

SEXUAL GROWTH AND DESTINY BELIEFS: ASSOCIATIONS WITH COUPLES'
SEXUAL WELL-BEING AND COPING DURING THE PATHWAY TO
PARENTHOOD

by

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Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy

at

Dalhousie University

Halifax, Nova Scotia

August 2022

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DEDICATION

To those that I love and have loved throughout this five year journey – I dedicate this thesis to you. Your compassion and support have driven me to dream big and persevere from the start to the end of this challenging, yet most fulfilling, chapter of my life. I treasure each of you.

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ABSTRACT

When undergoing a challenging life event, an individual's growth and destiny beliefs – their beliefs about what makes a good relationship – shape relationship outcomes. ***Sexual destiny beliefs*** refer to the belief that the success of a sexual relationship is determined by natural compatibility. In contrast, ***sexual growth beliefs*** reflect the belief that sexual satisfaction results from effort and hard work. There is limited information as to whether these beliefs relate to couples' well-being and behaviours during actual life stressors. In my dissertation I examined sexual destiny and growth beliefs as predictors of couples' sexual well-being and dyadic coping across two vulnerable periods for their sexuality: the transition to parenthood and medically assisted reproduction. In Study 1, I assessed whether couples' ($N = 203$) beliefs in pregnancy predicted their sexual well-being across 3-, 6-, 9-, and 12-months postpartum. When expectant mothers endorsed greater sexual destiny beliefs in pregnancy, they reported lower sexual satisfaction and higher sexual distress at 3-months postpartum. Moreover, partners' greater sexual destiny beliefs in pregnancy predicted their own and new mothers' greater sexual desire at 3-months postpartum, whereas partners' greater sexual growth beliefs in pregnancy predicted mothers' lower sexual desire at 3-months postpartum. In Study 2, I tested the temporal associations at the between- and within-person levels among sexual growth and destiny beliefs and positive and negative dyadic coping in a sample of couples ($N = 219$) seeking medically assisted reproduction over a one-year period. Across couples, higher than average overall sexual destiny beliefs were related to higher overall levels of negative dyadic coping. Within couples, I found that reporting higher-than-average sexual growth beliefs at baseline was associated with their own lower-than-average negative dyadic coping six months later, whereas higher-than-average sexual destiny beliefs at 6-months was linked to an individual's and their partners' higher-than-average negative dyadic coping at 12-months. Greater negative dyadic coping at 6-months was associated with lower sexual growth beliefs at 12-months. My dissertation contributes important knowledge as to the function and temporality of sexual growth and destiny beliefs. My work may inform interventions that target couples' ability to identify and potentially modify unhelpful beliefs about sex.

LIST OF ABBREVIATIONS AND SYMBOLS USED

%	Percentage
2SLGBTQ+	Two-Spirit, Lesbian, Gay, Bisexual, Trans, Queer
APIM	Actor-Partner Interdependence Model
<i>B</i>	Unstandardized Beta Coefficient
CFI	Confirmatory Fit Index
CI	Confidence Interval
CLMP	Cross-lagged Panel Model
<i>df</i>	Degrees of Freedom
DLGCM	Dyadic Latent Growth Curve Model
FSDS-R	Female Sexual Distress Scale—Revised
FSFI	Female Sexual Function Index
FSIAD	Female Sexual Interest and Arousal Disorder
GMSEX	Global Measure of Sexual Satisfaction
IIEF	International Index of Erectile Functioning
MAR	Medically Assisted Reproduction
<i>n</i>	Subsample of Total Sample Size
<i>N</i>	Total Sample Size
OSF	Open Science Framework
<i>p</i>	P-Value for Significance Testing
<i>r</i>	Correlation Coefficient
RI-CLPM	Random Intercept Cross-Lagged Panel Model
RMSEA	Root Mean Square Error of Approximation

<i>SD</i>	Standard Deviation
<i>SE</i>	Standard Error
SEM	Structural Equation Modelling
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized Root Mean Squared Residual
<i>t</i>	T-Value for T-Tests
TLI	Tucker Lewis Index
α	Cronbach's Alpha (measure of internal consistency)
χ^2	Chi-squared Value

ACKNOWLEDGEMENTS

Dr. Natalie Rosen – I still recall how nervous I was introducing myself to you at IARR to discuss a graduate student position in your lab. Those nerves were there because I knew that working with you would be a literal dream. However, I was not aware of how instrumental you would be in making many of my dreams actually come true. From speaking at my first major conference, publishing my first, first authored manuscript, conducting my own independent research, mentoring junior research projects, learning how to deliver couples therapy, travelling to new places to share my work, and delivering public talks to those navigating the very challenges I study – there are not enough words to express how grateful I am to have had, and continue to have, you as a mentor. Your support, in endless ways throughout this adventure, has been more than I could have asked for. I am so grateful for everything you have done to help me grow as a researcher, clinician, and person. Thank you from the bottom of my heart.

I have also had the honour of working with many other esteemed researchers and clinicians, all of whom have guided me along this journey. My thesis committee – Dr. Sean Mackinnon and Dr. Jill Chorney – you both have been crucial members from the beginning to the end of this process. Dr. MacKinnon, thank you for your patience and generosity in helping me develop my statistical expertise. Dr. Chorney, thank you for inspiring the inclusion of patient partners in this work. You have made not only this work stronger, but also me as a researcher. The thought-provoking comments and advice I have received from you both have been so important to the development of this work. My comprehensive project supervisors – Dr. Alissa Pencer and Dr. Sherry Stewart – despite my passion for sexuality research, the time spent broadening my research skills and interests with you both has been so formative. Thank you for your incredible support, I have learned so much from you both.

I have also been so lucky to learn and grow in my clinical placements from several immensely knowledgeable, compassionate, and kind-hearted clinicians. Dr. Natalie Rosen, Dr. Nicolle Vincent, Dr. Alissa Pencer, Dr. Natalie Stratton, Dr. Shannon Johnson, Dr. Jacquie Cohen, and Dr. Penny Corkum – thank you for helping me believe in myself as I traversed the exciting and challenging world of clinical work.

The manuscripts within this thesis would not be where they are today without the expertise of the dozens of co-authors that I have had the opportunity to work with and learn from. Thank you all so much for your commitment and enthusiasm for this work. These projects literally would not have even been possible without the all-star research teams in the Couples and Sexual Health Lab at Dalhousie University, the Université de Montréal, and the University of Toronto-Mississauga. I am forever indebted to the incomparable Gillian Boudreau, as well as Megan Muise and Sarah Beauchemin-Roy who were all supremely integral to the making of this research. Thank you to all the lab members who worked on these projects and shared their knowledge and support.

To my fellow lab mates during my time in the CaSH Lab - Maria Glowacka, Kat Merwin, Justin Dubé, Grace Schwenck, David Allsop, and Grace Wang, as well as my fabulous

cohort and fellow graduate student friends that I have made throughout my time in this program: you have all been a source of fun, friendship, empathy, and kindness. I am so honoured to have been able to train alongside you. Special mention to Gather.Town and the many individuals who joined me in that virtual world – I literally would not have been able to write this dissertation without you and our beautiful “outdoor” workspace.

I would also like to express my gratitude to the organizations that have supported me financially and made this research possible: the Social Sciences and Humanities Research Council, Research Nova Scotia, the Maritime SPOR (Strategy for Patient-Oriented Research) Support Unit, the IWK Health Centre, and Mitacs.

To my lifelong friends that have weathered the 6,000km distance over the last five years – I know that you will always be a safe place that I can fly back to. In the many years of our friendship, time has flown, and many milestones have been reached. But I am so lucky to have friends who when we see each other, it’s like no time has passed at all.

Throughout this life altering experience, I have also managed to forge relationships that I never thought possible. From meeting the very best friends that anyone could ask for in the whole wide world, to the most supportive and thoughtful partner who has shown me what love really is all about. I count my lucky stars every day that I get to be in your lives. My life is infinitely enriched by you all and I cannot be more excited for the future we have together.

My family – Momma, Daddio, Emmie, and Bubbie – I have missed you all so deeply here on the east coast. Experiencing birthdays, anniversaries, and big life accomplishments through a screen is just not the same, but the time apart makes visits home that much sweeter. You have all been there from Day 1 (quite literally, Mom you were helping me write my elementary school speeches) and have helped shape me into the person that I am today. Thank you for being my biggest supporters during the many ups and downs throughout this journey. I love you all so much.

For those that know me at all, this won’t come as a surprise to you – but I must acknowledge some of the most important members in my PhD journey. My dear furry companions – thank you for being by my feet or on my lap during all of those the long workdays. I really could not have done this without you all. But my deepest love goes to my baby girl Lulu. Even though you are no longer with us, I am eternally grateful for all the joy and love that you brought into my life.

And finally, I would like to end by taking a moment to acknowledge my past self. Past Meghan – your unwavering dedication and work ethic has led me here. What we once thought was impossible, has come true and all of it is in large part because of you. Since 1st year undergrad, you have given so much of yourself to get to this point. The lines of my CV do not and cannot capture the sacrifices and hardship that you encountered to get to this point. Although there are definitely a few things I wish you did differently, perhaps it really was all “meant to be” (if you read my thesis, then you’ll get it). Thank you – I hope the next steps I take, whatever they may be, make you proud.

CHAPTER 1: INTRODUCTION

When faced with challenges, the beliefs we hold as to whether we can overcome them can have profound effects on our behaviour and well-being. For some, the belief that hard work and effort can improve the situation contributes to the engagement in behaviors that elicit change. For others, the belief that the situation cannot be changed and that is “just how it is” can direct a person to refrain from doing anything to change the situation. These beliefs, respectively referred to as growth and destiny beliefs, are held and applied within a variety of domains, including intelligence and relationships (e.g., Dweck, 2012; Knee & Petty, 2013). Only recently have these beliefs been applied to the domain of sexuality in the form of *sexual* growth and destiny beliefs, where sexual growth beliefs refer to the idea that sexual challenges can be overcome with effort and sexual destiny beliefs reflect the idea that sexual problems signify the relationship is “not meant to be” (Maxwell et al., 2017). There has been burgeoning empirical evidence demonstrating the relationship between growth and destiny beliefs and well-being and behaviour during times of stress (e.g., Bohns et al., 2015; Dovala et al., 2018; Knee, 2006; Sutherland & Rehman, 2018). The Vulnerability-Stress Adaptation Model hypothesizes that underlying beliefs can become more pronounced during periods of challenge, functioning as either strengths or vulnerabilities, that impact outcomes (i.e., sexual well-being) and adaptive behaviors, such as dyadic coping (i.e., how couples manage shared stressors).

One significant period of challenge that many couples face together is becoming parents for the first time. For some couples, the pathway to parenthood may occur with or without medical intervention to conceive. For couples who do not require medical

intervention, I will refer to their journey as the transition to parenthood. For those who require medical assistance to conceive, their pathway towards parenthood will be referred to as medically assisted reproduction or MAR. Both paths are comprised of change, challenge, and joy. Although these pathways to parenthood are common life events, they substantially disrupt couples' romantic and sexual relationships (Borneskog et al., 2012; Doss et al., 2009; Luk & Loke, 2019; Rosen et al., 2021a; Schwenck et al., 2020), both of which are linked to couples' overall health and quality of life (Diamond & Huebner, 2012; Holt-Lunstad et al., 2010). Yet, little is known about whether these beliefs relate to couples' sexual well-being and coping behaviors as posited by the VSA model. With psychosocial factors being amenable to change and more robust predictors of well-being, it is necessary to identify psychosocial factors, such as sexual growth and destiny beliefs, that can assist couples in maintaining or enhancing their well-being during times of challenge experienced in the pathway to parenthood. This research can inform the development of targeted interventions that limit the impact of these common life events to couples' relationship and sexuality.

Taken together, the overarching aim of my dissertation was to examine the longitudinal associations between couples' sexual growth and destiny beliefs and two important domains—their sexual well-being and dyadic coping—during the pathway to parenthood. First, I will outline the overarching theoretical framework that guides this dissertation: the Vulnerability-Stress-Adaptation (VSA) model, which conceptualizes couples' strengths and vulnerabilities as predictors of their well-being and behaviour. Next, I will review implicit theories as potential strengths and vulnerabilities within the VSA model, with a specific focus on sexual growth and destiny beliefs. Then, I will

discuss two relevant contexts in which sexual growth and destiny beliefs are thought to be more salient: 1) the transition to parenthood without intervention and 2) medically assisted reproduction. I will describe the novel sexual challenges faced by couples during these periods and how their sexual growth and destiny beliefs may have implications for their sexual well-being and dyadic coping. Finally, I will discuss current limitations in the literature and provide an outline of my dissertation papers, which aim to address these gaps.

1.1. The Vulnerability Stress Adaptation Model

Sexuality research has often adapted and applied theoretical frameworks from other relevant areas of psychology, such as relationships research (e.g., Muise et al., 2018). The Vulnerability Stress-Adaptation (VSA) model is a widely used and evidence-based interpersonal framework positing pre-existing or enduring vulnerabilities (e.g., attachment style, beliefs, attitudes) to interact with external stressors (e.g., life transitions, health concerns), which then influence relationship quality and stability (Karney & Bradbury, 1995). Vulnerabilities, in conjunction with external stressors, are thought to influence the extent to which individuals employ more or less adaptive processes (e.g., problem solving, provision of support) for managing stressors, which have consequences for the quality and stability of one's romantic relationship. This model has been empirically supported, with research demonstrating that as an individual navigates a stressor, their vulnerabilities, such as mental health concerns and personality traits, explain poorer relationship outcomes (e.g., lower satisfaction) and the process through which this can occur (e.g., reduced constructive communication, fewer forgiveness strategies; Sheldon et al., 2014; Trillingsgaard et al., 2014; Woszidlo & Segrin, 2013)

The VSA model has been widely applied to various contexts in which individuals and couples are navigating acute and chronic stressors, including the transition to parenthood and the post-adoption period (South et al., 2012; Trillingsgaard et al., 2014). In their review of the literature relating to the relationship challenges that arise when raising a child with autism, Schiltz and Van Hecke (2021) recently adapted the VSA model to incorporate the interplay between vulnerabilities *and* strengths (*a1*), stressors *and* supports (*a2*), and the associations amongst these factors with relationship outcomes (i.e., paths b and c; see Figure 1). This adaptation reflects that the consequences of vulnerabilities (and strengths) and stressors (and supports) on relationship outcomes are not predicated on the engagement in, or lack thereof, adaptive processes. As such, there are two possible routes of influence: 1) the interaction between stressors or supports and vulnerabilities or strengths have direct consequences on relationship quality (i.e., paths A through b and c to D) and 2) couples may have pre-existing vulnerabilities or strengths that prompt more or less adaptive processes (i.e., paths B and C). In both instances, the impacts to relationship quality and/or behaviour reinforces these routes, whereby the vulnerabilities/strengths and stressors/supports are increased, or individuals are prompted to further engage in more or less adaptive processes. Thus, rather than focusing on a singular component of the VSA model, researchers should consider the additive influence of multiple pathways of the VSA model in their investigations, whereby outcomes and adaptive processes are examined in couples with vulnerabilities or strengths who are also navigating real-time stressors (Lavner & Bradbury, 2010). Applied to sexuality, research grounded in the VSA model can contribute to the identification of modifiable factors that

can facilitate couples' sexual well-being and adaptive behaviours during stressful life events.

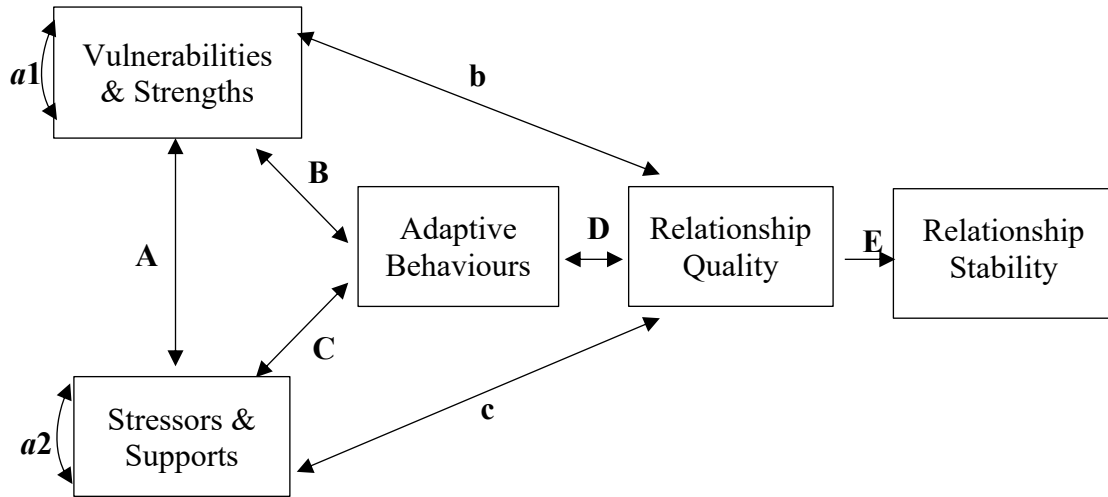


Figure 1.1.1. The Vulnerability-Stress Adaptation Model. Figure based on the work of Schiltz and Van Hecke (2021).

1.2 Implicit Theories

Modifiable factors that could be conceptualized within the VSA model as enduring strengths or vulnerabilities are an individual's *implicit theories* about the malleability or stability of traits. Implicit theories within this domain refer to fundamental knowledge structures that individuals hold as to whether certain traits or internal attributes can be changed with time and effort (i.e., incremental beliefs) or are relatively fixed (i.e., entity beliefs; Dweck & Leggett, 1988). Across a vast body of work, incremental and entity beliefs have been shown to shape outcomes within several domains, including intelligence, personality, academic achievement, and empathy (e.g., Costa & Faria, 2018; Hong et al., 1999; Plaks et al., 2005; Plaks et al., 2009; Schumann et al., 2014; Yeager et al., 2014). Moving from the individual to interpersonal domain, research examining beliefs about romantic relationships has used measures that primarily tapped into entity-oriented beliefs about romantic relationships (see Knee, 1998

for review) . Historically, measures of incremental and entity beliefs across domains were also predicated on the notion that they exist on a single continuum, where individuals' endorsement in one belief negates the presence of the other (e.g., Bohns et al., 2015; Dweck, 2012; Franiuk et al., 2002).

Expanding on this work, Knee (1998) developed the Implicit Theories of Relationships Scale (ITRs), which focuses on individuals' beliefs as to what makes for a satisfying romantic partnership. Unlike the one-dimensional conceptualization of incremental and entity beliefs, Knee proposed that individuals can endorse both *growth beliefs*, referring to the belief that relationship challenges can be overcome with effort and hard work, as well as *destiny beliefs*, which suggest that romantic partners are either destined to be compatible or not, to various degrees. In fact, Knee (1998) found a negative, but small and non-significant correlation amongst relationship growth and destiny beliefs. This foundational work spurred two decades of research that highlight the influence of growth and destiny beliefs on individual's behaviours, motivations, and relationship outcomes (see review by Knee, 2006). For instance, across numerous studies, greater (relative to lower) growth beliefs have been linked to greater commitment, positive emotions, and beliefs that a partner can change following relationship conflict. In contrast, greater destiny beliefs (relative to lower) have been associated with poorer relationship outcomes, especially when an individual perceives a threat to their relationship. Those endorsing greater destiny beliefs report more negative reactions to conflict and perceive this conflict to be a sign of incompatibility with their partner (Knee & Petty, 2013; Knee, 2006).

1.2.1. Sexual Growth and Destiny Beliefs

Past work underscores the value of growth and destiny beliefs as factors that contribute to relationship quality, however, a key component within a satisfying romantic relationship is couples' sexual well-being. How couples maintain their sexual well-being, especially during challenges to their sex lives, may also be related to their beliefs as to whether this aspect of their life is changeable or stable. However, only recently have growth and destiny beliefs been applied to the domain of sexuality (Bohns et al., 2015; Bóthe et al., 2017; Sutherland & Rehman, 2018). Maxwell et al. (2017) was the first to validate a measure assessing sexual growth and destiny beliefs, whereby *sexual growth beliefs* reflect the belief that sexual satisfaction results from effort and hard work. In contrast, *sexual destiny beliefs* refer to the belief that the success of a sexual relationship is determined by natural compatibility and sexual difficulties dictate whether the relationship is “meant to be or not” (Maxwell et al., 2017). Other work investigating growth- and destiny-related beliefs has used one dimensional scales (i.e., higher scores reflect higher growth beliefs and lower scores refer to higher destiny beliefs; Bohns et al., 2015; Bóthe et al., 2017; Dweck, 2012; Franiuk et al., 2002); however, Maxwell and colleagues tested a two-factor model of sexual growth and destiny beliefs. In line with the relationship growth and destiny beliefs measure (Knee, 1998), they found more appropriate model fit when these beliefs were conceptualized as two dimensions. Although they found that sexual growth and destiny beliefs were negatively and moderately correlated (Maxwell et al., 2017), these results suggest that individuals can still vary on both dimensions. For example, someone who endorses stronger sexual

destiny beliefs can still be willing to put effort into maintaining their sexual relationship (i.e., hold strong sexual growth beliefs).

Since growth and destiny beliefs are conceptualized as fundamental, underlying beliefs, most prior research has demonstrated their relative stability over time. For example, when individuals were provided with information that opposed their growth or destiny belief pertaining to intelligence, they were motivated to engage in behaviours (e.g., persisting with a task) that would reconfirm their belief (Plaks et al., 2005; Plaks & Stecher, 2007). However, a growing body of work suggests that these beliefs are malleable and that individuals can be motivated to modulate their beliefs following in-lab manipulations or perceived threats to themselves and important others (e.g., Bohns et al., 2015; Dweck, 2012; Hong et al., 1999; Leith et al., 2014; Maxwell et al., 2017; Sutherland & Rehman, 2018). Across several studies conducted outside the domain of sexuality, participants who received negative feedback on their performance or were asked to recall memories of failure endorsed significantly greater growth-oriented beliefs compared to participants who received positive performance feedback or recalled memories of success (Leith et al., 2014). In two sexuality-based studies, participants were randomly assigned to read articles that endorsed either growth or destiny-oriented beliefs relating to sex, with researchers finding that participants more strongly endorsed the type of belief to which they were primed (Maxwell et al., 2017; Sutherland & Rehman, 2018). Thus, it is possible that sexual growth and destiny beliefs can be modified in accordance with the situation, which may have implications for their well-being and behaviour.

1.3. The VSA Model and Sexual Growth and Destiny Beliefs

Researchers have argued that the benefits or consequences of growth and destiny beliefs also depend on the context in which they are applied (e.g., Dovala et al., 2018; Knee, 1998). Yet, much of the literature demonstrates that holding greater growth beliefs, relative to lower growth beliefs and higher destiny beliefs, is linked to greater relationship and sexual well-being, as well as engagement in more adaptive coping behaviors, especially when undergoing a relationship or sexual stressor.

