). <http://doi.org/10.3389/fpsyg.2020.01135>
- Buss, D. M. (2016). *The evolution of desire: Strategies of human mating*. Basic Books.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, 12(1), 1-14. <http://doi.org/10.1017/S0140525X00023992>
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, 100, 204–232. <https://doi.org/10.1037/0033-295x.100.2.204>
- Buss, D. M., & Schmitt, D.P. (2019). Mate preferences and their behavioral manifestations. *Annual Review Psychology*, 70, 77–110. <https://doi.org/10.1146/annurev-psych-010418103408>
- Buunk, B. P., Dijkstra, P., Fetchenhauer, D., & Kenrick, D. T. (2002). Age and gender differences in mate selection criteria for various involvement levels. *Personal Relationships*, 9, 271–278. <https://doi.org/10.1111/1475-6811.00018>
- Carlton, C. (1990). *Royal mistresses*. Routledge. <https://doi.org/10.4324/9781003382096>
- Chesnokova, A., & van Peer, W. (2021). “There are as many kinds of love as there are hearts”: Age-gap relationships in literature and cultural attitudes. In C. H. Mayer & E. Vanderheiden (Eds.), *International handbook of love: Transcultural and transdisciplinary perspectives* (pp. 807-826). Springer. [http://doi.org/10.1007/978-3-030-45996-3\\_43](http://doi.org/10.1007/978-3-030-45996-3_43)

- Choy, B.K.C., Li, N.P., & Tan, K. (2023). The long and short of mistress relationships: Sex-differentiated mate preferences reflect a compromise of mating ideals. *Journal of Personality*, 91(2), 383-399. <http://doi.org/10.1111/jopy.12734>
- Cockbain, E., Bowers, K., & Hutt, O. (2022). Examining the geographies of human trafficking: Methodological challenges in mapping trafficking's complexities and connectivities. *Applied Geography*, 139(2), 102643. <http://doi.org/10.1016/j.apgeog.2022.102643>
- Daly, S. (2017). *Sugar babies and sugar daddies: an exploration of sugar dating on Canadian campuses* [Master's thesis, Carleton University]. Carleton University Institutional Repository. <https://doi.org/10.22215/etd/2017-11961>
- Darwin, C. (1871). *The descent of man and selection in relation to sex*. Murray. <https://doi.org/10.1017/CBO9780511703829>
- Edlund, J.E., & Sagarin, B. J. (2010). Mate value and mate preferences: An investigation into decisions made with and without constraints. *Personality and Individual Differences*, 49(8), 835–839. <https://doi.org/10.1016/j.paid.2010.07.004>
- Graham, L. (2017). Governing sex work through crime: Creating the context for violence and exploitation. *Journal of Criminal Law*, 81(3), 201–216. <https://doi.org/10.1177/0022018317702802>
- Greiling, H., & Buss, D. M. (2000). Women's sexual strategies: The hidden dimension of extra-pair mating. *Personality and Individual Differences*, 28(5), 929–963. [https://doi.org/10.1016/S0191-8869\(99\)00151-8](https://doi.org/10.1016/S0191-8869(99)00151-8)
- Gunnarsson, L., & Strid, S. (2022). Chemistry or service? Sugar daddies' (re)quest for mutuality within the confines of commercial exchange. *The Journal of Sex Research*, 59(3), 309-320. <https://doi.org/10.1080/00224499.2021.1952155>
- Jones, A. (2016). "I get paid to have orgasms": Adult webcam models' negotiation of pleasure and danger. *Signs: Journal of Women in Culture and Society*, 42, 227–256. <https://doi.org/10.1086/686758>
- Kelberga Kelberg, A., & Martinsone, B. (2023). Motivation of sex workers who provide camming services to engage in sex with their real-life and virtual partners. *Frontiers in Psychology*, 14, 1173902. <https://doi.org/10.3389/fpsyg.2023.1173902>
- Killermann, S. (2016). *The genderbread person version 3*. It's Pronounced Metrosexual. <https://www.itspronouncedmetrosexual.com/2015/03/the-genderbread-person-v3/>
- Kirkeby, K. M., Lehmler, J. J., & Marks, M. J. (2022). Sugar dating, perceptions of power, and condom use: Comparing the sexual health risk behaviours of sugar dating to non-sugar dating women. *The Journal of Sex Research*, 59(6), 731-741. <https://doi.org/10.1080/00224499.2021.1962782>
- Lehmler, J., & Agnew, C. (2011). May-December paradoxes: An exploration of age-gap relationships in Western society. In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of close relationships II* (pp. 39–61). Routledge/Taylor & Francis Group.

- LI, N. P. (2007). Mate preference necessities in long- and short-term mating: People prioritize in themselves what their mates prioritize in them. *Acta Psychologica Sinica*, 39(3), 528-535.
- LI, N. P., & Kenrick, D. T. (2006). Sex similarities and differences in preferences for short-term mates: What, whether, and why. *Journal of Personality and Social Psychology*, 90(3), 468-489. <https://doi.org/10.1037/0022-3514.90.3.468>
- Motseki, M. M., & Mofokeng, J. T. (2022). An analysis of the causes and contributing factors to human trafficking: A South African perspective. *Cogent Social Sciences*, 8(1). <http://doi.org/10.1080/23311886.2022.2047259>
- Mugleton, N.K., & Fincher, C.L. (2017). Unrestricted sexuality promotes distinctive short- and long-term mate preferences in women. *Personality and Individual Differences*, 111, 169-173. <https://doi.org/10.1016/j.paid.2017.01.054>
- Penke, L., & Asendorpf, J. B. (2008). Beyond global sociosexual orientations: A more differentiated look at sociosexuality and its effects on courtship and romantic relationships. *Journal of Personality and Social Psychology*, 95(5), 1113-1135. <https://doi.org/10.1037/0022-3514.95.5.1113>
- Navarrete Gil, C., Ramaiah, M., Mantsios, A., Barrington, C., & Kerrigan, D. (2021). Best practices and challenges to sex worker community empowerment and mobilisation strategies to promote health and human rights. In S.M. Goldenberg, R. M. Thomas, A. Forbes, & S. Baral (Eds.), *Sex Work, Health, and Human Rights: Global Inequities, Challenges, and Opportunities for Action*. Springer. [https://doi.org/10.1007/978-3-030-64171-9\\_11](https://doi.org/10.1007/978-3-030-64171-9_11)
- Perrin, N. A., Levto, R. G., Ignacio, C. F., Anunciação, L., Landeira-Fernandez, J., Cerdeira, L., & Buller, A. M. (2022). Measuring social norms and attitudes about age-disparate transactional sex: psychometric testing of the NAATSS. *The Lancet Regional Health—Americas*, 10, 100209. <https://doi.org/10.1016/j.lana.2022.100209>
- Platt, L., Grenfell, P., Meiksin, R., Elmes, J., Sherman, S. G., Sanders, T., Mwangi, P., & Crago, A.L. (2018). Associations between sex work laws and sex workers' health: A systematic review and meta-analysis of quantitative and qualitative studies. *PLoS Medicine*, 15(12), 1002680. <http://doi.org/10.1371/journal.pmed.1002680>
- Platteau, T., De Baetselier, I., Van Mieghem, H., Tsoumanis, A., Keersmaekers, K., Ooms, L., Cuylaerts, V., & Florence, E (2022). Sexually transmitted infections and associated risk factors among male clients of sex workers: A cross-sectional pilot project in Antwerp, Belgium. *Frontiers in Reproductive Health*, 4, 837102. <https://doi.org/10.3389/frph.2022.837102>
- Reeve, S.D., Kelly, K.M. & Welling, L.L.M. (2016). Transitory environmental threat alters sexually dimorphic mate preferences and sexual strategy. *Evolutionary Psychological Science*, 2(2), 101–113. <http://doi.org/10.1007/s40806-015-0040-6>
- Regan, P. C., Medina, R., & Joshi, A. (2001). Partner preferences among homosexual men and women: What is desirable in a sex partner is not necessarily desirable in a romantic partner. *Social Behavior and Personality: An International Journal*, 29(7), 625–634. <https://doi.org/10.2224/sbp.2001.29.7.625>