The VSA model may be a useful framework to enhance our understanding of the function of sexual growth and destiny beliefs for couples. My dissertation proposes that sexual growth and destiny beliefs can be considered enduring strengths and vulnerabilities, respectively, that in the context of an external stressor, are associated with two routes within the VSA model: couples' sexual well-being (route 1, study 1) or with the adaptive behaviours they engage in (route 2, study 2) during the pathway to parenthood.

1.3.1. Sexual Growth and Destiny Beliefs and Sexual Well-Being

For the first route in the VSA model – vulnerabilities and strengths that directly influence relationship quality – there has been extensive research demonstrating the role of growth and destiny-oriented beliefs in shaping relationship outcomes. Extending this work to the domain of sexuality, Maxwell et al. (2017) conducted a series of cross-sectional, longitudinal, and daily diary studies examining the effects of sexual growth and destiny beliefs on individual's and couples' sexual and relationship satisfaction. Broadly, they found that the endorsement of greater sexual growth beliefs was consistently positively related to individuals and couples' greater relationship and sexual satisfaction.

In contrast, many of the effects of sexual destiny beliefs were contingent on perceived partner fit (i.e., how well their partner aligned with their ideal partner), where lower relationship and sexual well-being was evidenced for individuals reporting greater sexual destiny beliefs and lower partner fit. One of the studies conducted by Maxwell et al. (2017) also explored these associations in a cross-sectional study of couples during the transition to parenthood, finding similar results as noted above. Greater sexual and relationship satisfaction was evidenced when new parents endorsed high levels of sexual growth beliefs, whereas higher levels of sexual destiny beliefs were related to greater sexual satisfaction and lower relationship satisfaction. When examining the associations between beliefs related to the malleability of sexual behaviour, Bóthe et al. (2017) found that individuals in relationships who endorsed greater growth-oriented beliefs also reported greater relationship and sexual satisfaction. Raposo et al. (2021) found cross-sectional associations between greater sexual growth beliefs and greater sexual desire for women with low sexual desire, and in contrast, lower sexual desire, relationship satisfaction, and greater conflict and psychological concerns when couple members endorsed greater sexual destiny beliefs. Interestingly, when women in the sample reported greater sexual growth beliefs, their partners reported lower sexual desire. Collectively, these results highlight that while there are primarily benefits to holding greater sexual growth beliefs, there may be some limits to these advantages that should be explored (i.e., partners' lower sexual desire).

1.3.2. Growth and Destiny Beliefs and Adaptive Relationship Behaviours

There has also been research demonstrating a connection between growth and destiny beliefs and adaptive relationship processes as per the second route in the VSA

model. Knee (1998) conducted foundational work evaluating the effects of relationship oriented growth and destiny beliefs on coping strategies during a significant relationship event (e.g., argument, a breakup). Individuals' endorsement of greater destiny beliefs was significantly associated with greater use of avoidance-based coping strategies, such as disengagement, whereas greater growth beliefs was associated with more engagement in approach-based coping (e.g., planning, reframing). Freedman et al. (2018) also explored how growth and destiny beliefs were related to ghosting (i.e., ending a relationship with little to no communication). They found that individuals endorsing greater destiny beliefs, relative to lower destiny beliefs and greater growth beliefs, reported more positive perceptions of ghosting, intentions to use ghosting, and experience terminating relationships with ghosting. Across three studies using cross-sectional and longitudinal methods, Mattingly et al. (2018) found that greater growth beliefs (and not destiny beliefs) was significantly associated with greater self-expansion (i.e., activities that promote novelty and intimacy in couples), and self-expansion significantly mediated the association between greater growth beliefs and relationship outcomes (i.e., satisfaction and commitment). Wu and Zheng (2022) found that both sexual growth and sexual destiny beliefs were associated with higher levels of sexual communal motivation (i.e., motivation to meet partners' sexual needs) and motivation to express love for partner, which in turn, were associated with higher satisfaction with sexual communication.

Growth and destiny beliefs have also been linked to individual's cognitive coping strategies. Individuals who were provided threatening feedback about their relationship and primed to endorse greater destiny beliefs tended to exaggerate or refute their partners' positive qualities, particularly when they perceived high or low partner fit,

respectively (Franiuk et al., 2004). Akin to evidence suggesting limits to the benefits of growth beliefs (Raposo et al., 2021), Dovala et al. (2018) conducted a cross-sectional dyadic study that found greater growth and destiny beliefs were each related to less effective communication styles and neither were associated with constructive communication (e.g., problem solving). Six studies grouped into two articles have examined coping behaviours in relation to sexuality-oriented growth and destiny beliefs. Across four studies, Bohns et al. (2015) found that participants were more likely to report a willingness to engage in less destructive coping behaviors (e.g., exiting or neglecting the relationship) in response to a hypothetical stressor and continue with a relationship when they endorsed greater growth beliefs, relative to greater destiny beliefs. In two studies, women who were primed with destiny-oriented beliefs and expected to experience a challenge with sexual desire were more likely to endorse unhelpful coping behaviors (e.g., denial, disengagement) than those in a growth-oriented prime condition (Sutherland & Rehman, 2018).

The reviewed findings point towards the potential role of sexual growth and destiny beliefs as cognitive strength and vulnerabilities within the VSA model that promote certain adaptive, or less adaptive, coping behaviours. However, many of these studies utilized samples of individuals who were in relationships, which does not account for the interaction between couple members (Bohns et al., 2015; Knee, 1998; Mattingly et al., 2018; Sutherland & Rehman, 2018). Moreover, unique associations between growth and destiny beliefs and outcomes or behaviour have emerged particularly when an individual is undergoing a stressor (Dovala et al., 2018; Raposo et al., 2021). Yet, many of these studies included individuals who were not experiencing an actual stressor but

were rather provided hypothetical threatening feedback about their relationship or asked to recall a prior relationship conflict. These limits to the research may have precluded the identification of nuanced effects of sexual growth and destiny beliefs that may arise as couples navigate an actual stressor to their sex lives, such as during the pathway to parenthood.

1.3.3. The VSA Model, Sexual Growth and Destiny Beliefs, and the Pathway to Parenthood

The pathway to parenthood is a journey that many couples undertake to reach their goal of parenthood. For some couples, they may be in the process of navigating the joys and obstacles that arise during pregnancy and the postpartum period. Others may require medically assisted reproduction, which often involves burdensome and lengthy medical procedures to reach their goal of parenthood. Despite the unique experiences that occur for couples during this journey, the shared challenges they face to their romantic and sexual relationship may prompt sexual growth and destiny beliefs to become more salient.

In the face of a sexual challenge, an individual's pre-existing belief system as to whether the sexual challenge can be overcome or not is activated, which then influences their well-being or their coping in response to these challenges. When not faced with a challenge or problem, growth and destiny beliefs appear to be less salient because they are not needed to guide interpretations and behaviours. Indeed, an individual's growth and destiny-oriented beliefs towards sexual chemistry or desire were associated with their predicted coping behaviour, but only when presented with a sexual challenge (e.g., hypothetical post-baby declines in sex; Bohns et al., 2015; Sutherland & Rehman, 2018).

As couples navigate periods of challenge that come with declines in well-being, sexual growth and destiny beliefs may be salient and modifiable treatment targets to promote couples' sexual well-being and adaptive coping. As such, I was interested in understanding their effects in the context of actual challenges and how they may function over time as couples navigate ongoing concerns. In accordance with the VSA model, the stressors involved in the pathway to parenthood may reinforce and exacerbate the relationship between couples' vulnerabilities/strengths and their well-being or the adaptive strategies they use, such as coping behaviors.

1.4. Couples' Experience of the Transition to Parenthood

1.4.1. Couples' Sexual Well-Being during the Transition to Parenthood

Becoming parents for the first time is often an exciting and joyful time for couples, but this period is also a source of significant stress that has consequences for new parents' well-being. Across longitudinal and cross-sectional studies, new parents report low relationship quality, greater stress, and increased levels of psychological concerns, such as anxiety and depression (Condon et al., 2004; Don & Mickelson, 2014; Figueiredo et al., 2008; Goldberg et al., 2010; Le et al., 2016; Perren et al., 2005). A key, but often overlooked, aspect of couples' well-being during the transition to parenthood is their sexual well-being. New roles and expectations, physical changes, and sleep deprivation are just a few of the multitude of stressors that can contribute to the marked declines in couples' sexual satisfaction relative to pre-pregnancy (Doss et al., 2009; Lawrence et al., 2008; Schlagintweit et al., 2016). Among new parents, 36% to 58% describe themselves as sexually dissatisfied (Ahlborg et al., 2005). Over 90% of couples report novel sexual concerns, with new mothers reporting concerns with the impact of

child rearing and physical recovery from delivery on their sexual interest and activity and fathers reporting concerns about mismatches in sexual desire and sexual frequency (Schlagintweit et al., 2016). Declines in sexual and relationship satisfaction are associated with poorer adjustment in new parents (depression, parenting difficulties; Ahlborg et al., 2005; Woolhouse et al., 2012), which can negatively alter newborn development and parent-child dynamics (Goldberg, 2014; Stroud, 2015).

With sexual satisfaction being a top predictor of overall relationship quality (Joel et al., 2020), it is essential to understand how aspects of sexual well-being, including sexual desire (i.e., interest in sex), sexual satisfaction (i.e., appraisal of one's overall sexual relationship; Lawrance & Byers, 1995), and sexual distress (i.e., concerns about one's sex life; DeRogatis et al., 2008) change over time during the transition to parenthood. There have been only a handful of studies examining these components of sexual well-being longitudinally and with both members of a couple. One study compared the sexual well-being of new parent and community couples across three time-points. The researchers found that new parents, especially new mothers, reported lower sexual satisfaction, desire, and higher distress across 3-, 6-, and 12-months postpartum compared to the community couples (Schwenck et al., 2020). Despite there not being significant differences in sexual frequency between new parent and community couples by six-months postpartum, couples in the postpartum continued to evidence lower sexual well-being, highlighting the unique consequences of the transition to parenthood to sexual well-being. Another study identified average levels of sexual frequency, desire, satisfaction, and distress from pregnancy to one-year postpartum, demonstrating that on average, both mother's and partners evidenced declines in sexual frequency, sexual desire

declined only for mothers, and neither member experienced changes in sexual satisfaction nor distress across this period. Still, they observed heterogeneity in couple-level patterns of change with some showing stability, improvement, and declines in sexual well-being across couples, and that these changes were not consistent between couple members or across domains (Rosen et al., 2021a). Using the 3-month postpartum time-point in their analyses as an indicator of when a shift in trajectories of sexual well-being may occur, Dawson and colleagues found that mothers' sexual distress significantly increased to above clinical cut-offs from 20-weeks in pregnancy to 3-months postpartum and then declined thereafter. Unexpectedly, partners' sexual distress was low and did not change significantly in this same time-frame. Taken together, these studies offer important evidence as to the distinct components of sexual well-being and their unique patterns of change over time (Brotto et al., 2009; Mitchell et al., 2013; Stephenson & Meston, 2010). Research with more focused samples at specific timeframes or life events is needed to clarify the equivocal findings as to the variability in the patterns of sexual well-being across studies.

1.4.2. Psychosocial Predictors of Sexual Well-Being

Given the conceptual and empirical differences in the patterns of change for sexual desire, satisfaction, and distress across the transition to parenthood, it is possible that there are distinct factors to be accounted for that promote or hinder changes in these facets of couples' sexual well-being. Though there has been some evidence of the relationship between biological factors (e.g., breastfeeding, perineal tears) and sexual well-being during the transition to parenthood, these effects do not appear to persist over time (e.g., Dawson et al., 2020c). There has been a growing interest in the relationship

between psychosocial factors and couples' sexual well-being in this period. Cross-sectional and longitudinal studies have shown that couples experience lower sexual well-being (i.e., lower desire and satisfaction, higher distress) when they report greater depressive symptoms, postpartum sexual concerns, discrepant attitudes towards sex during pregnancy, and stress (Dawson et al., 2020a; Dawson et al., 2020b; Leavitt et al., 2017; Tavares et al., 2022; Tavares et al., 2019). Other dyadic processes that promote couples' sexual well-being, including greater dyadic empathy (i.e., perspective taking), common dyadic coping (i.e., joint coping), and sexual communal strength (i.e., understanding responses towards a partners' need to have or not to have sex) have also been identified (Muisse et al., 2017; Rosen et al., 2017; Tutelman et al., 2022). Such findings underscore the importance of psychosocial factors, which may facilitate the development of targeted interventions that assist new parents with adjusting to the challenges and changes during the transition to parenthood.

1.4.3. The Transition to Parenthood and Sexual Growth and Destiny Beliefs

In accordance with the VSA model, the many novels sexual and relationship challenges that arise during the transition to parenthood (Ahlborg et al., 2005; Doss et al., 2009) position this period to be an external stressor in which the relationship between vulnerabilities/strengths and sexual well-being may be magnified. Indeed, Doss et al. (2009) and Ter Kuile et al. (2021) applied the VSA model to the transition to parenthood and demonstrated several vulnerabilities, strengths, and processes that were linked to couples' relationship well-being, such as a history of parental conflict, pre-pregnancy happiness, and poor conflict management. Using this theoretical grounding, couples' sexual growth and destiny beliefs may be conceptualized as a strength and vulnerability,

respectively. The many novel sexual concerns that emerge during the transition to parenthood might require couples to actively work on their sex lives; believing that sexual well-being can be improved with time and effort (i.e., sexual growth beliefs) may be helpful for engaging in strategies that seek to improve the sexual relationship during this challenging time. In contrast, perceiving these challenges to be an indicator of overall incompatibility (i.e., sexual destiny beliefs) may be particularly detrimental for couples since the transition to parenthood involves significant commitment and investment in their relationship.

Only one study has explored sexual growth and destiny beliefs during the transition to parenthood. In their cross-sectional study of couples between 3 and 12 months postpartum, Maxwell et al. (2017) found that new mothers and their partners who endorsed stronger sexual growth beliefs reported greater sexual and relationship satisfaction, whereas when mothers held higher sexual destiny beliefs, both they and their partners reported lower relationship satisfaction. Overall, this study provides initial evidence for sexual growth and destiny beliefs being considered a strength and a vulnerability within the VSA model that become more salient during the stress of the transition to parenthood and are associated with new parent's well-being.

1.4.4. Limitations of Prior Work in the Transition to Parenthood

There is a dearth of dyadic longitudinal studies examining changes in the distinct aspects of *couples'* sexual well-being together and over time, as well as whether psychosocial factors predict these overall changes in sexual well-being across the transition to parenthood. The longitudinal designs and analyses used to test hypotheses related to the transition to parenthood are often highly complex. Yet, the majority of the

research in this area has not used preregistrations to outline hypotheses and analysis plans, rendering researchers vulnerable to hindsight and confirmation bias. The past research in this area also examined sexual growth and destiny beliefs cross-sectionally and with couples who were anywhere between 3 and 12 months postpartum (Maxwell et al., 2017). The dynamic nature of the transition to parenthood necessitates frequent and systematic assessment of couples' sexual well-being. Since sexual growth and destiny beliefs have been predominately considered trait variables, assessing their prospective role in couples' sexual well-being may offer important insights into treatment targets that can be identified early on to prevent further decline in couples' sexual well-being. Together, these are the gaps in the literature that will be addressed in Study 1 of my dissertation.

1.5. Couples' Experience of Medically Assisted Reproduction

1.5.1 Medically Assisted Reproduction and Couples' Well-Being

Another potential pathway for some couples' journey towards parenthood includes medically assisted reproduction (MAR), which involves medical procedures to facilitate a pregnancy, such as in vitro fertilization. Couples from a wide range of backgrounds seek MAR, including approximately 12% to 16% of Canadian couples who experience infertility (i.e., inability to conceive or to carry a pregnancy to term after 12 months of regular vaginal intercourse; Bushnik et al., 2012; WHO, 2019) and same sex and/or gender couples that require MAR to expand their families.

MAR is associated with an array of challenges to couples' psychological, relational, and sexual well-being, with up to 75% reporting clinical levels of distress and half indicating treatment as the most stressful experience in their lifetime (Benyamini et

al., 2005; Chen et al., 2004; Verhaak et al., 2007). Although some couples report benefits to their relationship during MAR (i.e., enhanced commitment), many experience declines in their relationship satisfaction as a result of infertility or treatment (e.g., Luk & Loke, 2019; Schmidt et al., 2005a). Couples who access MAR also report novel and unique challenges to their sexual relationship that have consequences for their sexual well-being. Sex can become scheduled around ovulatory cycles (Monga et al., 2004) and motivated by the need to conceive rather than desire or pleasure (Nelson et al., 2008). In addition to declines in relationship well-being (Borneskog et al., 2012; Drosdzol & Skrzypulec, 2009), men and women report decreases in sexual frequency and all domains of sexual functioning (i.e., interest, desire, erectile functioning, orgasm, lubrication, pain; Monga et al., 2004; Nelson et al., 2008; Peterson et al., 2007; Purcell-Levesque et al., 2018; Smith et al., 2015). There has been a substantial gap in the literature examining the consequences of MAR for sex and gender diverse couples, with one qualitative study demonstrating that lesbian women endorse poorer sexual function and increased stress during sex, despite not requiring intercourse to conceive (Goldberg et al., 2009). These declines have deleterious impacts on couples' quality of life (Smith et al., 2015) and relationship stability (Luk & Loke, 2019). Couples report relationship strain as a significant reason for treatment dropout (Gameiro et al., 2013b; Pedro et al., 2017), further deterring their goal of parenthood.

1.5.2. Medically Assisted Reproduction and Dyadic Coping

MAR is a taxing medical process that has consequences for both members of a couple. The stressors involved during this time may be most effectively managed by those utilizing conjoint coping efforts – dyadic coping. Dyadic coping is a

multifaceted construct that is comprised of positive and negative domains (Revenson et al., 2005). Couples using positive dyadic coping engage in supportive (e.g., validation, expression of solidarity), common (e.g., joint emotion- and problem-focused stress management), and delegated (e.g., practical support) behaviours when navigating stressors with their partner. Though positive coping includes several domains, empirical and theoretical evidence supports examining them in aggregated form (e.g., Falconier et al., 2015a; Papp & Witt, 2010; Regan et al., 2014). In contrast, couples using negative dyadic coping offer support in an unwilling or hostile manner, such as expressing disinterest in a partners' concerns or distancing themselves from the issue (Bodenmann & Cina, 2005).

A dyadic approach to coping enhances understanding of the complexity of couples' interactions when managing challenges, including how an individual reacts to stress, how this stress is perceived by one's partner, and how the partner responds to their partners' experience of stress (Falconier et al., 2015b). Dyadic coping has also been shown to be a stronger predictor of relationship satisfaction than individual coping strategies (Herzberg, 2013; Papp & Witt, 2010). Dyadic studies have provided a more nuanced understanding of individual and partner effects that would not have been detected otherwise (Martos et al., 2021; Regan et al., 2014; Van Schoors et al., 2019; Weißflog et al., 2017). For example, Papp and Witt (2010) found that an individual's greater positive dyadic coping, and lower negative dyadic coping, was associated with their own *and* their partners' greater relationship satisfaction and lower observed negativity during conflict.

Several studies have examined couples' coping during MAR (Berghuis & Stanton, 2002; Peterson et al., 2006; Peterson et al., 2011; Peterson et al., 2009; Peterson et al., 2008; Schmidt et al., 2005b), however, only two studies have used the well-validated dyadic coping questionnaire, which includes both positive and negative dyadic coping and most importantly, captures the inherently interpersonal nature of couples' coping by assessing an individual's perceptions of their own and their partners' dyadic coping. Among couples undergoing MAR, when individuals and their partner reported greater levels of positive dyadic coping, each member of the couple reported greater relationship adjustment (Molgora et al., 2019). Chaves et al. (2019) demonstrated that an individual's and their partners' dyadic coping (i.e., greater positive and lower negative dyadic coping) mediated the relationship between the impact of infertility and relationship adjustment. For women, the impact of infertility was negatively associated with their perception of dyadic coping by their partner, which in turn, was positively related to their relationship adjustment. For men, the impact of infertility was negatively related to their perception of their own dyadic coping, which was then positively associated with their relationship adjustment. These findings suggest that couples' well-being is related to not only to an individual's own dyadic coping, but also to their partners' perceptions, further highlighting the importance of accounting for the experiences of both members of a couple.

1.5.3. Dyadic Coping and Sexuality

Researchers have also examined the associations between dyadic coping and couples' sexual well-being within and outside periods of stressors (Bodenmann et al., 2010). Longitudinal and daily diary data in the transition to parenthood have

demonstrated that women and partners reported greater sexual and relationship well-being when they endorsed greater common and lower negative, dyadic coping (Tutelman et al., 2021; Schwenck et al., 2022). Similar findings have been evidenced in couples with children who have health concerns, whereby more common, and less negative dyadic coping as perceived by women and men was associated with their greater sexual adjustment (Van Schoors et al., 2019).

The significant declines in sexual functioning (e.g., desire, arousal, orgasm, and pain; Purcell-Levesque et al., 2018) couples experience during MAR may necessitate greater use of dyadic coping to manage these challenges. Despite the important role of dyadic coping in promoting couples' relationship and sexual well-being, there is limited research exploring the factors that predict dyadic coping (e.g., Felnhofer et al., 2021; Levesque et al., 2014; Zemp et al., 2017). This significant gap in knowledge hinders clinicians' ability to identify couples at-risk of poor dyadic coping and target evidence-based factors in treatment.

In two studies, couples were asked to describe their experience of infertility, with many couples endorsing growth- and destiny-oriented thoughts such as "I'll do whatever it takes to fix it" and "a pregnancy was not meant to be" (Malcolm & Cumming, 2004; Steuber & Haunani Solomon, 2008). These beliefs may motivate or limit couples' willingness to engage in effective dyadic coping during the challenges of MAR, including the sexual difficulties that can arise. Though no prior studies have examined how sexual growth and destiny beliefs are linked to dyadic coping in MAR, evidence from the broader literature underscores the importance of these beliefs for individual coping in other stressful contexts. As described earlier, in community samples of

individuals navigating real or hypothetical relationship and sexual stressors, greater endorsement of growth-oriented beliefs was related to more positive coping (e.g., planning, support seeking), whereas greater destiny-oriented beliefs have been linked to more negative coping (e.g., disengagement, denial; Bohns et al., 2015; Dovala et al., 2018; Knee, 1998; Sutherland & Rehman, 2018).

As such, in accordance with the second pathway in the VSA model and prior research, couples who believe that the sexual challenges they encounter during MAR can be worked through (i.e., sexual growth beliefs) may engage in more positive and less negative dyadic coping. In contrast, believing that sexual challenges are indicative of incompatibility (i.e., sexual destiny beliefs) may limit couples' effort to engage in positive dyadic coping and prompt their use of more negative dyadic coping. With evidence showcasing the malleability of implicit theories and coping styles (e.g., Johnson et al., 2016; Leith et al., 2014; Sutherland & Rehman, 2018), examining sexual growth and destiny beliefs as predictors of positive and negative dyadic coping with the stressors related to MAR is a crucial step for understanding a tangible and modifiable strategy for promoting couples' adjustment during this period of vulnerability.

1.5.4. Limitations of Prior Work in Medically Assisted Reproduction

Prior studies have focused on demographic (e.g., age, sex, gender, education) and fertility-related (e.g., diagnosis, duration of infertility) predictors of relationship satisfaction and sexual function in couples undergoing fertility treatment (Borneskog et al., 2012; Drosdzol & Skrzypulec, 2009). There is a paucity of research examining psychosocial predictors, despite these factors being amenable treatment targets (Gameiro et al., 2013a) and reported as key reasons for treatment dropout (Gameiro et al., 2012).

Moreover, the majority of studies examining couples' coping behaviors during MAR included only one member of the couple, neglecting both partners' experience whilst seeking treatment and their influence on one another. MAR is often a long-term process and the burdens associated with treatment may fluctuate over time as couples encounter various experiences (e.g., pregnancy, treatment failure, pregnancy loss). Though research has primarily conceptualized sexual growth and destiny beliefs as trait variables, it is possible that in response to the challenges during MAR, couples may modulate their sexual growth and destiny beliefs, which in turn, affect their coping behaviours. However, research has primarily used cross-sectional designs, which preclude the assessment of change in these beliefs and dyadic coping over time. Study 2 of my dissertation intends to address these limitations of the prior literature.

1.6 Outline of Dissertation Papers

The overall objective of my dissertation was to examine whether sexual growth and destiny beliefs as strengths and vulnerability factors, as rooted within the VSA model respectively, predicted couples' sexual well-being and dyadic coping during the pathway to parenthood. In the first pre-registered longitudinal study, I examined the average trajectories of couples' sexual well-being (i.e., desire, distress, satisfaction) across the transition to parenthood (pregnancy to postpartum) and whether sexual growth and destiny beliefs in pregnancy predicted changes in these trajectories in the postpartum period. In the second longitudinal study, I tested whether between-and within-person changes in sexual growth and destiny beliefs predicted changes in dyadic coping over a one-year period as couples sought MAR. The manuscript for each of these two studies is included in separate chapters of my dissertation (Chapters 2 and 3). In Chapter 4, I

summarize the overall results, limitations, future directions, and theoretical and clinical implications of my research.

1.6.1 Aims and Hypotheses of Chapter 2

The first study in my dissertation, as described in Chapter 2, addresses the limitations of prior research by conducting a pre-registered dyadic and longitudinal study that examined the prospective effects of sexual growth and destiny beliefs in pregnancy on various facets of couples' sexual well-being across one-year of the postpartum period. To test whether these beliefs are related to trajectories of couples' sexual well-being, I first established whether sexual desire, satisfaction, and distress evidenced significant change, on average, over time across the transition to parenthood for both new mothers and their partners. I predicted that, on average, mothers' and partners' sexual desire and satisfaction would decline from pregnancy (20-weeks) to 3-months postpartum and then improve from 3- to 12-months postpartum. As the average trajectory of sexual distress in this sample was already established in an previous manuscript, I did not have any hypotheses pertaining to this trajectory (Dawson et al., 2020a).

The primary aim of this first study was to test sexual growth and destiny beliefs as predictors of the average trajectories of sexual well-being. In line with prior work, I hypothesized that mothers and partners with greater sexual growth beliefs in pregnancy would have higher sexual desire and satisfaction, and lower sexual distress at 3-months postpartum and would experience a greater increase in sexual desire and satisfaction, and a greater decrease in distress over the postpartum period. I also predicted that mothers and partners with greater sexual destiny beliefs in pregnancy would have lower sexual desire and satisfaction, and higher distress at 3-months postpartum and would experience

weaker increases in sexual desire and satisfaction, and weaker decreases in distress across the postpartum period. Given that mothers experience more extensive changes during the transition to parenthood, I anticipated that changes to sexual desire, sexual satisfaction, and sexual distress and their links with sexual growth and destiny beliefs would be stronger among mothers than partners (McBride & Kwee, 2017).

1.6.2 Aims and Hypotheses of Chapter 3

The second study in my dissertation, as described in Chapter 3, aimed to fill critical gaps in the literature by employing a dyadic longitudinal design to examine sexual destiny and growth beliefs as predictors of dyadic coping as couples seek medically assisted reproduction over a one-year period. This study was developed to build upon the findings from Study 1 by exploring another aspect of the VSA model, particularly how the strengths and vulnerabilities (i.e., sexual growth and destiny beliefs, respectively) related to dyadic coping behaviours when couples are managing the significant stressor of MAR.

I tested associations at the between-person (i.e., averaged across time points/variability between-couples) and within-person (i.e., co-occurring changes over time/variability within-couples) levels to assess the temporal link between sexual growth and destiny beliefs and dyadic coping over a one-year period. Based on theory and research, I hypothesized that at the between-person level (i.e., averaged across all time-points): 1) Individuals who endorsed higher levels of sexual growth beliefs would report higher positive and lower negative dyadic coping and 2) Individuals who endorsed higher levels of sexual destiny beliefs would report lower positive and higher negative dyadic coping. At the within-person level, I hypothesized that 1) When an individual endorsed

higher than average sexual growth beliefs at one time-point relative to their 12-month average, they would report increases in their positive and decreases in their negative dyadic coping at the next time-point; and 2) When an individual endorsed higher than their average sexual destiny beliefs at one time-point relative to their 12-month average, they would report decreases in positive and increases in negative dyadic coping at the next time-point.

CHAPTER 2: A LONGITUDINAL INVESTIGATION OF COUPLES' SEXUAL GROWTH AND DESTINY BELIEFS IN THE TRANSITION TO PARENTHOOD

The manuscript prepared for this study is presented below. Readers are advised that Meghan Rossi, under the supervision of Dr. Natalie Rosen, was responsible for developing the research questions and hypotheses, preparing the pre-registration, cleaning the dataset for analyses, conducting data analyses, and interpreting the study findings. Meghan wrote the initial draft of the manuscript and received and incorporated feedback from her co-authors. The manuscript underwent peer-review, and required three rounds of revision, which Meghan led, prior to the manuscript's acceptance in *Archives of Sexual Behavior* on December 14th, 2021. The full reference for this manuscript is:

Rossi, M. A., Impett, E. A., Dawson, S. J., Vannier, S., Kim, J., & Rosen, N. O. (2022).

A Longitudinal Investigation of Couples' Sexual Growth and Destiny Beliefs in the Transition to Parenthood. *Archives of Sexual Behavior*, 1-17. doi:

10.1007/s10508-021-02267-3

2.1 Abstract

Beliefs about sexuality tend to become more salient during sexual challenges and are associated with how individuals respond to these difficulties, and in turn, their sexual well-being. The transition to parenthood is marked by significant changes to couples' sexuality. As such, this period of vulnerability may be an important context in which these beliefs impact how couples manage sexual stressors and may have implications for their sexual well-being. In a longitudinal dyadic study, we examined whether couples' sexual growth beliefs (e.g., beliefs that sexual problems can be resolved through effort) and sexual destiny beliefs (e.g., beliefs that sexual problems reflect incompatibility with their partner) correspond with changes to various facets of couples' sexual well-being over time. First-time parent couples ($N = 203$) completed online surveys assessing these beliefs in pregnancy (32-weeks) and measures of sexual well-being (satisfaction, desire, and distress) in pregnancy (20- and 32-weeks) and across the postpartum period (3-, 6-, 9-, 12-months). Dyadic latent growth curve models showed that expectant mothers who reported stronger sexual destiny beliefs in pregnancy reported higher sexual distress and lower sexual satisfaction at 3-months postpartum. When partners reported stronger sexual destiny beliefs in pregnancy, both they and new mothers reported greater sexual desire at 3-months postpartum. Unexpectedly, partners' higher sexual growth beliefs in pregnancy predicted mothers' lower sexual desire at 3-months postpartum. Sexual growth and destiny beliefs were not associated with change in couples' sexual well-being beyond 3-months postpartum. Findings shed light on the potential benefits and costs of sexual growth and destiny beliefs for couples' sexual well-being early in the postpartum period, but not over time.

Keywords: sexual well-being, transition to parenthood, sexual growth and destiny beliefs, sexual desire, sexual satisfaction, sexual distress

2.2 Introduction

As couples navigate the transition to parenthood, they are faced with an array of changes that can have consequences for their sexual well-being. Indeed, this period—from pregnancy to 12-months postpartum—is marked by novel sexual concerns, including fluctuations in levels of sexual desire, sexual distress, and sexual satisfaction for both partners (Ahlborg et al., 2005; Fitzpatrick et al., 2021; Rosen et al., 2021; Schlagintweit et al., 2016). Moreover, both mothers and partners report significantly lower desire and higher sexual distress relative to couples who are not in the transition to parenthood, with mothers showing greater disruptions in these facets compared to their partners (Schwenck et al., 2020). These declines in sexual well-being may have implications for the couple (e.g., relationship conflict) and, in turn, the family unit (e.g., parent-child relationship, child development; Goldberg, 2014; Stroud, 2015). Thus, despite the transition to parenthood being a normative life event, disruptions to sexual well-being are common; identifying factors that promote or interfere with sexual adjustment could help new parents adapt to these changes more effectively and prevent more persistent difficulties.

While past research has predominately focused on biomedical predictors of sexual function in the transition to parenthood (see Leeman & Rogers, 2012; McBride & Kwee, 2017 for reviews), there is emerging evidence of psychosocial predictors of sexual well-being, such as greater empathy and relationship satisfaction (Dawson et al., 2020c; Rosen et al., 2017). The demands of caring for an infant, changing relationship dynamics, and subsequent changes to sexual well-being are experienced by both members of a couple, underscoring the interpersonal nature of the transition to parenthood. Moreover, it is

essential to examine how sexual well-being changes across this period in order to identify vulnerable periods in which targeted prevention and interventions can be implemented. Yet, there is a dearth of dyadic and longitudinal studies examining the associations between psychosocial factors and various facets of couples' sexual well-being over time.

According to the literature, individuals have personal, underlying beliefs as to whether certain components of their lives are changeable (i.e., growth orientation) and fixed (i.e., destiny orientation; Dweck, 2012). Growth and destiny beliefs have been studied across various contexts, including intelligence, personality, and relationships and play a key role in shaping individuals' responses to life challenges (Costa & Faria, 2018; Dupeyrat & Mariné, 2005; Franiuk et al., 2002; Plaks et al., 2009; Yeager et al., 2014). These beliefs have also been studied in relation to sexual difficulties (Bohns et al., 2015; Maxwell et al., 2017; Sutherland & Rehman, 2018). Individuals who hold stronger *sexual growth beliefs* think that sexual satisfaction fluctuates and can be maintained or improved with effort, whereas those who hold stronger *sexual destiny beliefs* believe that sexual satisfaction is achieved by natural compatibility between partners (e.g., the right "fit") and sexual difficulties are reflective of whether couples are "meant to be" (Maxwell et al., 2017). Sexual growth and destiny beliefs have been shown to shape relationship and sexual satisfaction, with cross-sectional evidence indicating that they are associated with couples' sexual satisfaction in the postpartum period (Maxwell et al., 2017). In the face of novel sexual stressors, such as those experienced during the transition to parenthood, sexual growth and destiny beliefs may become more salient and affect how couples respond to changes to their sexuality, thus impacting their sexual well-being. In the present study, we sought to examine sexual growth and destiny beliefs as predictors of

the average trajectories of new mothers' and partners' sexual well-being—including desire, satisfaction, and distress—across the postpartum period.

2.2.1 Trajectories of Sexual Well-Being in the Transition to Parenthood

Sexual well-being includes both positively and negatively valenced domains, including sexual desire (i.e., interest in sex), sexual satisfaction (i.e., appraisal of one's overall sexual relationship; Lawrance & Byers, 1995), and sexual distress (i.e., concerns about one's sex life; DeRogatis et al., 2008). Prior research has established that while correlated, these domains of sexual well-being are conceptually distinct and have different predictors and patterns of change over time (Brotto et al., 2009; Mitchell et al., 2013; Rosen et al., 2021; Stephenson & Meston, 2010). A recent study comparing the sexual well-being of new parent couples and community controls across three time-points demonstrated that new parents reported lower sexual satisfaction, desire, and higher distress across 3-, 6-, and 12-months postpartum (Schwenck et al., 2020). These changes were particularly pronounced for new mothers as they reported clinically significant levels of low sexual desire and high sexual distress, in comparison to both control women and the partners of new mothers. These findings are consistent with past research on patterns of sexual well-being in the postpartum period (Ahlborg et al., 2005; Condon et al., 2004; DeJudicibus & McCabe, 2002; Lévesque et al., 2019; Sagiv-Reiss et al., 2012).

Yet, the majority of past research has examined sexual well-being cross-sectionally and has not assessed the *degree* of change and *variability* in these changes over time. Moreover, few studies have statistically accounted for the interdependence between members of a couple. Two studies have addressed these limitations by using dyadic latent growth curve analyses to identify trajectories of mothers' and partners'

sexual well-being. In one study, researchers identified unique trajectories of sexual desire, satisfaction, and distress at the level of the couple during the transition to parenthood (Rosen et al., 2021). For example, for sexual desire, three unique trajectories were revealed that captured varying initial levels of desire and change in desire over time. In another study, Dawson and colleagues (2020a) demonstrated that, on average, mothers' sexual distress significantly increased from 20-weeks pregnancy to above clinical cut-offs at 3-months postpartum, then decreased significantly by 12-months postpartum, but remained above the clinical cut-off. However, contrary to expectations, partners' sexual distress remained stable and low (i.e., did not change significantly in pregnancy or the postpartum period) across this same time frame. Although an average trajectory of sexual distress has been previously established, no studies to our knowledge have examined the overall average trajectories of mothers' and partners' sexual satisfaction and desire from pregnancy through the postpartum period. The first step towards examining sexual growth and destiny beliefs as predictors of sexual well-being is to establish the average trajectories of sexual satisfaction, desire, and distress over the transition to parenthood.

2.2.2 Sexual Growth and Destiny Beliefs

Destiny and growth beliefs about one's relationship have been shown to shape a variety of relationship outcomes, including commitment, empathy, interpretation of conflict, and satisfaction (Franiuk et al., 2002; Freedman et al., 2018; Knee, 1998; Knee, 2006, 2003; Schumann et al., 2014). With respect to sexual beliefs, in a series of cross-sectional, experimental, and daily experience studies with community couples, endorsing stronger sexual growth beliefs was often associated with greater sexual and relationship

outcomes compared to holding stronger sexual destiny beliefs. Specifically, when individuals scored high on an individual difference measure of sexual growth beliefs and on days when they reported stronger sexual growth beliefs than they typically do, they reported more positive sexual experiences and greater relationship quality. Further, when individuals scored high on an individual difference measure of sexual destiny beliefs, they reported more daily negative sexual experiences, yet, endorsing greater daily sexual destiny beliefs was associated with their higher relationship quality (Maxwell et al., 2017). Three experimental studies have examined the effects of sexual beliefs. Participants primed with sexual growth beliefs who were told they were sexually compatible with their partner (versus incompatible) reported higher sexual satisfaction, whereas participants primed with sexual destiny beliefs who were told they were sexually or financially compatible with a partner (versus incompatible) reported higher sexual satisfaction (Maxwell et al., 2017). In two studies conducted by Bohns et al., (2015), they randomly assigned participants into hypothetical sexual challenge or non-sexual challenge conditions. Across both studies, they found that growth and destiny beliefs about sexual chemistry were only related to the participants' reported behavior (e.g., coping responses and willingness to end a relationship) in the sexual challenge conditions (Bohns et al., 2015). Two studies demonstrated similar patterns of results in couples experiencing difficulties in their sexual relationship. In a clinical sample of women with low sexual desire, women with stronger sexual growth beliefs reported higher desire. In contrast, when women and their partners reported stronger sexual destiny beliefs, the partners reported lower desire (Raposo et al., 2021). However, these effects did not persist one year later. In a cross-sectional study of couples in the postpartum period,

Maxwell and colleagues (2017) found that new mothers and their partners who endorsed stronger sexual growth beliefs reported greater sexual and relationship satisfaction, whereas when mothers held higher sexual destiny beliefs, both they and their partners reported lower relationship satisfaction (Maxwell et al., 2017). Establishing whether and how these beliefs are associated with changes in various facets of new parents' sexual well-being over time is important for understanding how to mitigate against declines in sexual well-being and its associated consequences.

Theoretically, growth and destiny beliefs impact the types of relationship maintenance behaviors individuals use when experiencing an interpersonal challenge (Bohns et al., 2015; Schumann et al., 2014; Sutherland & Rehman, 2018). When faced with a real or hypothetical stressor across relational and sexual domains, people who endorse more growth-oriented beliefs are more likely to report engaging in adaptive coping behaviors (e.g., enhanced communication, fewer destructive responses such as ignoring or ending the relationship) compared to those who endorse more destiny-oriented beliefs who report using less adaptive coping (e.g., avoidance; Bohns et al., 2015; Knee, 1998; Sutherland & Rehman, 2018). Importantly, one study demonstrated that compared to women who expected to experience a sexual challenge, only those who did not expect to experience a sexual challenge evidenced no significant differences in their coping strategies across growth or destiny orientations (Sutherland & Rehman, 2018). These studies underscore the potential benefits of growth beliefs and detriments of destiny beliefs for sexual well-being, and importantly, that these beliefs may become more salient in the context of a sexual challenge such as those experienced by new parents in the transition to parenthood.

With the many novel sexual challenges that arise during the transition to parenthood (Ahlborg et al., 2005; Rosen et al., 2021; Serrano Drozdowskyj et al., 2020), this period is an ideal context to study the effects of sexual growth and destiny beliefs for new parents. The emergence of sexual changes in pregnancy and the anticipation of further challenges in the postpartum period may position pregnancy as a critical time to identify and modify beliefs about sexuality. Couples who believe that these challenges can be worked through may be able to navigate these changes most effectively. For example, holding stronger growth beliefs may motivate individuals to engage in behaviors (e.g., communication, support seeking) that contribute to enhanced sexual well-being. In contrast, it may be less helpful for expectant parents, and mothers especially, to hold stronger sexual destiny beliefs because this may elicit fewer effective behaviors (e.g., avoidance, distraction) during a time of novel perinatal changes that impact women's sexual well-being to a greater degree. Targeting sexual growth and destiny beliefs early in pregnancy may be crucial to mitigating their consequences as these kinds of coping behaviors have been implicated in the sexual and relationship adjustment of couples (Bodenmann et al., 2010; Kraemer et al., 2011), including new parents (Alves et al., 2018; Goldberg et al., 2010). Importantly, how one partner manages a shared stressor, such as new parenthood, is in turn associated with the well-being of the other member of the couple (Lee & Roberts, 2018; Peterson et al., 2008). As such, we may expect that beliefs held by one partner would be tied to changes in their partners' sexual well-being.

2.2.3 The Current Research

In a longitudinal and dyadic study, we examined whether sexual growth and destiny beliefs in pregnancy predicted couples' sexual well-being at 3-months postpartum

and across the postpartum period (3- to 12-months). To do so, we first established the average trajectories of sexual desire, satisfaction, and distress in pregnancy and the postpartum period (i.e., 20 weeks' gestation to 3-months postpartum and 3-months postpartum to 12-months postpartum) including associations between mothers' and partners' average sexual well-being at 3-months (i.e., intercepts) and their change over time (i.e., slopes). We predicted that mothers' and partners' sexual desire and satisfaction would decline from pregnancy (20-weeks) to 3-months postpartum and then improve from 3- to 12-months postpartum, whereas sexual distress would increase in pregnancy and decrease in the postpartum period, as previously established in this same dataset (Dawson et al., 2020a; hypothesis 1). We also predicted that mothers' and partners' sexual well-being outcomes would be positively associated at 3-months postpartum (hypothesis 2), however, we made no a priori prediction about whether change in their sexual well-being outcomes from 3- to 12-months would be associated given a lack of prior evidence.

Regarding our main objective, we hypothesized that mothers and partners with greater sexual growth beliefs in pregnancy would have higher sexual desire and satisfaction, and lower sexual distress at 3-months postpartum (i.e., intercepts) and would experience a greater increase in sexual desire and satisfaction, and a greater decrease in distress over the postpartum period (i.e., slopes; hypothesis 3). We also predicted that mothers and partners with greater sexual destiny beliefs in pregnancy would have lower sexual desire and satisfaction, and higher distress at 3-months postpartum (i.e., intercepts) and would experience weaker increases in sexual desire and satisfaction, and weaker decreases in distress across the postpartum period (i.e., slopes; hypothesis 4). Finally, we

predicted that changes to sexual desire, sexual satisfaction, and sexual distress (i.e., hypothesis 1) and their links with sexual growth and destiny beliefs (i.e., hypotheses 3 and 4) would be stronger among mothers than partners, considering they experience more extensive biopsychosocial changes during pregnancy and postpartum than partners (McBride & Kwee, 2017; hypothesis 5).

2.3 Methods

2.3.1 Participants

Couples in the transition to parenthood were recruited mid-pregnancy as part of a longitudinal study on sexuality and relationships in pregnancy and postpartum, some results of which have been published (Dawson et al., 2020a; Leonhardt et al.; Rosen et al., 2021). None of the previously published manuscripts utilized sexual growth and destiny beliefs as predictors of sexual well-being. Although the average trajectory of sexual distress overlaps with a published manuscript (Dawson et al., 2020a), the average trajectories of sexual desire and satisfaction have not been examined. Eligibility criteria for the study required that both members of the couple were: 1) 18 years of age or older; 2) in a romantic relationship for at least six months; 3) fluent in English; and 4) living in Canada or the United States. The pregnant partners must: 5) have not previously given birth and 6) have a singleton and uncomplicated pregnancy. Of the 252 couples recruited and enrolled in the study, the sample consisted of 215 couples (see Appendix A or the Open Science Framework at: <https://osf.io/zb8my/> for flow of recruitment). However, couples ($n = 12$) who became pregnant again during the study period were removed from the current sample, as their transition to parenthood experience may differ from those

with only one child (Figueiredo et al., 2008). As a result, the final sample for the present study was 203 couples (see Table 2.6.1. for all sample characteristics).

2.3.2 Measures

Sexual Growth and Destiny Beliefs. To examine sexual growth and destiny beliefs, couples responded to 10 items from the Implicit Theories of Sexuality Scale - Short Form (Maxwell et al., 2017). Five items assess sexual destiny beliefs, such as “struggles in a sexual relationship are a sure sign that the relationship will fail”, and five items assess sexual growth beliefs, including “successful sexual relationships require regular maintenance.” Items are rated on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*). Items from each subscale were averaged, with higher scores reflecting greater endorsement of each belief. The sexual growth beliefs subscale ($\alpha = .79$) and sexual destiny beliefs subscale ($\alpha = .82$) demonstrated strong internal consistency.

Sexual Desire. Sexual desire in the past four weeks was assessed using the equivalent two sexual desire items (“Over the past 4 weeks, how often did you feel sexual desire or interest?” and “Over the past 4 weeks, how would you rate your level (degree) of sexual desire or interest?”) from the Female Sexual Function Index (FSFI; Rosen et al., 2000) and the International Index of Erectile Function (IIEF; Rosen et al., 1997), for men and women, respectively. To ensure that scores were on the same scale and comparable across participants regardless of the sexual function measure they completed, scoring for the desire subscale followed that described in the IIEF and not the FSFI (i.e., we did not multiply the desire subscale score by the domain factor from the FSFI). Thus, the two items were summed to give a score ranging from 2 to 10, where higher scores indicate greater desire. The two items from the FSFI ($\alpha = .89 - .91$) and IIEF ($\alpha = .86 - .89$)

demonstrated strong reliability across time-points and in a similar sample of couples transitioning to parenthood (Schwenck et al., 2020).