- Recio, R.P. (2022). 'I have bills to pay!' Sugar dating in British higher education institutions. *Gender and Education*, 34(5), 545-560. <http://doi.org/10.1080/09540253.2021.1971161>
- Romans, S. E., Potter, K., Martin, J., & Herbison, P. (2001). The mental and physical health of female sex workers: A comparative study. *Australian & New Zealand Journal of Psychiatry*, 35(1), 75–80. <https://doi.org/10.1046/j.1440-1614.2001.00857.x>
- Schmitt, D. P., & Shackelford, T. K. (2008). Big Five traits related to short-term mating: From personality to promiscuity across 46 nations. *Evolutionary Psychology*, 6(2), 246–282. <https://doi.org/10.1177/147470490800600204>
- Scull, M.T. (2023) Sugaring as a deviant career: Modes of entering sugar relationships and social stigmas. *Deviant Behavior*, 44(4), 528-550. <http://doi.org/10.1080/01639625.2022.2061391>
- Scull, M. T. (2022). From seeking financialships to satisfying curiosity: Women's motivations for entering sugar relationships. *Sexuality & Culture*, 26(1), 222-248. <https://doi.org/10.1007/s12119-021-09888-9>
- Simpson, J. A., & Gangestad, S. W. (1992). Sociosexuality and romantic partner choice. *Journal of Personality*, 60(1), 31–51. <https://doi.org/10.1111/j.1467-6494.1992.tb00264.x>
- Snyder, J. K., Fessler, D. M., Tiokhin, L., Frederick, D. A., Lee, S. W., & Navarrete, C. D. (2011). Trade-offs in a dangerous world: women's fear of crime predicts preferences for aggressive and formidable mates. *Evolution and Human Behavior*, 32(2), 127–137. <https://doi.org/10.1016/j.evolhumbehav.2010.08.007>
- Sprecher, S. (1998). What keeps married partners attracted to each other?. *Free Inquiry in Creative Sociology*, 26(2), 193-200.
- Stanik, C. E., & Ellsworth, P. C. (2010). Who cares about marrying a richman? Intelligence and variation in women's mate preferences. *Human Nature*, 21(2), 203–217. <https://doi.org/10.1007/s12110-010-9089-x>
- Steen, R., & Dallabetta, G. (2003). Sexually transmitted infection control with sex workers: Regular screening and presumptive treatment augment efforts to reduce risk and vulnerability. *Reproductive Health Matters*, 11(22), 74–90. [https://doi.org/10.1016/s0968-8080\(03\)02295-x](https://doi.org/10.1016/s0968-8080(03)02295-x)
- Thomas, A.G., Jonason, P.K., Blackburn, J.D., Kennair, L.E.O., Lowe, R., Malouff, J., Stewart-Williams, S., Sulikowski, D., & Li, N.P. (2020). Mate preference priorities in the East and West: A cross- cultural test of the mate preference priority model. *Journal of Personality*, 88(3), 606–620. <https://doi.org/10.1111/jopy.12514>
- Upadhyay, S. (2021) Sugaring: Understanding the world of sugar daddies and sugar babies. *The Journal of Sex Research*, 58(6), 775-784. <https://doi.org/10.1080/00224499.2020.1867700>
- Vohs, K. D., & Lasaleta, J. (2008). Heterosexual sexual behavior is governed by social exchange and basic economic principles: Sexual economics theory. *Minnesota Journal of Law, Science & Technology*, 9(2), 785-803. <https://scholarship.law.umn.edu/mjlst/vol9/iss2/14>
- von Germeten, N. (2018). *Profit and passion: Transactional sex in colonial Mexico* (1<sup>st</sup> ed.). University of California Press. <http://www.jstor.org/stable/10.1525/j.ctt216690h>

Whyte, S., Brooks, R. C., & Torgler, B. (2019). Sexual economic theory & the human mating market. *Applied Economics*, 51(2), 1-13. <http://doi.org/10.1080/00036846.2019.1650886>