Sexual Satisfaction. To evaluate participants' subjective global satisfaction with their sexual relationship with their partner in the past four weeks, the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995) was administered. This measure includes five items rated on 7-point bipolar scales (e.g., pleasant-unpleasant). Items were summed to provide a total score (5 to 35), where higher scores reflect greater sexual satisfaction. The GMSEX has shown strong psychometric properties in pregnancy and postpartum samples (Beveridge et al., 2018; Tavares et al., 2019; Vannier & Rosen, 2017) and demonstrated strong internal consistency across all time-points for mothers ($\alpha = .93 - .96$) and partners ($\alpha = .94 - .96$).

Sexual Distress. Worries and concerns about one's sex life in the past four weeks were examined using the 13-item Female Sexual Distress Scale (FSDS; Derogatis et al., 2002), which has been validated for use with women and men (DeRogatis et al., 2008; Santos-Iglesias et al., 2018a). This measure has shown strong reliability in a similar sample of couples navigating the transition to parenthood (Dawson et al., 2020c; Vannier & Rosen, 2017). Total scores range from 0 to 52, with higher scores indicative of greater sexual distress. The established cut-off for clinically significant distress associated with sexual problems is a total score of 11 or greater for women (DeRogatis et al., 2008). A score of 19.5 or greater has been identified as a clinical cut-off for men, however, this should be interpreted with caution as there is only preliminary evidence to support this cut-off (Santos-Iglesias et al., 2018b). In this sample, the FSDS demonstrated strong internal consistency for mothers and partners ($\alpha = .93$ to $.96$ and $.92$ to $.94$, respectively).

2.3.3. Procedure

Couples were recruited between May 2016 and April 2018 through various sources, including in-person at the IWK Health Care Centre ultrasound clinic, online and community advertisements, and word of mouth. Online and community advertisements were posted on websites across North America (e.g., Kijiji and Facebook), in local community centers and stores, and health offices. For in-person recruitment at the ultrasound clinic, research staff reviewed medical records and identified potentially eligible participants prior to their 20-week appointment. Once identified, staff at the ultrasound clinic informed potential participants about the study upon check-in for their appointment. For those who were interested, a research assistant described the study and conducted an eligibility screening. If interested and eligible, the research assistant enrolled the couple in the study. For those who were recruited via advertisements, a screening call was scheduled with both members of the couple in which a research assistant provided more details about the study and verified eligibility prior to enrollment.

Couples completed online surveys in pregnancy (20-weeks and 32-weeks pregnant) and postpartum (3-, 6-, 9- and 12-months postpartum) hosted on Qualtrics. Survey links were emailed to participants and expired after four weeks. All participants reviewed and completed an online consent form before accessing the first survey. Participants who did not complete the survey within the first 48 to 72 hours were called by a research assistant to ensure they received the email and link (Dawson et al., 2020c; Rosen et al., 2020). Follow-up reminders were emailed one and three weeks following the initial survey email. For completing all surveys, couples received up to \$210 Cdn (\$105 each) in Amazon gift cards.

2.3.4 Data Analysis

The hypotheses and analytic approach for this study were preregistered and all data and syntax can be found at https://osf.io/zb8my/?view_only=ae6d26fb8dc142d2908e358b37d788ef. Statistical analyses were conducted using *Mplus* 8.4. If a participant was missing less than 50% of the items in a total (or sub-scale), a total score was computed using the means of the responded items. The mean was then converted back to a total score. Missing value replacement was not done for subscale or total scores with three or fewer items (i.e., for sexual desire). Missing data due to attrition were treated using the full information maximum likelihood function (FIML; Muthén & Muthén, 1998-2015).

Our main objective was to examine sexual growth and destiny beliefs at 32-weeks pregnancy (own and partner's) as predictors of the trajectories of mothers' and partners' sexual desire, satisfaction, and distress postpartum. Before testing this key objective, we first had to establish average trajectories of sexual well-being across the transition to parenthood. Unconditional dyadic latent growth curve models (DLGCM; Duncan et al., 1999) within a structural equation model (SEM; Kenny et al., 2006)) were conducted to establish trajectories of sexual satisfaction and sexual desire. This model was previously conducted for sexual distress: https://osf.io/p9g3r/?view_only=None (in this same dataset but will be summarized here in the results. DLGCMs were tested within an Actor-Partner Interdependence Model (APIM; Kenny et al., 2006). Partners were distinguished based on the person who gave birth (i.e., mother) and the person who did not give birth (i.e., the partner). To test whether there were differences between mothers and partners for intercepts and slopes, we conducted Wald χ^2 tests within the DLGCMs. Sexual growth

and destiny beliefs were then entered simultaneously into conditional models as time-invariant predictors of the variance in the postpartum intercepts and slopes for each sexual well-being outcome. As such, only three conditional models were conducted. All of the effects were tested and associations among study variables were controlled for within a single model for each outcome. Given this approach, which limited the number of models and comparisons conducted, the number of Type I errors may have been reduced. By preregistering our hypotheses and analysis plan, it is also possible that we limited the number of Type I errors in other ways, including by preventing researcher degrees of freedom in analytic decisions¹.

All DLGCMs utilized a piece-wise model (Perales, 2019), where the 3-month time-point was used as a knot point. This knot point reflects when we expected shifts in the trajectories to occur based on both prior research of the transition to parenthood (Galazka et al., 2015; Hyde et al., 1996; McBride & Kwee, 2017; Nakić Radoš et al., 2015; Serati et al., 2010; Vannier & Rosen, 2017; Yıldız, 2015) and our previous analyses with this dataset (Dawson et al., 2020a). The weights for each of the time-points were adjusted to reflect the different sampling timeframes in pregnancy and postpartum. Model fit was evaluated using the following criteria: (1) a non-significant Chi-Square value, (2) Confirmatory Fit Index (CFI) and Tucker-Lewis Index (TLI) greater than .95, (3) Root Mean Square Approximation of Error (RMSEA) less than .06, with a 90% CI that does not contain .08, and (4) Standardized Root Mean Square Residual (SRMR) less than .08 (Hooper, 2008).

¹ In response to reviewer comments on the manuscript regarding potential gender differences in the effects of sexual growth and destiny beliefs, we conducted all conditional models with and without same-gender couples. All results across sexual well-being outcomes remained consistent when excluding these couples.

2.4 Results

Correlations and descriptives of all study variables are presented in Table 2.6.2. Fixed and random estimates of intercepts and slopes for each outcome are reported in Table 2.6.3. See Figures 2.7.1 – 2.7.3 for depictions of the trajectories for each outcome.

2.4.1 Sexual Desire

Unconditional Dyadic Latent Growth Curve Model

Model fit for sexual desire was good: $\chi^2(45) = 65.35, p = .03$; CFI = 0.98, TLI = 0.97, RMSEA = 0.05 [CI = 0.02 – 0.07]; SRMR = .05. Table 2.6.3. depicts the means and variances of all sexual well-being outcomes for mothers and partners (i.e., Hypothesis 1). Consistent with Hypothesis 1, mother's sexual desire significantly declined in pregnancy and increased in the postpartum period. However, inconsistent with Hypothesis 1, partners' sexual desire did not significantly change during pregnancy or postpartum. Random estimates of the intercepts were all significant, indicating variability in sexual desire at 3-months postpartum for mothers and partners. Random estimates of the pregnancy and postpartum slopes for both mothers and partners were all significant, indicating variability in the sexual desire slopes (i.e., change over time) in pregnancy and the postpartum period.

All correlations among actors' and partners' sexual desire intercepts and slopes are reported in Table 2.6.4 (i.e., Hypothesis 2). Mothers' and partners' sexual desire intercepts were not significantly positively associated (in contrast to Hypothesis 2), reflecting that mothers and partners' sexual desire at 3-months postpartum were not linearly related. Consistent with Hypothesis 2, mothers' postpartum sexual desire slope was significantly and positively associated with partners' postpartum slope, suggesting

that the degree to which sexual desire changed was similar for both members of the couple. Correlations amongst other partner effects (e.g., between each person's sexual desire intercepts and sexual desire pregnancy slopes) were not significant, suggesting that an individual's own sexual desire at 3-months postpartum was not significantly associated with changes in their partner's sexual desire and that mothers' and partners' sexual desire during pregnancy were not changing in parallel. In line with Hypothesis 5, mothers' sexual desire intercept was significantly lower than their partner's sexual desire intercept, Wald $\chi^2(1) = 160.95, p < .001$. Compared to their partners, mothers showed significantly stronger decreases in their sexual desire in pregnancy, Wald $\chi^2(1) = 32.67, p < .001$, and significantly stronger increases in their sexual desire postpartum, Wald $\chi^2(1) = 27.45, p < .001$.

Conditional Dyadic Latent Growth Curve Model

Sexual growth and destiny beliefs were entered as time-invariant predictors of mothers' and partners' intercept and postpartum slope for sexual desire (Hypotheses 3 and 4). The conditional model fit was good: $\chi^2(73) = 119.97, p < .001$; CFI = 0.96, TLI = 0.94; RMSEA = 0.06 [90%CI = 0.04 – 0.07]; SRMR = .07. All effects of sexual growth and destiny beliefs on each sexual outcome (i.e., Hypothesis 3 and 4) are presented in Table 2.6.5.

Sexual Destiny Beliefs. Mothers' own destiny beliefs did not significantly predict their own or their partners' sexual desire intercepts. In contrast to Hypothesis 4, partners' own higher sexual destiny beliefs in pregnancy predicted their own higher sexual desire at 3-months postpartum, such that for every 1-unit increase in their sexual destiny beliefs at 32-weeks pregnancy, there was a 0.22 increase in sexual desire at 3-months

postpartum². Partners' higher sexual destiny beliefs in pregnancy predicted mothers' higher sexual desire at 3-months postpartum, such that for every 1-unit increase in partners' sexual destiny beliefs at 32-weeks pregnancy, there was a 0.32 increase in mothers' sexual desire intercept. In contrast to Hypothesis 4, mothers' sexual destiny beliefs did not significantly predict changes in their own or their partners' postpartum sexual desire slopes. Similarly, partners' sexual destiny beliefs did not significantly predict changes in their own or mothers' postpartum sexual desire slopes.

Sexual Growth Beliefs. In contrast to Hypothesis 3, mothers' own growth beliefs did not significantly predict their own or their partners' sexual desire intercepts. However, partners' higher sexual growth beliefs in pregnancy predicted mothers' lower sexual desire at 3-months postpartum. Mothers' and partners' sexual growth beliefs did not significantly predict changes in their own or their partners' postpartum sexual desire slopes.

2.4.2 Sexual Satisfaction

The DLGCM for sexual satisfaction had convergence issues even with modifications (e.g., adjusting covariances). Consistent with our preregistered contingency plan, we conducted unconditional latent growth curve models separately for mothers and their partners, similar to techniques used in past research (Don & Mickelson, 2014). As such, we could not examine correlations for the interdependence between partners' sexual satisfaction (Hypothesis 2) or test whether changes in sexual satisfaction were stronger for mothers than partners (Hypothesis 5).

² All subsequent significant effects can be interpreted using unit-increase or decrease descriptions as in this example.

Unconditional Dyadic Latent Growth Curve Model – Mothers

The model fit for mothers' sexual satisfaction was good: $\chi^2(12) = 15.97, p > .05$; CFI = 0.99, TLI = 0.99, RMSEA = 0.04 [CI = 0.02 – 0.09]; SRMR = .04. Consistent with Hypothesis 1, mother's sexual satisfaction significantly declined in pregnancy and significantly increased in the postpartum period. Fixed and random estimates of mothers' pregnancy slope and intercept were significant, indicating variability in mothers' sexual satisfaction in pregnancy and at 3-months postpartum. There was no significant variability in mothers' postpartum slopes for sexual satisfaction (see Table 2.6.3.).

Conditional Dyadic Latent Growth Curve Model – Mothers

We then tested sexual growth and destiny beliefs (own and partners') as time-invariant predictors of mothers' intercept and postpartum slope for sexual satisfaction (Hypothesis 3 and 4; Table 2.6.5). The conditional model fit was good: $\chi^2(26) = 34.09, p > .05$; CFI = 0.99, TLI = 0.98; RMSEA = 0.04 [90% CI = 0.00 – 0.07]; SRMR = .04.

Sexual Destiny Beliefs. In line with Hypothesis 4, mothers' higher sexual destiny beliefs in pregnancy predicted their own lower sexual satisfaction at 3-months postpartum. Partners' sexual destiny beliefs did not significantly predict mothers' sexual satisfaction intercept. Mothers' nor partners' sexual destiny beliefs predicted changes in mothers' postpartum slope.

Sexual Growth Beliefs. Mothers' and partners' sexual growth beliefs did not significantly predict mothers' sexual satisfaction intercept or changes in mothers' postpartum slope.

Unconditional Dyadic Latent Growth Curve Model – Partners

The model fit for partners' sexual satisfaction was good: $\chi^2(12) = 16.58, p > .05$; CFI = 0.99, TLI = 0.99, RMSEA = 0.04 [CI = 0.00 – 0.09]; SRMR = .07. Consistent with Hypothesis 1, partners' sexual satisfaction significantly declined in pregnancy and significantly increased in the postpartum period. Fixed and random estimates of partners' pregnancy slope and intercept were significant, indicating variability in partners' sexual satisfaction in pregnancy and at 3-months postpartum. There was no significant variability in partners' postpartum slopes for sexual satisfaction (see Table 2.6.3.).

Conditional Dyadic Latent Growth Curve Model – Partners

Next, we entered sexual growth and destiny beliefs as time-invariant predictors of partners' intercept and postpartum slope for sexual satisfaction (Hypotheses 3 and 4; see Table 2.6.5). The conditional model fit was inadequate: $\chi^2(26) = 48.44, p < .05$; CFI = 0.95, TLI = 0.92; RMSEA = 0.07 [90% CI = 0.04 – 0.09]; SRMR = .09. Due to inadequate model fit, we did not interpret the model. No model modifications were able to improve the fit.

2.4.3 Sexual Distress

Unconditional Dyadic Latent Growth Curve Model

The initial model revealed negative residual variance for partners' postpartum slope of sexual distress. The residual variance was therefore fixed to zero and we could not estimate variability for partners' slope of postpartum sexual distress. The unconditional model fit for sexual distress was good: $\chi^2(51) = 86.87, p = .001$; CFI = 0.97, TLI = 0.97, RMSEA = 0.06 [CI = 0.04 – 0.08], SRMR = .05. Consistent with Hypothesis 1 (see Table 2.6.3), mothers' sexual distress significantly increased in

pregnancy, with significant declines postpartum. However, inconsistent with Hypothesis 1, partners' sexual distress did not significantly change during pregnancy or postpartum. There was significant variability in mothers' and partners' intercepts suggesting that mothers and partners had variable levels of sexual distress at 3-months postpartum. Variance in mothers' postpartum, but not pregnancy, slope was significant, suggesting variability in the degree to which mothers' postpartum distress improved over time. For partners, there was significant variability in the degree to which their sexual distress worsened during pregnancy.

Regarding the interdependence between couple members' sexual distress (see Table 2.6.4), a significant and positive association between mothers' and partners' intercepts was found (in line with Hypothesis 2) suggesting that mothers who had higher sexual distress at 3-months postpartum also had partners with higher sexual distress. All other correlations, including partner effects (e.g., between a mother's sexual distress intercept and her partner's sexual distress slopes in pregnancy and vice versa) were not significant, suggesting that an individual's own sexual distress at 3-months postpartum was not significantly related to their partner's change in sexual distress in pregnancy and that mothers' and partners' sexual distress during pregnancy were not changing in parallel. With respect to Hypothesis 5, mothers' sexual distress intercept (at 3-months postpartum) was significantly greater than their partner's sexual distress intercept, Wald $\chi^2(1) = 49.54, p < .001$. Compared to their partners, mothers showed significantly stronger increases in their sexual distress in pregnancy, Wald $\chi^2(1) = 9.36 p < .05$, but no significant difference in the postpartum period, Wald $\chi^2(1) = 3.74 p > .05$.

Conditional Dyadic Latent Growth Curve Model

Mothers' and partners' sexual growth and destiny beliefs were included as time-invariant predictors of their own and their partner's intercepts and postpartum slopes (Hypotheses 3 and 4). The conditional model fit was good: $\chi^2(82) = 148.40, p < .001$; CFI = 0.95, TLI = 0.93; RMSEA = 0.06 [90% CI = 0.05 – 0.08]; SRMR = .06.

Sexual Destiny Beliefs. Consistent with Hypothesis 4 (see Table 2.6.5), mothers' higher sexual destiny beliefs in pregnancy predicted their own higher sexual distress at 3-months postpartum. Mothers' sexual destiny beliefs did not significantly predict their partners' sexual distress intercept. Partners' sexual destiny beliefs were not significantly associated with their own or mothers' sexual distress intercepts. Contrary to Hypothesis 4, neither mothers' nor partners' sexual destiny beliefs significantly predicted change in mothers' postpartum sexual distress slope.

Sexual Growth Beliefs. In contrast with Hypothesis 3, mothers' and partners' sexual growth beliefs did not predict their own or their partners' sexual distress intercepts. Mothers' and partners' sexual growth beliefs also did not significantly predict changes in mothers' postpartum sexual distress slope.

2.5 Discussion

In the current pre-registered dyadic longitudinal study, we found that as new parent couples navigated novel stressors to their sexual well-being, their beliefs in pregnancy about how to sustain sexual satisfaction—sexual growth and destiny beliefs—were associated with some, but not all, of their sexual adjustment at 3-months postpartum, and the beliefs did not predict changes over time. We extended previous literature in several ways. We are the first to report the average trajectories of new

parents' sexual satisfaction and sexual desire across the transition to parenthood. We also demonstrated that sexual growth and destiny beliefs in pregnancy are differentially associated with sexual desire, satisfaction, and distress early in the transition to parenthood, further reflecting that these components of sexual well-being exhibit distinct associations. Although theory suggests that growth and destiny beliefs are triggered in the context of sexual challenges (Bohns et al., 2015; Sutherland & Rehman, 2018), this study is one of only a handful to examine how these beliefs function in a context of novel sexual stressors. Notably, many of our preregistered hypotheses, especially about the effects of these beliefs on sexual adjustment over time, were not supported. These results suggest that sexual growth and destiny beliefs may not be important for understanding change in new parent's sexual well-being over time; however, they still inform future research. For example, before drawing firm conclusions, researchers should examine these beliefs closer to when new parents' resume sexual activity postpartum as, theoretically, this would be when the beliefs become more activated as sexual challenges emerge and could therefore have more influence over time (Bohns et al., 2015; Sutherland & Rehman, 2018). Overall, the results of this study advance our understanding of how sexual growth and destiny beliefs may or may not shape sexual well-being in a population known to experience many novel sexual problems and especially at a time when these problems are salient (i.e., at 3-months postpartum; Rosen et al., 2021).

We showed for the first time that, on average, both mothers and their partners experienced significant improvements in their sexual satisfaction from 3 to 12 months postpartum, with mothers also experiencing significant increases in their sexual desire

and decreases in sexual distress across the transition to parenthood. These findings are consistent with prior studies that estimated the prevalence of difficulties with sexual function at various time-points postpartum (Leeman & Rogers, 2012; McBride & Kwee, 2017; Rosen et al., 2021; Serati et al., 2010). Our study extends these findings by examining these changes using a dyadic and longitudinal design, capturing how mothers and their partners' sexual well-being changes individually and together across multiple time-points over the transition to parenthood. These findings suggest that throughout the transition to parenthood, most new parents begin to adjust to the demands of new parenthood and/or experience at least some resolution to their sexual concerns.

2.5.1 Sexual Destiny Beliefs and Sexual Well-Being at 3-Months Postpartum

Past research has demonstrated that sexual growth and destiny beliefs may become more salient in the context of a sexual challenge (Bohns et al., 2015; Sutherland & Rehman, 2018). As such, we hypothesized that 3-months postpartum, the time when most couples resume sexual activity and experience many sexual changes (e.g., Jawed-Wessel & Sevick, 2017), would be when we would detect the most robust effects of sexual growth and destiny beliefs. Indeed, in line with our hypotheses at this particular time point, we found that mothers who endorsed stronger sexual destiny beliefs in pregnancy experienced higher levels of sexual distress and lower sexual satisfaction at 3-months postpartum. These findings are consistent with a cross-sectional study that found when new mothers endorsed stronger sexual destiny beliefs, they and their partners reported lower relationship satisfaction (Maxwell et al., 2017). Past research indicates that destiny beliefs are associated with unhelpful coping behaviors, such as avoidance and distraction (Bohns et al., 2015; Sutherland & Rehman, 2018), which may interfere

with relationship maintaining (e.g., supportive coping) behaviors that are associated with sexual well-being (Bodenmann et al., 2010; Jones et al., 2018).

Contrary to our hypothesis, we found that when partners reported stronger sexual destiny beliefs in pregnancy, both they and new mothers reported greater sexual desire at 3-months postpartum. Similar benefits of sexual destiny beliefs have been found in couples coping with the sexual dysfunction FSIAD, which is characterized by chronic and distressing sexual desire and arousal difficulties. In this study, partners' greater sexual destiny beliefs were associated with less anxiety and depression for women with FSIAD (Raposo et al., 2021). It is possible that partners who endorse stronger sexual destiny beliefs may see these changes as time-limited and not as permanent indicators of sexual incompatibility. These partners may then be less focused on resolving sexual difficulties that occur during this vulnerable period, limiting pressures and concerns about sex that they and new mothers may experience at this time.

2.5.2 No Benefits of Sexual Growth Beliefs

We did not find evidence that new parents' sexual growth beliefs conferred any benefits for couples' sexual well-being during the transition to parenthood. In fact, when partners reported stronger growth beliefs in pregnancy, new mothers endorsed lower sexual desire at 3-months postpartum. A similar effect of sexual growth beliefs on partners' sexual desire was found in couples with FSIAD (Raposo et al., 2021). The researchers posited that persistent efforts to work through sexual difficulties may stifle their partners' sexual desire by limiting the spontaneity of sexual interactions that some individuals believe to be necessary for "good sex" (e.g., Dune & Shuttleworth, 2009; Sims & Meana, 2010). At 3-months postpartum, when partners are overly committed to

working on sexual challenges, mothers may perceive this as an additional stressor, further limiting their sexual desire (Tavares et al., 2019).

New mothers' sexual growth beliefs were also not associated with their own or their partners' sexual well-being either at 3-months postpartum or over time. In one study examining beliefs of sexual attraction, greater endorsement of growth-oriented beliefs was related to engaging in fewer unhelpful behaviors (e.g., avoidance, distraction), but not engaging in more helpful behaviors (e.g., communication) in response to a sexual stressor (Bohns et al., 2015). Mothers and partners who strongly endorse sexual growth beliefs may in fact be aware of the changes required to improve their sexual well-being. However, they may perceive themselves to be less efficacious in implementing such changes because of the many other novel stressors during this period, precluding any benefits derived from sexual growth beliefs. Future research may consider assessing parents' perceptions of their sexual self-efficacy as a potential moderator of our findings.

The lack of positive effects of sexual growth beliefs on sexual well-being is in contrast to findings by Maxwell et al. (2017). Maxwell and colleagues (2017) utilized a cross-sectional study design with a sample of couples who were anywhere between 3 to 12 months postpartum. In the current study, we assessed these beliefs at the same time-point for all couples (i.e., 32 weeks in pregnancy) and predicted outcomes again for all couples at the same time-point (3-months postpartum). It is possible that the different timeframes at which sexual growth and destiny beliefs were measured might account for the different results between the studies. Specifically, it may be important to measure growth beliefs concurrently with when postpartum sexual challenges begin to emerge (i.e., in the early postpartum) to determine their effects on sexual well-being (Jawed-

Wessel & Seveck, 2017). It is at this time that beliefs would theoretically become the most strongly activated and potentially have the most influence on couples' relationship maintaining or coping behaviors in response to their sexual challenges (Bohns et al., 2015; Sutherland & Rehman, 2018).

2.5.3 Sexual Growth and Destiny Beliefs Not Linked to Change Over Time

We assessed sexual growth and destiny beliefs in pregnancy and sexual well-being at 3-months postpartum demonstrating that these variables were meaningfully linked, while allowing for temporal separation between our variables. However, we cannot draw causal conclusions because we did not find evidence that sexual growth and destiny beliefs predicted change in sexual well-being over time. Indeed, none of our hypotheses regarding sexual growth and destiny beliefs predicting changes in sexual desire, satisfaction, or distress over time were supported. There is more evidence implicating psychosocial factors as predictors of sexual well-being at particular time-points (e.g., 3-months postpartum) in the transition to parenthood, rather than for change over time (e.g., Dawson et al., 2020a; Dawson et al., 2020b; Durtschi et al., 2017; Le et al., 2016). Moreover, the cross-sectional effects of sexual growth and destiny beliefs observed in the study with couples with FSIAD did not persist one-year later (Raposo et al., 2021), which is consistent with our non-significant slope effects. Thus, taken together, our results suggest that sexual growth and destiny beliefs may function differently only when couples are experiencing acute disruptions to their sex lives.

Still, many of our hypothesized effects were not supported and the observed effects were small. Coupled with the large number of effects tested within each model, it is possible that the effects we did detect were spurious and a result of Type I error.

Conversely, we may not have had enough statistical power, rendering us vulnerable to Type II error and unable to capture change over time or the benefits of sexual growth beliefs. Considering the lack of over-time effects in the current findings, as well as in previous research (Raposo et al., 2021), sexual growth and destiny beliefs may not be important for understanding changes in couples' sexual well-being during a time when they are navigating long-term sexual stressors. Identifying other psychosocial factors (e.g., communication, coping; Tutelman et al., 2022) that may be more strongly linked to couples' sexual well-being during the transition to parenthood is important as these are often more amenable to change relative to biomedical factors (e.g., mode of delivery, perineal tearing).

2.5.4 Strengths and Limitations

Overall, our study has a number of strengths, including a large sample size incorporating the perspective of both members of a couple. The theoretical underpinnings of sexual growth and destiny beliefs suggest that they emerge in the context of a sexual challenge (Bohns et al., 2015; Sutherland & Rehman, 2018). As such, we examined these beliefs in a context of novel sexual stressors, whereas most of the previous literature has focused on imagined or expected sexual challenges (Bohns et al., 2015; Sutherland & Rehman, 2018) or ongoing sexual dysfunction (Raposo et al., 2021). We are also the first to identify average trajectories of couples' sexual satisfaction and desire in the transition to parenthood, demonstrating how various facets of couples' sexual well-being change across this unique period. With a past focus on biological predictors of couples' sexuality in the postpartum, this is also one of only a few longitudinal and dyadic studies

examining psychosocial predictors of couples' sexual well-being using preregistered hypotheses and analyses.

There are limitations, in addition to those noted above, to the current research. Sexual growth and destiny beliefs were measured at only one time-point in pregnancy as we conceptualized that these beliefs would be relatively stable given that some research has demonstrated both stability and change in these beliefs over time (Canevello & Crocker, 2011; Knee, 2003). However, the transition to parenthood is a time when people may be prone to re-evaluate their expectations about their relationship (e.g., Lévesque et al., 2020; Pancer et al., 2008), including their sexuality. Although it is a methodological strength to use beliefs in pregnancy to predict postpartum outcomes, this design does not capture possible shifts in beliefs that may have happened in response to this major life event. Future research should assess whether these beliefs change during the transition to parenthood, particularly before and after sexual challenges are resolved. New parents were asked to reflect on their experience of sexual desire, satisfaction, and distress within the last four weeks. The length of this timeframe may have introduced recall bias, which may be addressed by future studies employing a daily diary study design. Moreover, the generalizability of our findings is restricted by our fairly homogenous sample in that majority of individuals were married, White, high socioeconomic status, and identified as cisgender and heterosexual. We did not test for the specific mechanisms through which sexual growth and destiny beliefs may impact sexual outcomes in the context of the transition to parenthood. Future research should examine relationship maintaining behaviors (e.g., dyadic coping) as mediators in the associations between these beliefs and sexual well-being.

2.5.4 Conclusions

The transition to parenthood can be a time of uncertainty and joy, with many challenges to couples' sexual well-being. We identified a novel psychosocial factor—sexual growth and destiny beliefs—as a predictor of couples' sexual desire, satisfaction, and distress at 3-months postpartum, but not change in these outcomes over time. We found that mothers' greater sexual destiny beliefs in pregnancy were linked to their own lower sexual well-being at 3-months postpartum, whereas partners' greater sexual destiny beliefs were associated with their own and new mothers' greater sexual desire. In contrast with the literature, partners' greater sexual growth beliefs were associated with mothers' lower sexual desire at 3-months postpartum. These findings suggest that intervening to address sexual beliefs in late pregnancy may be helpful to bolster couples' sexual desire, as well as mitigate the declines in new mothers' sexual satisfaction and increases in sexual distress at 3-months postpartum. Prior theory and research have posited growth-oriented beliefs, compared to destiny beliefs, as especially beneficial when managing interpersonal challenges. Our findings extend theory and prior research by demonstrating that (1) the costs and benefits of sexual growth and sexual destiny beliefs, respectively, are not uniform during a vulnerable period for couples' sexual well-being, precluding their dichotomization as either unhelpful or adaptive, and (2) these beliefs may not offer sustained contributions—either positive or negative—to couples' sexual well-being over time. Assessing the presence and role of these beliefs early in pregnancy may inform individualized interventions for modifying unhelpful thinking patterns. Ultimately, increasing couples' awareness of their sexual growth and destiny beliefs, alongside their

function, may enhance their sexual well-being during the challenges many new parents face in the early postpartum period, but not over time.

2.6 Tables

Table 2.6.1. Sample Characteristics ($N = 203$)

	Mothers	Partners
Age (y), M (SD)	30.04 (3.49)	31.58 (4.51)
Partner Gender, n (%)		
Man	-	196 (96.6%)
Woman	-	7 (3.4%)
Sexual Orientation, n (%)		
Heterosexual	182 (89.7%)	194 (95.5%)
Bisexual	12 (5.9%)	3 (1.5%)
Lesbian	6 (3.0%)	4 (2.0%)
Pansexual	2 (1.0%)	-
Asexual	1 (0.5%)	1 (0.5%)
Between Lesbian and Straight	-	1 (0.5%)
Ethnicity/Culture, n (%)‡		
White	160 (78.8%)	165 (81.2%)
Asian American/Asian	19 (9.4%)	10 (4.9%)
Multiracial	9 (4.4%)	7 (3.4%)
East Indian	6 (3.0%)	5 (2.5%)
Black	3 (1.5%)	3 (1.5%)
Middle Eastern/Central Asian/South Asian	3 (1.5%)	7 (3.4%)
First Nations	2 (1%)	2 (1.0%)
Hispanic	-	2 (1.0%)

Table 2.6.1. Sample Characteristics ($N = 203$)

Native Hawaiian/Pacific Islander	-	2 (1.0%)
Relationship type, n (%)		
Married/Common-Law/Engaged	186 (91.6%)	185 (91.1%)
Living With/Dating	17 (8.4%)	17 (8.4%)
Other	-	1 (0.5%)
Relationship Duration (years), M (SD)	6.64 (3.60)	6.64 (3.60)

‡For women, one individual selected “other”, but did not specify their ethnicity. For partners, one individual self-identified as Ashkenazi Jewish and was included in the European ethnicity row. Age is based on data from 198 mothers and 195 partners due to missing data on this variable

Table 2.6.2. Descriptives and Correlations of Sexual Well-Being Outcomes and Sexual Growth and Destiny Beliefs Across Time-Points

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.SDeB	.01	.47**	-.35**	.63**	.36**	-.19**	.51**	.30**	-.16*	.45**	.26**	-.12	.50**	.32**	-.25**	.42**	.23**	-.20**	-.02	.08
2.SSB	.09	.56**	-.55**	.43**	.69**	-.42**	.34**	.59**	-.32**	.25**	.43**	-.32**	.39**	.54**	-.37**	.32**	.45**	-.38**	.11	-.18**
3.SDB	-.06	-.52**	.24**	-.24**	-.47**	.66**	-.27**	-.35**	.58**	-.16*	-.34**	.61**	-.29**	-.37**	.68**	-.29**	-.32**	.61**	.02	.14*
4.SDe32	.66**	.12	-.13	.14*	.45**	-.29**	.45**	.29**	-.17*	.43**	.21**	-.12	.46**	.27**	-.21**	.43**	.20**	-.25**	.08	.09
5.SS32	.09	.55**	-.49**	.20**	.55**	-.61**	.23**	.53**	-.36**	.18*	.44**	-.35**	.31**	.48**	-.41**	.30**	.45**	-.41**	.11	-.19**
6.SD32	-.11	-.42**	.72**	-.20**	-.48**	.25**	-.20**	-.35**	.56**	-.12	-.23**	.58**	-.16*	-.26**	.54**	-.18*	-.24**	.56**	.02	.20**
7.SDe3	.52**	.05	-.12	.62**	.11	-.11	.09	.46**	-.29**	.62**	.41**	-.21**	.57**	.34**	-.30**	.46**	.30**	-.33*	-.15*	.06
8.SS3	.12	.51**	-.37**	.19*	.51**	-.32**	.18*	.47**	-.46**	.29**	.51**	-.41**	.36**	.53**	-.39**	.28**	.51**	-.44**	-.00	-.22**
9.SD3	-.10	-.39**	.55**	-.15*	-.39**	.54**	-.14	-.62**	.15*	-.10	-.26**	.63**	-.26**	-.32**	.60**	-.16*	-.22**	.57**	.09	.19**
10.SDe6	.53**	.09	-.10	.61**	.18*	-.09	.73**	.21**	-.13	.07	.53**	-.30**	.64**	.37**	-.27**	.60**	.35**	-.34**	-.14*	.06
11.SS6	.06	.41**	-.32**	.10	.49**	-.28**	.02	.65**	-.49**	.16*	.49**	-.47**	.45**	.63**	-.40**	.38**	.61**	-.38**	.05	-.05
12.SD6	-.00	.37**	.68**	-.07	-.38**	.60**	.05	-.48**	.69**	-.06	.55**	.17*	-.29**	-.40**	.67**	-.28**	-.32**	.65**	.09	.19**
13.SDe9	.48**	.15*	-.18*	.51**	.16*	-.15	.61**	.21**	-.18*	.69**	.22**	-.22**	.15*	.55**	-.44**	.70**	.46**	-.43**	-.14	.03
14.SS9	.00	.46**	-.39**	.08	.43**	-.28**	.02	.62**	-.49**	.17	.65**	-.53**	.33**	.53**	-.56**	.46**	.68**	-.50**	.02	-.23**
15.SD9	-.01	-.43**	.60**	-.02	-.34**	.61**	-.02	-.45**	.69**	-.12	-.47**	.76**	-.26**	-.61**	.26**	-.35**	-.39**	.75**	.06	.17*
16.SDe12	.51**	.21**	-.13	.61**	.19*	-.19*	.60**	.20*	-.16*	.70**	.10	-.06	.67**	.17*	-.15	.13	.52**	-.45**	-.19**	-.01
17.SS12	.04	.46**	-.29**	.10	.35**	-.26**	.08	.58**	-.33**	.23**	.58**	-.41**	.27**	.61**	-.44**	.28**	.51**	-.57**	.02	-.11
18.SD12	-.04	-.37**	.48**	-.08	-.26**	.51**	-.06	-.48**	.60**	-.12	-.41**	.69**	-.22**	-.48**	.70**	-.21**	-.58**	.20*	.12	.23**
19.SGB	-.09	.17*	.01	-.08	.06	.03	-.02	-.02	-.04	.00	.06	.02	-.07	.03	.02	-.04	.01	-.00	.27**	-.18
20.SDB	.14*	-.07	.05	.20**	-.02	.04	.13	.00	.14	.09	-.12	.01	.20**	-.06	.07	.08	.02	-.01	-.15*	.23**
Mothers <i>M</i>	5.77	26.46	13.45	5.24	25.25	14.08	4.54	23.83	16.96	4.92	25.34	15.94	5.17	25.85	14.48	5.30	26.45	14.68	5.93	2.20
Mothers <i>SD</i>	2.00	7.00	10.38	1.98	7.00	9.69	1.91	7.24	11.07	1.91	6.76	11.24	1.98	7.14	11.26	1.93	7.34	11.79	0.81	1.04

Table 2.6.2. Descriptives and Correlations of Sexual Well-Being Outcomes and Sexual Growth and Destiny Beliefs Across Time-Points

Partners <i>M</i>	6.97	27.26	9.43	6.60	26.55	9.45	6.81	24.08	11.12	6.76	25.81	10.07	6.80	26.42	9.56	6.75	26.20	10.55	5.71	2.41
Partners <i>SD</i>	1.61	6.89	8.31	1.86	6.60	8.16	1.84	7.46	9.27	1.76	7.55	9.19	1.83	6.86	9.38	1.80	7.05	8.74	0.95	1.10

SDe = sexual desire, SS = sexual satisfaction, SD = sexual distress, SGB = sexual growth beliefs, SDB = sexual destiny beliefs. B = baseline, 32 = 32 weeks pregnancy, 3 = 3-months postpartum, 6 = 6-months postpartum, 9 = 9-months postpartum, 12 = 12-months postpartum. Bolded correlations are the correlations between the partners. Mothers' correlations are above the diagonal. Partners' correlations are below the diagonal. * $p < .05$. ** $p < .01$.

Table 2.6.3. Unconditional Dyadic Latent Growth Curve Models of Sexual Well-Being Outcomes

	Pregnancy Slope		Intercept (3M)		Postpartum Slope	
	Mean (LL, UL)	Variance (LL, UL)	Mean (LL, UL)	Variance (LL, UL)	Mean (LL, UL)	Variance (LL, UL)
Sexual Desire						
Mothers	-.14*** (-0.17, -0.12)	.03*** (0.02, 0.04)	4.55*** (4.34, 4.76)	2.29*** (1.71, 2.86)	.09*** (0.06, 0.12)	.02*** (0.10, 0.03)
Partners	-.02 (-0.04, 0.01)	.03*** (0.02, 0.04)	6.77*** (6.56, 6.98)	2.56*** (2.01, 3.11)	-.00 (-0.02, 0.02)	.01* (0.00, 0.02)
Sexual Satisfaction						
Mothers	-.30*** (-0.39, -0.21)	.18* (0.04, 0.33)	23.90*** (23.41, 24.65)	25.95*** (18.45, 33.45)	.26*** (0.17, 0.35)	.15 (0.01, 0.29)
Partners	-.34*** (-0.45, -0.23)	.28** (0.11, 0.45)	24.40*** (23.55, 25.25)	36.61*** (27.56, 45.65)	.20*** (0.11, 0.29)	.10 (-0.03, 0.22)
Sexual Distress						
Mothers	.44*** (0.30, 0.57)	.31 (0.00, 0.62)	16.62*** (15.43, 17.82)	71.46*** (53.04, 89.88)	-.20* (-0.34, -0.07)	.38* (0.10, 0.66)
Partners	.13 (0.01, 0.24)	.44*** (0.29, 0.58)	10.60*** (9.55, 11.65)	59.00*** (47.87, 70.13)	-.01 (-0.11, 0.09)	n/a

Note. * $p < .05$. ** $p < .01$. *** $p < .001$. LL, UL = lower limit and upper limit of the 95% confidence interval.

Table 2.6.4. Unconditional Dyadic Latent Growth Curve Model Standardized Coefficients for APIM relationships of All Sexual Well-Being Outcomes

	Mothers' Pregnancy Slope (LL, UL)	Mothers' Intercept (LL, UL)	Mothers' Postpartum Slope (LL, UL)	Partners' Pregnancy Slope (LL, UL)	Partners' Intercept (LL, UL)	Partners' Postpartum Slope (LL, UL)
Sexual Desire						
Mothers' Pregnancy Slope	-	0.23 (0.03, 0.43)	-.17 (-0.44, 0.10)	-.06 (-0.34, 0.23)	.14 (-0.04, 0.33)	-.05 (-0.38, 0.27)
Mothers' Intercept		-	-.21 (-0.44, 0.02)	-.04 (-0.24, 0.17)	.05 (-0.12, 0.21)	-.14 (-0.43, 0.15)
Mothers' Postpartum Slope			-	.10 (-0.17, 0.37)	-.03 (-0.24, 0.18)	.57* (0.16, 0.99)
Partners' Pregnancy Slope				-	.53*** (0.40, 0.66)	-.39* (-0.65, -0.13)
Partners' Intercept					-	-.35** (-0.56, -0.15)
Partner's Postpartum Slope						-
Sexual Distress						
Mothers' Pregnancy Slope	-	.23 (-0.08, 0.53)	-.29 (-0.78, 0.19)	.46 (0.04, 0.89)	-.04 (-0.31, 0.23)	n/a
Mothers' Intercept		-	.10 (-0.26, 0.46)	.08 (-0.11, 0.27)	.26** (0.11, 0.41)	n/a
Mothers' Postpartum Slope			-	.06 (-0.24, 0.37)	.13 (-0.11, 0.37)	n/a
Partners' Pregnancy Slope				-	.38*** (0.24, 0.52)	n/a
Partners' Intercept					-	n/a
Partner's Postpartum Slope						-

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

n/a = Not applicable for partners' postpartum slope for sexual distress due to residual variance being fixed to zero. APIM = Actor-Partner Interdependence Modelling. APIM relationships for sexual satisfaction are not presented as these models were run separately to address issues with model fit. LL, UL = lower limit and upper limit of the 95% confidence interval.

Table 2.6.5. Conditional Dyadic Latent Growth Curves with Sexual Growth and Destiny Beliefs on all Sexual Outcomes

	Mothers' Intercept (<i>LL, UL</i>)	Mothers' Postpartum Slope (<i>LL, UL</i>)	Partners' Intercept (<i>LL, UL</i>)	Partners' Postpartum Slope (<i>LL, UL</i>)
Sexual Desire				
Mothers' Sexual Growth Beliefs	-.12 (-0.37, 0.14)	.03 (-0.06, 0.00)	-.16 (-0.41, 0.08)	-.00 (-0.03, 0.03)
Mothers' Sexual Destiny Beliefs	.01 (-0.18, 0.21)	-.00 (-0.03, 0.02)	-.00 (-0.29, 0.09)	-.02 (-0.04, 0.00)
Partners' Sexual Growth Beliefs	-.32*(-0.54, -0.10)	.02 (-0.01, 0.05)	.02 (-0.21, 0.21)	.01 (-0.02, 0.03)
Partners' Sexual Destiny Beliefs	.32**(0.13, 0.51)	-.02 (-0.05, 0.00)	.22*(0.04, 0.40)	.00 (-0.02, 0.02)
Sexual Satisfaction				
Mothers' Sexual Growth Beliefs	-.24 (-1.12, 0.79)	.01 (-0.12, 0.13)	-.51 (-1.49, 0.46)	-.07 (-0.18, 0.06)
Mothers' Sexual Destiny Beliefs	-1.16**(-1.90, -0.43)	.01 (-0.09, 0.10)	-.19 (-0.94, 0.57)	-.09 (-0.19, 0.00)
Partners' Sexual Growth Beliefs	-.17 (-1.00, 0.66)	-.02 (-0.12, 0.09)	.04 (-0.81, 0.88)	.05 (-0.06, 0.15)
Partners' Sexual Destiny Beliefs	.05 (-0.67, 0.78)	-.02 (-0.11, 0.07)	-.36 (-1.10, 0.37)	.02 (-0.07, 0.11)
Sexual Distress				
Mothers' Sexual Growth Beliefs	1.27 (-0.23, 2.77)	.06 (-0.12, 0.23)	.51 (-0.66, 1.68)	n/a
Mothers' Sexual Destiny Beliefs	2.15**(1.01, 3.30)	.08 (-0.05, 0.22)	.62 (-0.28, 1.52)	n/a
Partners' Sexual Growth Beliefs	.82 (-0.50, 2.14)	-.00 (-0.15, 0.15)	-.13 (-1.13, 0.87)	n/a
Partners' Sexual Destiny Beliefs	-.84 (-1.99, 0.32)	.05 (-0.09, 0.18)	.43 (-0.05, 1.30)	n/a

Note. * $p < .05$. ** $p < .01$. *** $p < .001$. n/a = Not applicable for partners' postpartum slope for sexual distress due to residual variance being fixed to zero. LL, UL = lower limit and upper limit of the 95% confidence interval.

2.7 Figures

Figure 2.7.1. Trajectories of sexual desire mid-pregnancy to 12-months postpartum for mothers and partners.

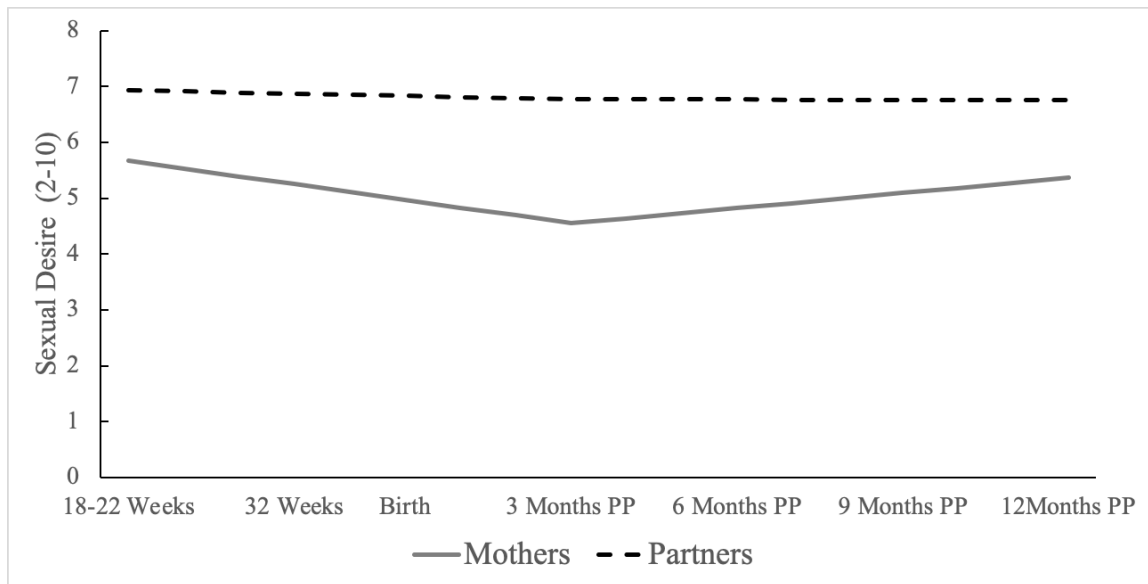


Figure 2.7.2. Trajectories of sexual satisfaction mid-pregnancy to 12-months postpartum for mothers and partners.

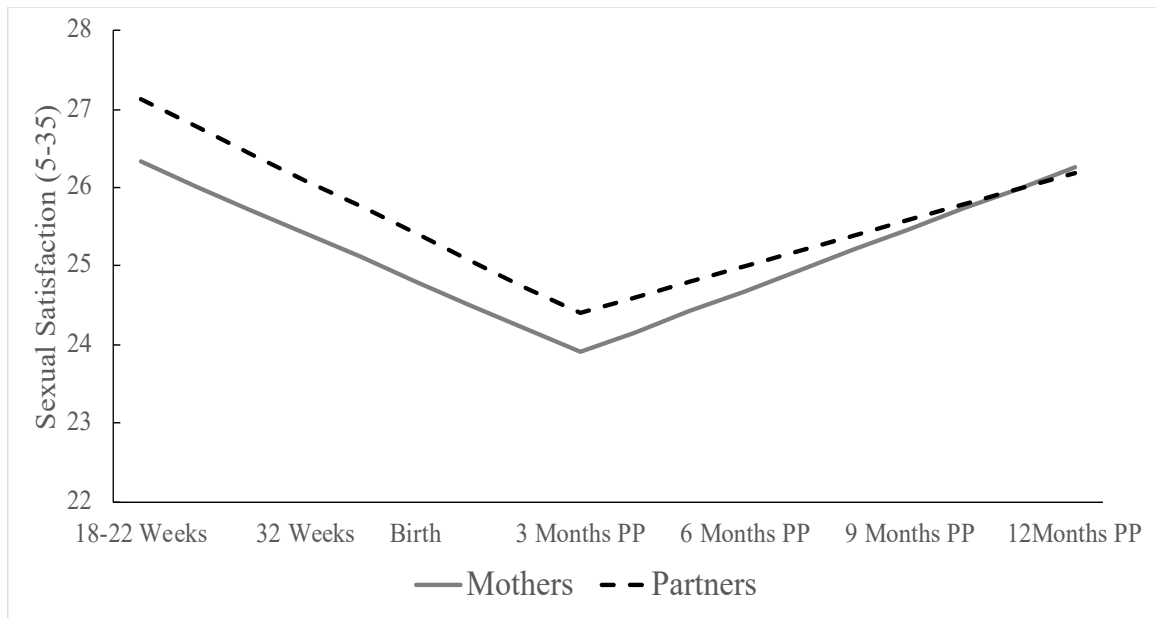
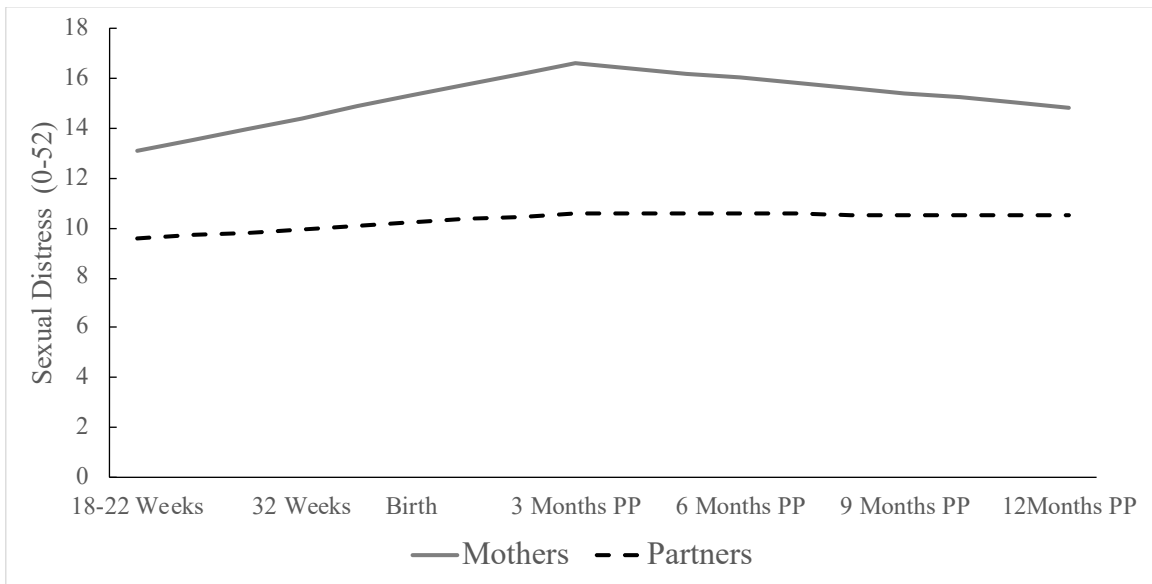


Figure 2.7.3. Trajectories of sexual distress mid-pregnancy to 12-months postpartum for mothers and partners.



2.8 Acknowledgements

This work was supported by Doctoral awards through the Social Sciences and Humanities Research Council (SSHRC), Research Nova Scotia, and Maritime SPOR Support Unit awarded to the first author and by an Insight Grant from SSHRC (FRN: 435–2017-0534) awarded to the last author. The authors declare no conflicts of interest. The preregistered hypotheses and analysis plan, as well as all data and syntax, can be found on the Open Science Framework at the following link:
https://osf.io/zb8my/?view_only=ae6d26fb8dc142d2908e358b37d788ef.

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2.10 Transition to Study 2

2.10.1. Overview of Study 1: Findings and Implications

Study 1 used a dyadic and longitudinal design to test average trajectories of three facets of couples' sexual well-being—sexual desire, satisfaction, and distress—and assess whether sexual growth and destiny beliefs predicted these trajectories across the postpartum period. I found that on average, mothers and partners demonstrated decreases in sexual satisfaction during pregnancy and in the early postpartum period, with a return to levels of sexual satisfaction similar to mid-pregnancy by 12-months postpartum. Additionally, mothers demonstrated significant increases in their sexual desire and decreases in sexual distress from 3 to 12 months postpartum, whereas these facets of partners' sexual well-being remained stable. The primary objective of Study 1 was to examine sexual growth and destiny beliefs as predictors of these average trajectories. My results indicated that expectant mothers who reported stronger sexual destiny beliefs in pregnancy, reported higher sexual distress and lower sexual satisfaction at 3-months postpartum. Unexpectedly, two findings were contrary to my hypotheses. First, when partners reported stronger sexual destiny beliefs in pregnancy, both they and new mothers reported greater sexual desire at 3-months postpartum. Second, I found no evidence that sexual growth and destiny beliefs predicted change in couples' sexual well-being beyond 3-months postpartum.

My results offer important insights into the function of sexual growth and destiny beliefs during a real-life stressor, including how they may: 1) be relevant factors addressed in pregnancy that could promote couples' sexual well-being in the early postpartum period and 2) the equivocal nature of sexual growth beliefs as a strength and

sexual destiny beliefs as a vulnerability, as originally posited within the VSA model. Although some of my preregistered hypotheses were not supported, the results from this study provided some support for the proposition that these beliefs operate through the first route within the VSA model (i.e., direct associations between enduring traits and well-being). It is possible that these beliefs should be tested closer in time to when new parents' resume sexual activity in the postpartum period as this is when couples may experience the most sexual challenges as they navigate new roles, responsibilities, and body changes. Moreover, it is possible that these beliefs operate on behaviour more directly, as noted in the second route of the VSA model and tested in Study 2.

2.10.2. Planning for Study 2: Challenges and Changes

My original plan for Study 2 of my dissertation was to replicate the approach used in Study 1 to identify the effects of sexual growth and destiny beliefs on sexual well-being in another sample of couples experiencing novel sexual challenges: those seeking MAR. Using dyadic latent growth curve models (DLGCM) again, I planned to test average trajectories of sexual well-being and sexual growth and destiny beliefs as predictors of these trajectories over a one-year period as couples considered or received MAR. To address some of the limitations from Study 1, I assessed sexual growth and destiny beliefs at each study time-point (i.e., baseline, 6-months, and 12-months) to increase the frequency of measurement. In doing so, I anticipated having more flexibility in detecting timeframes where couples' beliefs would be most salient, as well as having the option to explore stability and change in the sexual outcomes and sexual growth and destiny beliefs. Moreover, I aimed to recruit a large sample of couples who all required MAR and were in the early phases of seeking out or initiating treatment. My eligibility

criteria extended prior research in this area by facilitating the recruitment of couples from diverse backgrounds, including those experiencing medical infertility and gender/sex diverse couples that require MAR to facilitate conception. Despite these adaptations, I was cognizant that my pre-registered hypotheses in Study 1 related to sexual growth and destiny beliefs predicting change over time in sexual well-being outcomes were not supported. However, for the sake of transparency in this dissertation, I initially planned to proceed with the same hypotheses and statistical approach as in Study 1.

While awaiting completion of data collection for Study 2, I revisited my analytic strategy to begin developing syntax. As I moved through this process, I learned that there were new considerations to account for with this sample of couples, including whether and how to distinguish members of the dyads, as well as the conceptualization of the intercepts and slopes for each sexual well-being outcome over the one-year period. Eventually, it became clear to me that using the same analytical approach as in Study 1 would not be theoretically and statistically appropriate. Most notably, dyadic latent growth curves strongly suggest that the participants in a sample start at the same theoretically relevant time (e.g., at the same time in pregnancy, start of a relationship) to estimate a consistent trajectory over time (Mehta & West, 2000). Additionally, the time-frame of assessments should be at theoretically relevant intervals, in which you would anticipate mean-level changes to occur over time (Aydin et al., 2014). Since the couples in my MAR sample were recruited at varying stages of the treatment process (i.e., starting treatment within the last 6-months, seeking treatment), we did not have the same starting point across couples from which we could estimate a consistent trajectory for each sexual well-being outcome over the one-year period. Although all couples in the

sample required MAR, there was variability in whether and when they proceeded with treatment, potentially limiting the applicability of 6-month sampling intervals across couples. Based on the theoretical and statistically underpinnings of DLGCM, I could not conduct these analyses. Instead, I decided to revise my research question and hypotheses, which would inform my selection of a more appropriate analytical approach.

2.10.3. Adaptations for Study 2: A New Path Forward

As described in Chapter 1, growth and destiny beliefs have demonstrated stability over time, but also the capacity to shift in response to external situations and goals (e.g., Leith et al., 2014; Plaks et al., 2005). In the context of MAR, and within my diverse sample of couples, it was possible that at any of the survey time-points couples might no longer be accessing treatment, be actively deciding whether to pursue treatment, or be currently undergoing treatment. In any of these instances, they may be encountering more or less stressors that would, theoretically, contribute to either stability or change in their sexual growth and destiny beliefs. Based on these considerations, I decided to examine whether sexual growth and destiny beliefs can shift over the one-year period, and if so, do they correspond to within- and between-person changes in facets of couples' sexual well-being. For example, at time-points when individuals and/or their partners endorse greater sexual growth beliefs compared to their own average, do they and their partners also tend to report greater sexual satisfaction relative to their average (i.e., within-person effects)? Additionally, for individuals across time-points who endorse greater sexual growth beliefs on average, do they and their partners also tend to have high sexual satisfaction (i.e., between-subjects' effects)? To test this research question, I sought an approach that would best handle my dyadic and longitudinal data and assess

corresponding changes in sexual growth and destiny beliefs and sexual well-being outcomes between members of a couple (i.e., within-subjects) and across couples in the sample (i.e., between-subjects). Through research and consultation, it became clear that random intercept cross-lagged panel models (RI-CLPM) would be the right fit for my research question and data in that these recently developed models extended beyond traditional cross-lagged panel models (CLPM) by parceling out within- and between-person effects in longitudinal data (Mulder & Hamaker, 2021). The novelty of RI-CLPM's is evidenced by the recent, albeit still limited, application of this approach, especially with dyadic data (e.g., Basili et al., 2021; Williams & Parra, 2019).

I decided to move forward with conducting these analyses (with a special thanks to David Allsop and Sean Mackinnon for their invaluable efforts in helping me understand these complex models!). In using the RI-CLPMs, I tested the associations at the between-person (i.e., averaged across time points/variability between-couples) and within-person (i.e., co-occurring changes over time/variability within-couples) levels. Based on theory and prior research, I hypothesized that at the between-person level, overall (averaged across all time-points), individuals who endorsed (a) higher levels of sexual growth beliefs and (b) lower levels of sexual destiny beliefs, would report higher sexual satisfaction and desire, and lower distress. At the within-person level, I hypothesized that individuals who endorsed (a) higher than average sexual growth beliefs and (b) lower than average sexual destiny beliefs, at one time-point relative to their 12-month average would report increases in sexual satisfaction and desire and decreases in distress at the next time-point relative to their 12-month average. As presented in the figures in Appendix B, the patterns of results are consistent with Study 1, whereby a

significant proportion of my hypotheses were not supported. Particularly, there were no stable cross-lagged effects across beliefs and sexual well-being outcomes. Considering the limited support for several of my preregistered hypotheses in Study 1 and the a priori hypotheses for Study 2, it became clear that sexual growth and destiny beliefs may not be the most robust strength and vulnerability predictors of sexual well-being as per the first route (i.e., beliefs relate directly to outcomes) of the VSA model. Based on this information, I decided to consider whether sexual growth and destiny beliefs would predict another theoretical and empirically relevant outcome rooted within the second route of the VSA model—that is that these beliefs may be associated with relationship coping behaviours.

As described in Chapter 1, the extant literature suggests that growth and destiny-oriented beliefs have been linked to individual's coping strategies during hypothetical or recalled stressors (Bohns et al., 2015; Knee, 1998; Sutherland & Rehman, 2018). I decided to explore the second route within the VSA model and examine, for the first time, whether sexual growth and destiny beliefs could still be conceptualized as a strength and vulnerability that predict couples' coping strategies as they sought MAR. Given the evidence of change in implicit theories and coping (Johnson et al., 2016; Leith et al., 2014), I was interested in understanding if changes in sexual growth and destiny beliefs corresponded with changes in two facets of couples general dyadic coping: positive and negative dyadic coping, over a one-year period. Thus, the objective of Study 2 was to enhance knowledge as to whether couples' sexual growth and destiny beliefs are related to more or less effective dyadic coping for couples as they navigate novel stressors to their relationship and sexuality during another pathway to parenthood: MAR.

**CHAPTER 3: SEXUAL GROWTH AND DESTINY BELIEFS: ASSOCIATIONS
WITH DYADIC COPING AMONG COUPLES SEEKING MEDICALLY
ASSISTED REPRODUCTION ACROSS ONE YEAR**

The manuscript prepared for this study is presented below. Readers are advised that Meghan Rossi, under the supervision of Dr. Natalie Rosen, was responsible for developing the research questions and hypotheses, recruiting study participants, developing the online tools, collecting data (including screening for eligibility, describing the study protocol, obtaining consent, and conducting participant retention protocols for longitudinal surveys), preparing the datasets for analyses, learning and conducting data analyses, and interpreting the study findings. Meghan wrote the initial draft of the manuscript and received and incorporated feedback from her co- authors. The manuscript is under review at Health Psychology. The full reference for this manuscript is:

Rossi, M. A., Péloquin, K., Allsop, D., El Amiri, S., Bouzayen, R., Brassard, A., Bergeron, S., & Rosen, N. O. (*Under Review*). Sexual growth and destiny beliefs: Associations with dyadic coping among couples seeking medically assisted reproduction across one year.

3.1. Abstract

Objective: Medically assisted reproduction is a vulnerable time for couples' sexual health. Believing that sexual challenges can be worked through (i.e., sexual growth beliefs) or that these challenges indicate incompatibility (i.e., sexual destiny beliefs) may relate to the strategies couples use to cope with the physical and psychological stressors of medically assisted reproduction. The current study aimed to examine the longitudinal between- and within-person associations between sexual growth and destiny beliefs and positive and negative facets of dyadic coping. **Methods:** Couples ($N = 219$) seeking medically assisted reproduction completed online measures of sexual growth and destiny beliefs and positive and negative dyadic coping at baseline, 6- and 12-months. **Results:** Random intercept cross-lagged panel models demonstrated that at the within-person level, reporting higher sexual growth beliefs at baseline, relative to their average across time-points, was associated with lower negative dyadic coping at 6-months. Higher negative dyadic coping at 6-months, relative to their average, was linked to lower sexual growth beliefs at 12-months. When individuals reported higher sexual destiny beliefs at 6-months, relative to their average, they and their partners reported higher negative dyadic coping at 12-months. At the between-person level, higher overall levels of sexual destiny beliefs were related to higher overall levels of negative dyadic coping. No associations with positive dyadic coping were identified. **Conclusions:** Lower sexual growth and higher sexual destiny beliefs may promote couples' engagement in less adaptive coping behaviors as they seek medically assisted reproduction. Couples may benefit from reducing unhelpful sexual beliefs and negative dyadic coping.

Keywords: Medically assisted reproduction, Implicit sexual beliefs, Dyadic coping, Longitudinal, Couples

3.2. Introduction

For many couples, medically assisted reproduction (MAR; i.e., medical procedures that facilitate a pregnancy) is a necessary step in their journey of starting or growing their family (Passet-Wittig & Greil, 2021). Individuals who require MAR face numerous physical and psychological stressors; they report lower quality of life (Chachamovich et al., 2010), symptoms of anxiety and depression (Fallahzadeh et al., 2019), and significant relationship distress (Borneskog et al., 2012; Luk & Loke, 2019). Indeed, the journey through MAR is associated with challenges to various facets of couples' health and well-being, including to their sexual health. Mixed-sex/gender couples experience pressures to perform during peak ovulatory periods as sex may be motivated primarily by the need for procreation, which is in turn associated with poorer sexual functioning (e.g., Luk & Loke, 2019; Purcell-Levesque et al., 2018; Smith et al., 2015). Same-sex/gender couples also report increased stress related to MAR that interferes with their sexual functioning (Goldberg et al., 2009).

Given the vast array of challenges these couples are navigating, the use of *dyadic coping*—how partners manage stressors and solve problems together—may be a key tool in mitigating declines in health and well-being. Despite research highlighting the association between couples' dyadic coping and their well-being during MAR (Chaves et al., 2019; Molgora et al., 2019), there have been no studies, to our knowledge, that have examined factors that predict dyadic coping as couples seek MAR. A consequence of MAR that may exacerbate relationship distress and require effective dyadic coping, is a significant decline in sexual functioning (e.g., desire, arousal, orgasm, and pain; Purcell-Levesque et al., 2018). Satisfying sexual relationships play a central role in couples'

overall health, even beyond other established health behaviors (e.g., smoking; Diamond & Huebner, 2012; Holt-Lunstad et al., 2010). Yet, up to 68% of women and 29% of men experience sexual problems during MAR (e.g., Purcell-Levesque et al., 2018).

Underlying beliefs about how to manage common and novel sexual concerns may have implications for the kinds of coping behaviors couples implement. Although MAR is a long-term process that involves both members of a couple, prior research has rarely used longitudinal or dyadic designs that account for the fluctuations and inherently interpersonal nature of couples' beliefs and coping behaviors over time. As such, the current study examined the associations between couples' sexual growth (i.e., sexual challenges can be worked through) and destiny beliefs (i.e., sexual challenges are reflective of incompatibility) and dyadic coping across a one-year period of seeking MAR.

3.2.1 Medically Assisted Reproduction and Dyadic Coping

MAR is a demanding medical process that affects the health and well-being of both members of a couple and involves conjoint coping efforts. Yet, research related to coping behaviors during MAR has typically focused on those implemented by individuals independently. For example, using more positive forms of coping (e.g., seeking social support, problem-solving) is linked to lower infertility-related stress and depression, whereas negative forms of coping (e.g., avoidance) is associated with greater infertility-related stress and anxiety (e.g., Gourounti et al., 2012; Schmidt et al., 2005).

Dyadic coping may better capture the interdependence between partners' stress and each member's perceptions of their own and their partner's coping (Revenson et al., 2005). Dyadic coping is a multidimensional process that involves positive and negative

domains. Positive dyadic coping includes supportive (e.g., validation, expression of solidarity), common (e.g., joint emotion- and problem-focused stress management), and delegated (e.g., practical support) coping responses, whereas negative dyadic coping refers to offering support in an unwilling or hostile manner (e.g., distancing, disinterest). Mainly cross-sectional studies have shown that engagement in more positive and less negative dyadic coping during acute and chronic life stressors is associated with couples' greater psychological, relationship, and sexual well-being relative to those who endorse less positive and more negative dyadic coping (e.g., Ștefănuț et al., 2021; Tutelman et al., 2022).

Although several studies have examined the coping behaviors of couples who require MAR (e.g., Peterson et al., 2011; Schmidt et al., 2005), only two cross-sectional studies have utilized the dyadic coping questionnaire (Chaves et al., 2019; Molgora et al., 2019). In addition to being widely used and well-validated, the most significant strength to using this measure is its simultaneous assessment of an individual's perception of their own *and* their partner's dyadic coping (Bodenmann, 2008). In one study, researchers found that perceptions of more positive dyadic coping were related to an individual's better relationship adjustment during MAR, with mixed findings related to negative dyadic coping (Molgora et al., 2019). The other study found that more adaptive (more positive, less negative) dyadic coping was associated with lower infertility-related stress, and in turn, couples' greater relationship quality (Chaves et al., 2019). Individuals are motivated to assume their partner shares similar qualities as themselves and these perceptions are often stronger predictors of well-being than the partner's actual reported behaviour (e.g., Kenny & Acitelli, 2001; Tidwell et al., 2013). As such, combining an

individual's perception of their own and their partners' coping more fully encompasses the complex layers of dyadic interactions.

Few studies have examined the factors that promote or hinder dyadic coping (e.g., co-parenting conflict; Zemp et al., 2017). Since psychosocial factors are amenable to change (Gameiro et al., 2013) and are primary reasons for distress during MAR (Gameiro et al., 2012), identifying psychosocial predictors of dyadic coping may inform the development of targeted interventions that aim to promote couples' adjustment.

Considering the consequences of MAR to couples' sexual well-being and that sexual satisfaction is a key predictor of overall relationship quality (Joel et al., 2020), beliefs about how to manage sexual concerns may contribute to couples' coping behaviors.

3.2.2. Sexual Growth and Destiny Beliefs

The Vulnerability Stress-Adaptation model (VSA) is an empirically supported framework that intersects the fields of romantic relationships and health. The VSA model posits associations among pre-existing enduring traits (e.g., cognitions), behaviours, and relationship quality during periods of stress (Karney & Bradbury, 1995; McNulty et al., 2021; Schiltz & Van Hecke, 2021). These vulnerabilities are thought to influence the extent to which individuals employ more or less adaptive coping for managing stressors – such as MAR – to their relationship. Given the interdependence between romantic partners, an individual's own vulnerabilities may also prompt their partner's coping behaviors. A vulnerability that may relate to couples' dyadic coping are their underlying beliefs as to whether certain aspects of their lives are changeable (i.e., growth orientation) or fixed (i.e., destiny orientation; Dweck, 2012). These beliefs have been shown to shape responses to life stressors (e.g., Dweck, 2012) and have been extended to the domain of

sexuality. Sexual growth beliefs reflect the belief that one's sex life can be maintained or improved with effort and sexual destiny beliefs refer to the belief that sexual difficulties are indicative of whether couples are "meant to be" and that there should be natural compatibility between partners (e.g., a soulmate; Maxwell et al., 2017). These beliefs are conceptualized as two dimensions whereby individuals can endorse both sexual growth and destiny beliefs (Maxwell et al., 2017). Cross-sectional and longitudinal studies with couples navigating acute and ongoing stressors to their sex lives, have found that those who endorse greater sexual growth and lower sexual destiny beliefs generally report higher relationship and sexual well-being relative to those who endorse lower sexual growth and greater sexual destiny beliefs (Maxwell et al., 2017; Raposo et al., 2021; Rossi et al., 2022).

Although no prior studies have examined how sexual growth and destiny beliefs are linked to dyadic coping, including those seeking or receiving MAR, evidence from the broader literature underscores the importance of these beliefs for coping in other stressful contexts. In community samples of individuals navigating real or hypothetical relationship stressors, greater growth-oriented beliefs were related to more positive coping (e.g., planning, support seeking), whereas greater destiny-oriented beliefs have been linked to more negative coping (e.g., disengagement, denial; Dovala et al., 2018; Knee, 1998). Only two studies have examined the association between sexual beliefs (e.g., growth and destiny beliefs about sexual attraction and desire; Bohns et al., 2015; Sutherland & Rehman, 2018) and coping behaviors. In the first study, among individuals who expected to experience an issue with sexual desire, those who were primed with destiny beliefs reported significantly greater negative coping behaviors (e.g., avoidance,

neglect) than those primed with growth beliefs (Sutherland & Rehman, 2018). In the second study, Bohns et al. (2015) presented participants with a scenario involving a hypothetical sexual problem. They found that those who endorsed greater destiny beliefs related to attraction were more likely to report negative coping compared to those who reported greater growth beliefs. However, whether these associations extend to dyadic coping remains unknown. Additionally, a hypothetical sexual challenge may not generalize or promote the same magnitude of effects as couples currently navigating an actual and ongoing stressor to their sex lives.

In addition to evidence that the sexual well-being of couples seeking MAR is compromised, qualitative research suggests that growth and destiny beliefs may be relevant for these couples. During their experience of fertility difficulties, couples describe growth- and destiny-oriented thoughts such as “I’ll do whatever it takes to fix it” and “a pregnancy was not meant to be” (Malcolm & Cumming, 2004; Steuber & Haunani Solomon, 2008). As such, in accordance with the VSA model and prior research, we expected that individuals who believe that sexual challenges can be worked through (i.e., sexual growth beliefs) would engage in more positive and less negative dyadic coping. In contrast, believing that sexual challenges are indicative of incompatibility (i.e., sexual destiny beliefs) may limit the effort extended by couples to engage in positive dyadic coping and prompt their use of more negative dyadic coping. Additionally, the burdens of MAR are likely to fluctuate over time within couples depending on their unique circumstances, potentially prompting changes in couples’ beliefs for how to manage sexual challenges and their coping behaviors. Indeed, there is evidence of change in both growth and destiny beliefs and dyadic coping over time (Canevello & Crocker, 2011;

Johnson et al., 2016). Altogether, examining whether changes in sexual growth and destiny beliefs correspond with changes in dyadic coping over time is a crucial step for understanding how we can promote effective dyadic coping during a period of vulnerability for couples' well-being.

3.2.3. The Current Study

The present study examined dyadic and longitudinal associations between sexual growth and destiny beliefs and positive and negative facets of dyadic coping among couples seeking MAR over 12-months. We used random intercept cross-lagged panel models (RI-CLPM) within a structural equation framework to test associations at the between-person (i.e., averaged across time points/variability between-couples) and within-person (i.e., co-occurring changes over time/variability within-couples) levels. This statistical approach extends the traditional cross-lagged panel models (CLPM) by disaggregating the within- and between-person variance, allowing us to better capture the temporal link between sexual growth and destiny beliefs and dyadic coping. At the between-person level, we hypothesized that, overall (averaged across all time-points), individuals who endorsed (a) higher levels of sexual growth beliefs and (b) lower levels of sexual destiny beliefs, would report higher overall positive and lower negative dyadic coping. At the within-person level, we hypothesized that individuals who endorsed (a) higher than average sexual growth beliefs and (b) lower than average sexual destiny beliefs at one time-point relative to their 12-month average would report increases in positive and decreases in negative dyadic coping at the next time-point relative to their 12-month average. These directional hypotheses are based on prior theory and research (Bohns et al., 2015; Karney & Bradbury, 1995; Maxwell et al., 2017; Sutherland &

Rehman, 2018), however, our analyses tested both directions of the associations in order to assess directionality.

Due to conflicting evidence for how an individual's sexual beliefs are linked to their partner's outcomes (Maxwell et al., 2017; Raposo et al., 2021; Rossi et al., 2022), we examined partner effects in an exploratory manner. Including both partners allowed us to account for the interdependence within- and between-couples, which is important given that both partners are coping with novel stressors during MAR.

3.3. Methods

3.3.1. Participants

Couples requiring MAR were recruited as part of a larger longitudinal study examining factors related to treatment burden and well-being. There is one study published, and another under review, using a subset of the sample from the present study (El Amiri et al., 2021) These studies focused on dyadic coping, relationship, and medical factors as predictors of sexual well-being for couples seeking MAR who have a medical diagnosis of infertility and included baseline data only. Neither study used sexual growth and destiny beliefs or examined predictors of dyadic coping. To participate, couples must have had their first visit to an assisted reproductive therapies (ART) clinic within the last 6-months and be seeking MAR. If they had accessed a clinic in the past, then it must have been at least one year since their last appointment. Both members of the couple were also required to be: 1) 18 years of age or older, 2) fluent in English or French, and 3) living in North America. Couples were excluded if one or both members self-reported experiencing unmanaged symptoms of a mental health disorder (e.g., psychosis). With research demonstrating that sex and gender diverse couples experience

similar challenges to their well-being during MAR (Goldberg et al., 2009), we aimed to be inclusive of all couples who require ART. The present sample consisted of 219 couples who were primarily married, common-law, or engaged (i.e., 99%). The flow of recruitment can be found in Supplemental Figure C.1 on the Open Science Framework (OSF): https://osf.io/umwtf/?view_only=3a0c361cc07e430c99d6105b5764bb1d. Table 3.8.1. presents sociodemographic and treatment information for the sample.

3.3.2. Measures

Participants' sociodemographic (e.g., age, gender, education) and medical (e.g., infertility diagnosis, treatment status) information was collected in an investigator-made survey.

3.3.2.1. *Sexual Growth and Destiny Beliefs*

Sexual growth and destiny beliefs were assessed using the 10 item Implicit Theories of Sexuality Scale - Short Form (Maxwell et al., 2017). Five items assess sexual destiny beliefs, such as “struggles in a sexual relationship are a sure sign that the relationship will fail,” and five items assess sexual growth beliefs, including “successful sexual relationships require regular maintenance.” All items are rated on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) with total scores on each subscale ranging from 5 to 35. Items from each subscale were averaged, with higher scores reflecting greater endorsement of each belief. The sexual growth ($\alpha = .73-.83$) and sexual destiny ($\alpha = .82-.86$) subscales demonstrated strong internal consistency at all time-points, similar to other samples of couples navigating stressors to their sex lives (Maxwell et al., 2017; Raposo et al., 2021; Rossi et al., 2022).

3.3.2.2. Dyadic Coping

To assess couples' dyadic coping, we administered the Dyadic Coping Inventory (DCI; Bodenmann, 2008). Considering the relative importance of partner perceptions (Kenny & Acitelli, 2001; Tidwell et al., 2013), this measure aims to encompass an individual's own and their perception of their partners' coping behaviours. We utilized subscales that capture an individual's perceptions of their own and their partner's negative and positive dyadic coping. The negative dyadic coping subscale was comprised of eight items that ascertain less adaptive coping strategies endorsed by oneself and what they perceived from their partner (e.g., "When I/my partner was stressed, I/they tended to withdraw"). The positive dyadic coping subscale was comprised of 19 items assessing the forms of dyadic coping that are considered adaptive, including delegated (e.g., "I/My partner took on things that I/my partner would normally do in order to help me/them out"), common (e.g., "We tried to cope with the problem together and searched for solutions"), and supportive (e.g., "I/My partner showed empathy and understanding to me/my partner"). All items are rated on a 5-point scale ranging from (1) "very rarely" to (5) "very often". In accordance with scoring procedures of the DCI and prior research (e.g., Van Schoors et al., 2019; Pankrath et al., 2018), items assessing an individual's own, and their perceptions of their partners' positive or negative dyadic coping, were summed to create a subscale score. Higher scores indicate higher negative and positive dyadic coping, respectively. This measure has been used in samples of couples navigating infertility or medically assisted reproduction (Chaves et al., 2019; Molgora et al., 2019). In the current study, the internal consistency of the negative ($\alpha = .78-.85$) and positive ($\alpha = .90-.91$) dyadic coping scales demonstrated strong reliability.

3.3.3. Procedure

Prior to participant recruitment, the research teams connected with four couples with lived experience of MAR to review all the study materials (e.g., recruitment advertisements, measures) to provide feedback. The community partners were compensated for their contributions and their feedback was integrated via revisions to our measures, advertisements, and medical questionnaire to capture the intricacies of MAR. Couples were recruited between November 2019 and November 2020 by two research teams at Dalhousie University and Université de Montreal. Recruitment was conducted in-person at an ART clinic Halifax, Nova Scotia and through online and community advertisements posted on websites across North America (e.g., Facebook), in local community centers and stores, ART clinics, and other health offices. For in-person recruitment at the Atlantic ART clinic, research staff reviewed medical records and identified potentially eligible participants prior to their initial appointment. Once identified, staff informed potential participants about the study upon check-in for their appointment. Due to the COVID-19 pandemic, in-person recruitment was suspended in March 2020. After that time, recruitment through the ART clinic continued via virtual appointments whereby clinic staff informed potential participants about the study and obtained consent for the research team to contact them via email. For both recruitment methods, a research assistant conducted an eligibility screening interview in person or via telephone with both members of the couple and enrolled eligible couples. Participants independently completed online surveys, sent via email, and hosted on Qualtrics at baseline, 6-, and 12-month follow-ups. Participant retention strategies, including emails, phone calls, and infographics were used to promote participation. Couples received up to

\$144 CDN (\$57 each) in their choice of an online gift card. All procedures were approved by each participating university's Research Ethics Boards.

3.4. Data Analysis

Descriptive statistics were computed using SPSS Version 27 and all other analyses were conducted with MPlus Version 8.6. All study data and syntax can be found at https://osf.io/umwtf/?view_only=3a0c361cc07e430c99d6105b5764bb1d. Little's MCAR test indicated that the data missing at baseline could be predicted by variables in the model ($\chi^2(665) = 808.46, p < .001$), whereas the missing data at 6-months ($\chi^2(552) = 601.72, p = .07$) and 12-months ($\chi^2(333) = 173.84, p > .05$) could not be predicted by variables in the model. Given the minimal missing data at baseline (i.e., less than 9% across measures), single imputation approaches for addressing missing data are still appropriate (Newman, 2003). We proceeded with two techniques to address these minimal data missing across time-points. For participants with less than 50% of missing data across the items for each measure, the mean of their responded items was imputed manually (Newman, 2003). This process was completed prior to calculating total scores. For longitudinal data where one or both members of a couple did not complete the survey (for reasons other than their relationship ending), their data were left as missing. Then, full information maximum likelihood estimator was used and relevant auxiliary variables (e.g., demographic information) were included to accurately estimate missing data in line with current recommendations (see Mazza et al., 2015).

To examine within- and between-person longitudinal associations between each sexual belief and positive and negative dyadic coping, we tested a dyadic random intercept cross-lagged panel model (RI-CLPM) following specifications outlined by

Mulder and Hamaker (2021)³. Analyses were guided by the Actor-Partner Interdependence Model (APIM) to account for the non-independence of the dyadic data (Kenny et al., 2006). Using the APIM allowed us to examine how an individual's sexual growth or destiny beliefs were linked to their own (i.e., actor effects) and their partners' (i.e., partner effects) perceptions of positive or negative dyadic coping. The RI-CLPM allowed us to test whether 1) higher overall (or lower overall) sexual growth and destiny beliefs—across the 12-month period—were related to higher overall (or lower overall) negative or positive dyadic coping among individuals and members of a couple across time-points (i.e., between-person), and 2) deviations from one's own average sexual growth and destiny beliefs at one time-point predicted an increase (or decrease) from their own or their partner's negative and positive dyadic coping at a later time-point (i.e., within-person).

The within-person effects in the RI-CLPM include cross-lagged and autoregressive paths as well as concurrent associations. Cross-lagged parameters reflect the extent to which increases or decreases in one's score is explained by deviations from their own or their partner's average score of another construct from the previous time point. For example, do increases in an individual's or partner's sexual growth beliefs at 6-months (relative to their 12-month average) relate to increases in their own or their partner's positive dyadic coping (relative to their 12-month average) at 12-months? The autoregressive parameters examine the extent to which within-person increases or decreases can be explained by deviations in one's own expected score from their own or

³ Given evidence of stability and change in growth and destiny beliefs within and outside the domain of sexuality (e.g., Maxwell et al., 2017; Leith et al., 2014), we first conducted a dyadic latent growth curve model to assess whether there was variability in the intercept and slopes of sexual growth and destiny beliefs. The results are presented in Appendix C.

their partner’s score at a previous assessment point for the same construct. In other words, do decreases in an individual’s or partner’s sexual destiny beliefs at baseline (relative to their 12-month average) relate to decreases in their own or their partner’s negative dyadic coping (relative to their 12-month average) at 6-months? (Mulder & Hamaker, 2021). In both cross-lagged and autoregressive parameters, the model controls for all previous deviations from within-person scores. Concurrent within-person associations—covariances and residual covariances—capture actor and partner associations among the study variables at a single time- point. Unlike a traditional CLPM, autoregressive and concurrent within-person associations are not usually large or statistically significant. These associations were also not germane to our hypotheses. Sexual growth and destiny beliefs and positive and negative dyadic coping were tested in separate models (i.e., a total of 4 models) due to model complexity and to increase statistical power.

With the diverse sample of same-and mixed-gender/sex couples at varying stages of MAR, there were no variables that consistently distinguished members within a couple across all dyads and time-points⁴. As such, dyads were treated as indistinguishable and random role assignment was used within each dyad (Kenny et al., 2006; Ledermann & Kenny, 2017; Mustanski et al., 2014). For the RI-CLPM, model paths were constrained to be equal for both members of the dyad, thus allowing each participant to contribute data as both an “actor” and a “partner” and maximizing use of the full sample (Olsen &

⁴ Our sample included couples at various points in their MAR journey such that some were actively receiving treatment or experienced a pregnancy; we retained all couples in our analyses. Independent sample *t*-tests assessed group differences in our study variables. Among couples who received or did not receive treatment during the study and those who became pregnant or did not become pregnant, there were no significant differences between groups for sexual growth and destiny beliefs, or positive and negative dyadic coping. The lack of group differences further supports treating couples as indistinguishable.

Kenny, 2006). Figure 3.9.1 depicts a graphical representation of our dyadic RI-CLPM. Paths which share a colour and arrow style are constrained to be equal between partners given dyads were treated as indistinguishable. While paths were constrained to be the same between partners, they were not constrained to be the same across time. Models met or exceeded appropriate fit criterion, as described next, and fit indices for all models are reported in the results: (1) a non-significant Chi-Square value, (2) the Confirmatory Fit Index (CFI) and Tucker-Lewis Index (TLI) are greater than .95, (3) the Root Mean Square Approximation of Error (RMSEA) is less than .06, with a 90% confidence interval that does not contain .08 or higher, and (4) the Standardized Root Mean Square Residual (SRMR) is less than .08 (Hooper, 2008).

3.5. Results

Figures 3.9.2 and 3.9.3. depict all between- and within-person effects for each negative dyadic coping RI-CLPM. Supplemental Figures C.2 and C.3 depict each positive dyadic coping RI-CLPM. As the autoregressive and concurrent associations do not pertain to our primary hypotheses, they are reported in Figures 3.9.2 and 3.9.3, Supplemental Figures C.2 and C.3, and text in Appendix C.

3.5.1. Negative Dyadic Coping

3.5.1.1. Model 1 - Sexual Growth Beliefs. The fully constrained model fit was adequate, $\chi^2(44) = 50.81, p = .22$; CFI = 0.99, TLI = 0.99; RMSEA = 0.03 [90% CI = 0.00 – 0.06]; SRMR = .10. There were no between-person associations between an individual's sexual growth beliefs and their own or their partner's negative dyadic coping. In support of our within-person level hypothesis, reporting higher than average sexual growth beliefs at baseline was associated with decreases in one's own negative

dyadic coping at 6-months ($B = -1.57, p < .05$). Moreover, reporting higher than average negative dyadic coping at 6-months was linked to decreases in one's own sexual growth beliefs at 12-months ($B = -0.03, p < .05$). There was no significant within-person association between an individual's sexual growth beliefs and their partner's negative dyadic coping.

3.5.1.2. Model 2 - Sexual Destiny Beliefs. The fully constrained model demonstrated excellent fit, $\chi^2(44) = 58.82, p = .07$; CFI = 0.99, TLI = 0.98; RMSEA = 0.04 [90%CI = 0.00 – 0.06]; SRMR = .05. In line with our between-person hypothesis, individuals with higher than average levels of sexual destiny beliefs across the 12-month period reported higher overall levels of negative dyadic coping ($B = 0.68, p < .05$). There was no significant association between an individual's sexual destiny beliefs and their partner's negative dyadic coping at the between-person level. We identified two cross-lagged effects that supported our within-person hypotheses. When individuals reported higher than average sexual destiny beliefs at 6-months, they ($B = 1.12, p < .05$) and their partners ($B = 0.99, p < .05$) reported increases in negative dyadic coping at 12-months.

3.5.2. Positive Dyadic Coping

3.5.2.1. Model 3 - Sexual Growth Beliefs. The fully constrained model fit was adequate, $\chi^2(44) = 54.15, p = .14$; CFI = 0.99, TLI = 0.99; RMSEA = 0.03 [90%CI = 0.00 – 0.06]; SRMR = .10. There were no significant between- or within-person associations amongst sexual growth beliefs and positive dyadic coping.

3.5.2.2. Model 4 - Sexual Destiny Beliefs.

The fully constrained model fit was adequate, $\chi^2(44) = 58.58, p = .07$; CFI = 0.99, TLI = 0.98; RMSEA = 0.04 [90%CI = 0.00 – 0.06]; SRMR = .08. As in Model 3, there

were no between- or within-person associations amongst sexual destiny beliefs and positive dyadic coping.

3.6. Discussion

In this longitudinal and dyadic study, couples' beliefs about how to sustain their sexual health—sexual growth and destiny beliefs—corresponded to changes in their own and their partner's negative dyadic coping over a one-year period of receiving or considering MAR. Specifically, greater sexual growth beliefs were related to an individual's lower negative dyadic coping over a 6-month period, and likewise, greater negative dyadic coping was associated with lower sexual growth beliefs 6-months later. At the between and within-person level, greater sexual destiny beliefs was related to their own and their partner's greater negative dyadic coping, on average over time. Our results are in line with and build upon the VSA model and prior research by demonstrating sexual growth and destiny beliefs to be a cognitive vulnerability that predicted negative dyadic coping over time in the context of a major life stressor.

3.6.1. Sexual Growth and Destiny Beliefs & Negative Dyadic Coping

Our findings replicate and extend prior cross-sectional research by demonstrating a temporal within-person relationship between sexual growth beliefs and negative dyadic coping, such that reporting higher than average sexual growth beliefs at baseline was associated with decreases in an individual's own perceptions of negative dyadic coping 6-months later. Researchers have consistently demonstrated that growth-oriented beliefs are associated with less engagement in negative or avoidance-based individual coping behaviors (Bohns et al., 2015; Knee, 1998; Sutherland & Rehman, 2018). Growth oriented beliefs are related to the perception of challenges and threats as opportunities to

“work-it-out”. Indeed, researchers have demonstrated that more growth-oriented beliefs are associated with greater accommodation of a partner’s unhelpful behaviors and fewer thoughts of ending a relationship in the face of a challenge (Franiuk et al., 2004). Thus, when faced with common sexual challenges in MAR, endorsing greater sexual growth beliefs may prompt cognitions and behaviors that orient the person to engage in less negative dyadic coping.

Although not hypothesized, our analyses also found evidence of the reverse direction, whereby reporting higher than average negative dyadic coping at 6-months was linked to decreases in one’s own sexual growth beliefs at 12-months. Based on empirical and theoretical developments, the VSA model has been adapted to include associations amongst the factors. These adaptations support the novel reciprocal relationship between implicit theories about sexuality and negative dyadic coping that we identified (McNulty et al., 2021; Schiltz & Van Hecke, 2021). When couples use more negative dyadic coping, especially as they navigate stressors involved with seeking MAR, it may diminish feelings of intimacy and relationship quality (e.g., Ștefănuț et al., 2021) which in turn, could reduce their belief that sexual well-being can be improved with time and effort.

Individuals who – on average – report higher levels of sexual destiny beliefs across a one- year period also tended to also report higher than average overall levels of negative dyadic coping. In addition, among individuals reporting higher than average sexual destiny beliefs at 6-months, they and their partner reported increases in their average levels of negative dyadic coping at 12-months. Destiny beliefs within and outside the domain of sexuality have been theorized and shown to be associated with less effective individual coping behaviors (Dovala et al., 2018; Knee, 1998; Sutherland &

Rehman, 2018). We extend prior work by demonstrating that endorsing higher than usual sexual destiny beliefs and reporting higher sexual destiny beliefs over one year, is associated with how both members of a couple perceive their coping together. Believing that sexual challenges are an indicator of incompatibility may feel threatening to couples' relationship, which may further compound existing perceptions of threat to their relationship and identity that can arise from requiring MAR more broadly (Borneskog et al., 2012). These experiences of threat may generate intolerable emotions that motivate couples to rely on negative coping strategies more strongly (Knee, 1998). Still, some paths within our RI-CLPM models for negative dyadic coping were non-significant. At baseline, all couples were either still considering pursuing or in the early phases of MAR. It is possible that more effects of sexual growth and destiny beliefs on negative dyadic coping might emerge following the accumulation of MAR-related burdens (e.g., side effects of treatment procedures) over time.

3.6.2. Sexual Growth and Destiny Beliefs & Positive Dyadic Coping

In contrast to our predictions, we found no evidence of between- or within-person associations amongst sexual growth and destiny beliefs and positive dyadic coping. Much of the literature has demonstrated growth-oriented beliefs to be related to greater positive coping behaviors relative to destiny-oriented beliefs, however, two studies in the domain of sexuality demonstrated no significant associations between growth and destiny-oriented beliefs and positive coping (Bohns et al., 2015; Sutherland & Rehman, 2018). The couples in our sample endorsed relatively high levels of positive dyadic coping. It is possible that couples could not accrue any additional benefits for positive dyadic coping that could be offered by sexual growth beliefs. Regarding sexual destiny beliefs and

positive dyadic coping, prior work has shown that individuals who hold stronger destiny-oriented beliefs tend to perceive efforts to overcome challenges as futile, and consequently, prioritize negative coping strategies, such as avoidance (Knee, 1998).

Taken together, we found evidence supporting the associations between sexual growth and destiny beliefs and negative dyadic coping. However, several of our longitudinal and dyadic hypotheses, including those related to positive dyadic coping, were not supported. Future research should examine other predictors that could be relevant for couples seeking MAR, such as coping resources (Khalid & Dawood, 2020). Whether positive and negative dyadic coping function as mediators in the associations between sexual growth and destiny beliefs and other dyadic outcomes (e.g., sexual well-being; Maxwell et al., 2017; Raposo et al., 2021; Rossi et al., 2022) is also an important avenue for future work.

3.6.3. Strengths, Implications, and Limitations

An important strength of this study was the relatively large and inclusive sample. Our engagement of community partners with lived experience of medically assisted reproduction in study development and implementation is another significant strength of our study that continues to be underused in the field of sexual health. Their involvement improved the relevance of our research to those it has intended to benefit and enhanced the inclusiveness of our recruitment and data collection approaches. With theoretical models positing sexual growth and destiny beliefs to emerge during periods of sexual health difficulties, we extended past research by focusing on a time-frame where couples are actively experiencing physical and mental health stressors to their relationship and sex lives (Bohns et al., 2015; Sutherland & Rehman, 2018). Our study design and

analytical approach also expanded prior literature by assessing how change in sexual growth and destiny beliefs relate to couples' coping behavior over one-year. Specifically, the findings build upon the VSA model by providing support for our conceptualization of sexual growth beliefs as a strength and sexual destiny beliefs as a cognitive vulnerability factor that, in the context of MAR, limit and promote couples' engagement in negative dyadic coping, respectively (Karney & Bradbury, 1995). Thus, identifying and modifying sexual growth and destiny beliefs may be important for reducing partners' negative coping behaviors and could be integrated into existing interventions for couples who require MAR (Ying et al., 2016). Stability and variation in implicit theories have been evidenced throughout the literature, suggesting that these beliefs can dictate how a person generally responds to their environment, but also that beliefs can be adapted or become more salient in the face of new situations or information (Franiuk et al., 2004). By identifying between- and within-person effects of sexual destiny beliefs, we offer further evidence of these beliefs as both state and trait variables.

There are also notable limitations to the present research. Our study followed couples over 6-month increments, which may not have best captured changes as couples seek MAR. For example, the effects between couples' sexual growth and destiny beliefs and their positive or negative dyadic coping may only occur when sexual difficulties emerge during a specific treatment process (e.g., side-effects from hormonal stimulation, receiving test results, having sex "on the clock"; see Piva et al., 2014 for review). Tools for conducting a RI-CLPM power analysis have not been adapted to account for dyadic data (Mulder, n.d.). Given the lack of longitudinal investigations involving sexual growth and destiny beliefs, accurate estimates of the variances, covariances, and effect sizes of

our hypothesized associations were also not available to inform a power analysis. As such, we may have been limited in our statistical power, precluding our ability to detect all possible significant effects. Although we had a large sample of sex and gender diverse individuals (approximately 20%), which contributes to the generalizability of our results, our sample was still largely comprised of White, married, highly educated, cisgender, heterosexual individuals. MAR requires a considerable investment of time and financial resources. Recruiting couples seeking MAR does not capture the perspectives of all who require MAR.

3.6.4. Conclusions

As couples seek MAR they are faced with a multitude of stressors; our findings suggest that lower growth and higher sexual destiny beliefs make couples vulnerable to engaging in more negative coping. As the first investigation into the psychosocial predictors of couples' dyadic coping during MAR, our results extend prior theory and research by providing evidence of *sexual* growth and destiny beliefs as factors that underpin negative coping in couples, particularly in a novel population of couples seeking MAR. Taken together, the findings highlight the potential utility of psychosocial interventions aimed at identifying and modifying unhelpful thinking styles and negative dyadic coping (e.g., cognitive-behavioral therapy) among couples who require MAR.

3.7 References

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3.8. Tables

Table 3.8.1. Sample Characteristics from Baseline Survey ($N = 438$)

	M (range; <i>SD</i>)	<i>N</i> (%)
Age	33.36 (21-51)	-
Relationship Duration (years)^a	8.12 (1-20)	-
Gender Identity		
Woman		236 (53.88)
Man		195 (44.52)
Non-Binary, Gender Queer or Fluid		7 (1.60)
Sexual Orientation		
Heterosexual		360 (82.1)
Lesbian/Gay		34 (7.8)
Bisexual		17 (3.9)
Pansexual		10 (2.3)
Asexual		10 (2.3)
Queer, Bi-Curious		7 (1.6)
Race		
White		387 (88.4)
Multiracial		19 (4.3)
Asian		19 (4.3)
Black		8 (1.8)
Latino/Hispanic		3 (0.7)

Table 3.8.1. Sample Characteristics from Baseline Survey ($N = 438$)

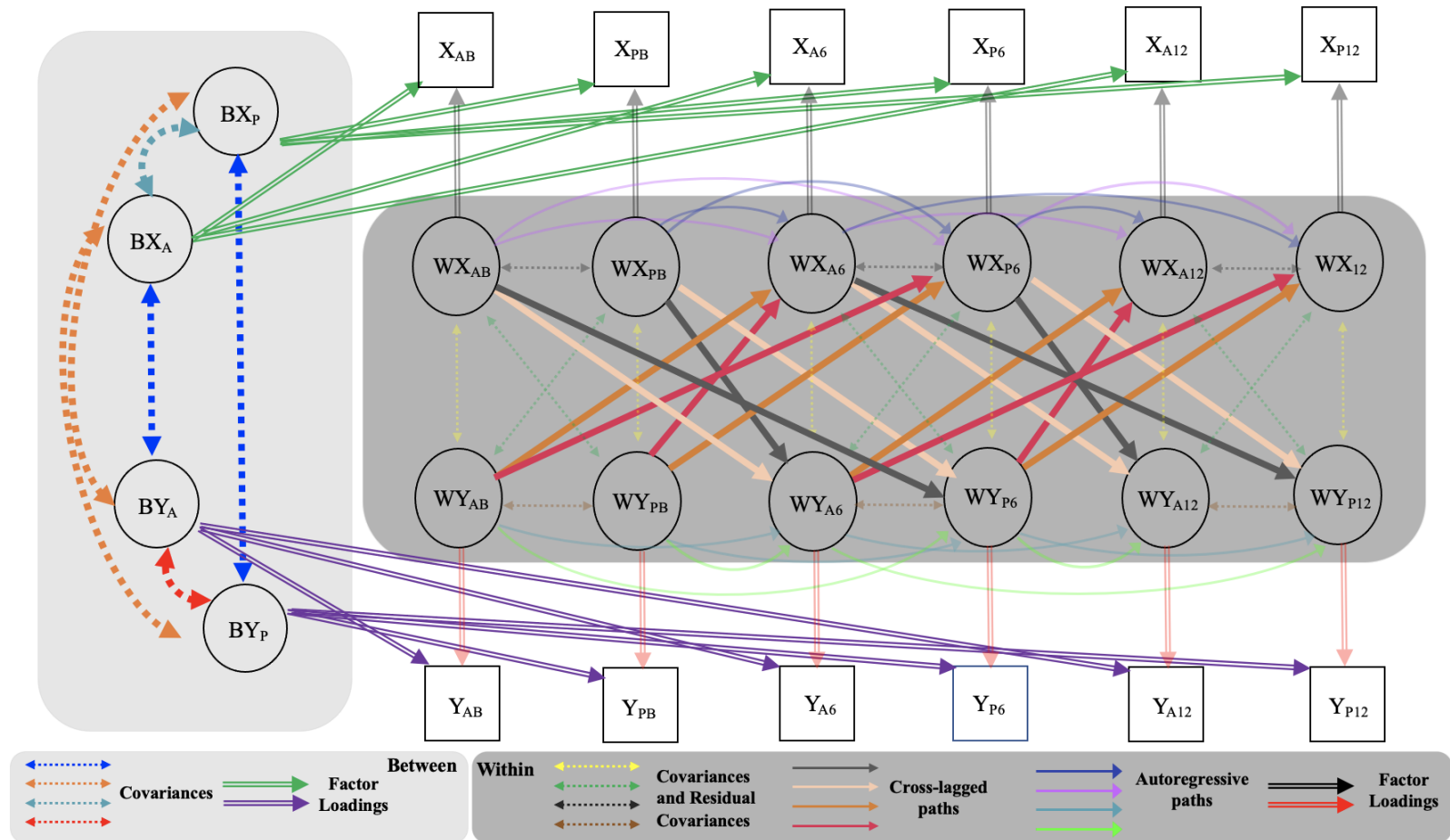
Indigenous	2 (0.5)
Individual Income ($n = 437$)	
Under \$30,000	57 (13.04)
\$30,000 - \$69,999	206 (47.14)
\$70,000 - \$110,000	148 (33.87)
Above \$110,000	26 (5.95)
Education	
Post-Graduate Degrees (Masters, Ph.D., MD)	112 (25.57)
University Degree/Some University	163 (37.21)
College Diploma/Certificate Programs	104 (23.74)
High school diploma/GED	49 (11.20)
Less than high school	10 (2.28)
Treatment Status During Study	
Accessed treatment	352 (80.37)
Did not access treatment	86 (19.63)
Reasons for seeking MAR ^b	
Infertility diagnosis or medical concerns	384 (87.70)
2SLGBTQ+ couple requiring MAR	53 (12.10)
Both	1 (0.2)

^a One couple member did not report their relationship length. Their missing value was replaced by their partners report. The mean relationship length of the sample was calculated from the average of both partners' report.

^b Medical concerns included unexplained infertility, recurrent pregnancy loss, genetic conditions, and advanced age. One couple member did not provide a reason, so their partner's report was used.

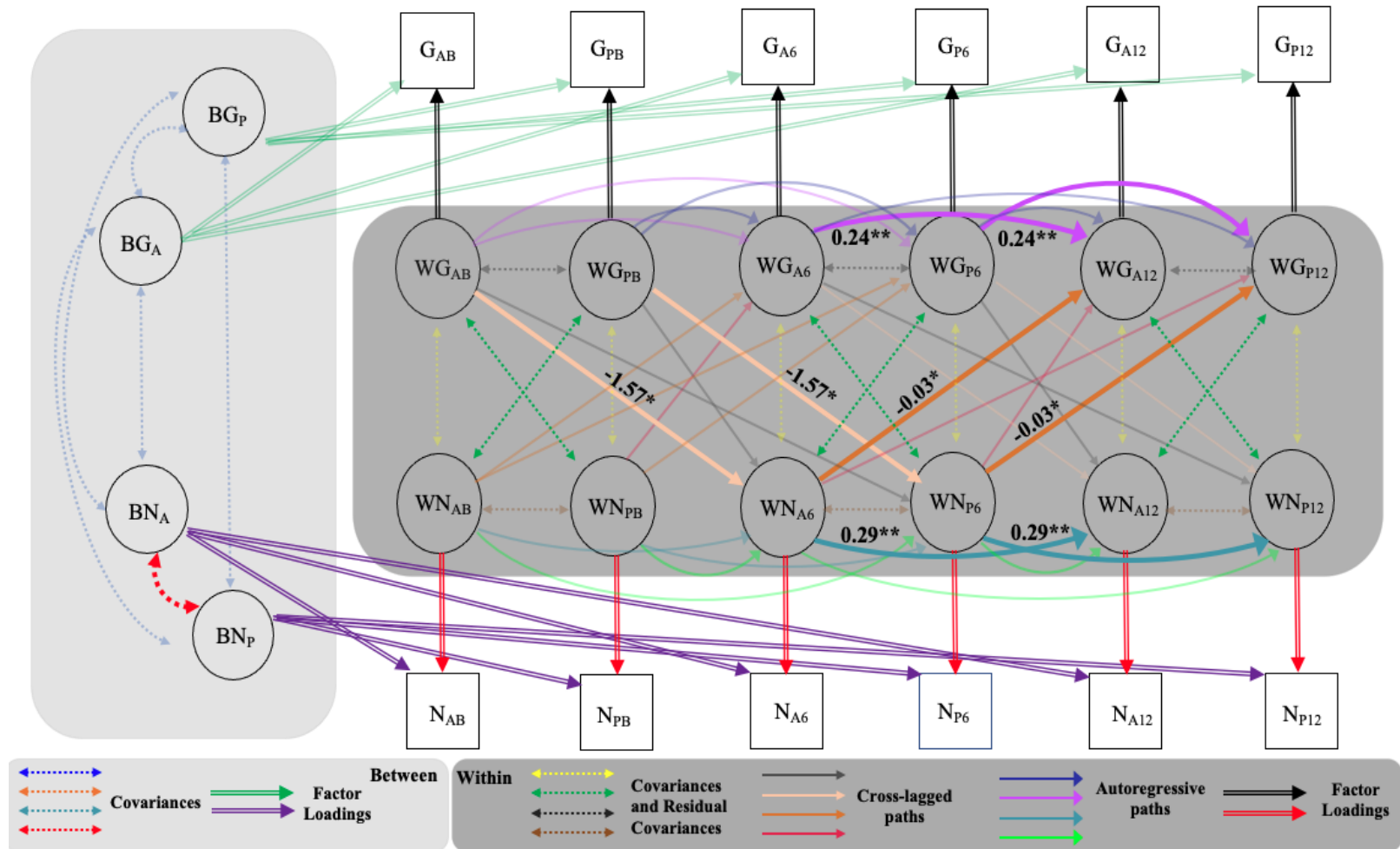
3.9. Figures

Figure 3.9.1. Graphical Representation of the Dyadic Random Intercept Cross-Lagged Panel Model



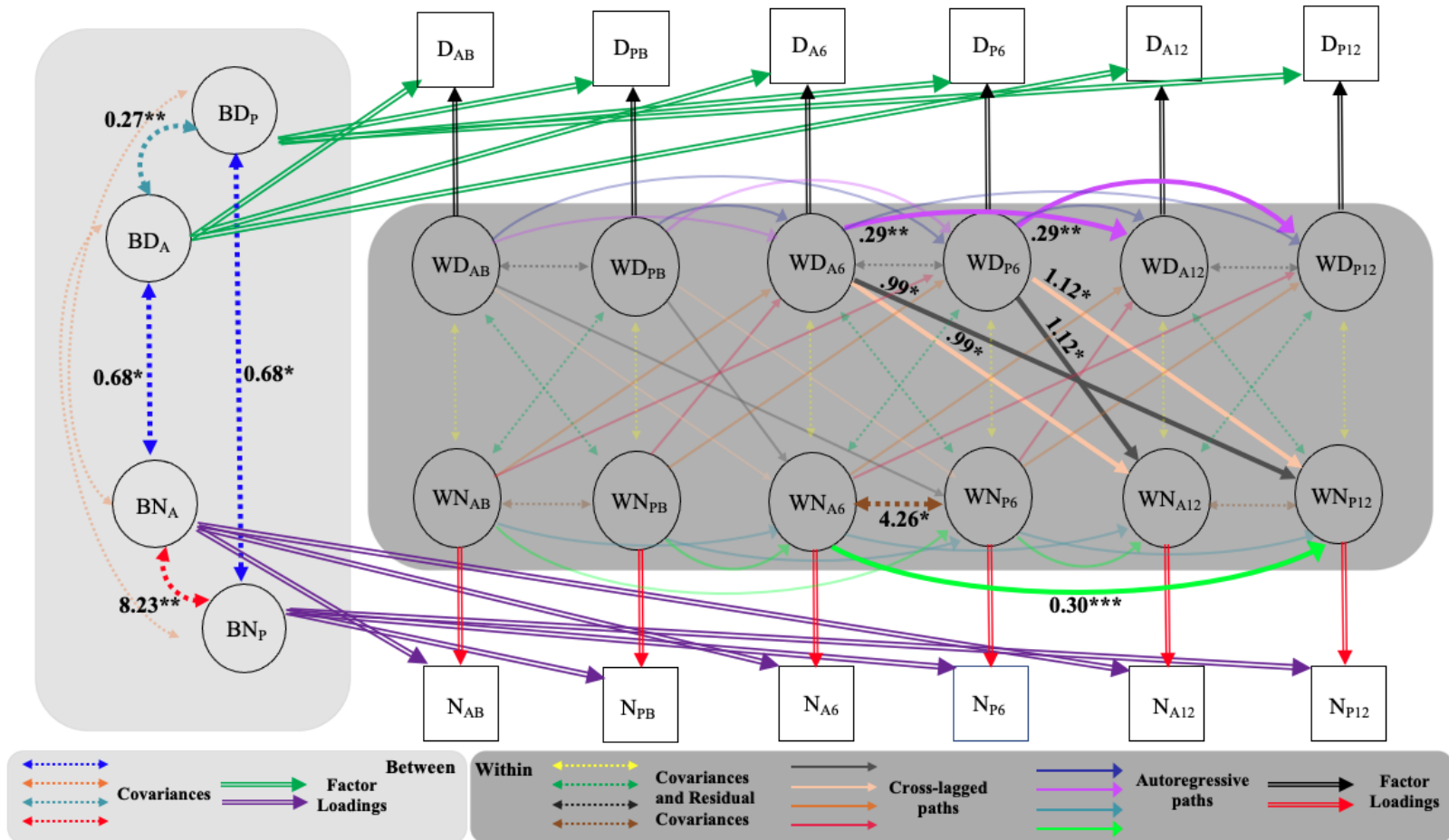
Note. **B** = Between-person, **W** = Within-person, **X** = Variable 1, **Y** = Variable 2, **AB** and **PB** = Actor and Partner Baseline Score, **A6** and **P6** = Actor and Partner 6-Month Score, **A12** and **P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths that are bolded pertain to our hypotheses. Paths were not constrained to be the same across time, which is not shown here for parsimony.

Figure 3.9.2. Sexual Growth Beliefs and Negative Dyadic Coping RI-CLPM



Note. **B** = Between-person, **W** = Within-person, **G** = Sexual Growth Beliefs, **N** = Negative Dyadic Coping, **AB and PB** = Actor and Partner Baseline Score, **A6 and P6** = Actor and Partner 6-Month Score, **A12 and P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded.

Figure 3.9.3. Sexual Destiny Beliefs and Negative Dyadic Coping RI-CLPM



Note. **B** = Between-person, **W** = Within-person, **G** = Sexual Destiny Beliefs, **N** = Negative Dyadic Coping, **AB** and **PB** = Actor and Partner Baseline Score, **A6** and **P6** = Actor and Partner 6-Month Score, **A12** and **P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded.

CHAPTER 4: DISCUSSION

The overarching goal of this dissertation was to examine couples' beliefs about how to maintain their sexual well-being during two contexts in which they are likely to encounter sexual challenges: 1) the transition to parenthood and 2) medically assisted reproduction. Specifically, I was interested in understanding the effects of sexual growth and destiny beliefs on couples' sexual well-being and dyadic coping as they navigate the pathway to parenthood.

In Study 1 (as described in Chapter 2), I utilized a longitudinal and dyadic design to test sexual growth and destiny beliefs in pregnancy as predictors of the trajectories of new parent's sexual desire, satisfaction, and distress over a one-year period following childbirth. Overall, the pattern of results demonstrated that mothers and partners experience distinct changes in their sexual well-being from one another. Both members reported declines in sexual satisfaction during pregnancy and increases over time in the postpartum period. However, new mothers tended to also experience declines in sexual desire and increases in sexual distress, whereas partners demonstrated stability in both domains. When testing sexual growth and destiny beliefs in pregnancy as predictors of sexual well-being trajectories, I found mixed results regarding my hypotheses. Generally, greater sexual destiny beliefs were associated with new mother's lower sexual well-being at 3-months postpartum. Yet, when they had partners who endorsed greater sexual destiny beliefs, new mothers reported greater sexual desire. Even more unexpected was the finding that partners' greater sexual growth beliefs were related to new mothers' lower sexual desire. Interestingly, these effects only emerged at the 3-month time-point and did not persist throughout the study period. The findings from Study 1 suggest that

cognitions in pregnancy – sexual growth and destiny beliefs – are related to both benefits and costs for couples’ sexual well-being early in the postpartum period.

As described in the transition section between Chapters 2 and 3, I had originally intended to replicate the analytical approach used in Study 1 for Study 2. However, there were several factors that prevented me from replicating the same approach, including 1) the limited and inconsistent actor-partner and slope effects in Study 1, 2) that LGCM’s were an inappropriate statistical approach for the Study 2 data, and 3) testing the RI-CLPM with my original variables and hypotheses was not supported. Pivoting within my guiding theoretical model, I decided to explore another route through which sexual growth and destiny beliefs may affect couples.

In Study 2 (described in Chapter 3), I explored the second route within the VSA model. I examined the relationship between sexual growth and destiny beliefs and couples’ positive and negative dyadic coping across a one-year period as they sought medically assisted reproduction. Consistent with my hypotheses and prior research, I found that across couples during this one-year period, higher than average overall sexual destiny beliefs were related to higher overall levels of negative dyadic coping. Within couples, I found that reporting higher-than-average sexual growth beliefs at baseline was associated with an individual’s lower-than-average negative dyadic coping six months later, whereas higher-than-average sexual destiny beliefs at 6-months was linked to an individual’s and their partners’ higher-than-average negative dyadic coping at 12-months. Additionally, a bidirectional effect between negative dyadic coping at 6-months and sexual growth beliefs at 12-months was found. Though bidirectional relationships were not originally hypothesized, the model tested allows for the presence of these

relationships to be detected. Unexpectedly, I also found no effects of sexual growth and destiny beliefs on couples' positive dyadic coping. These results provide initial evidence of the temporal routes through which sexual growth and destiny beliefs relate to couples' engagement in less effective dyadic coping.

4.1. Strengths and Limitations

Although many of the strengths and limitations of studies 1 and 2 have been detailed in their respective manuscripts, there are broader strengths and limitations of my research that I will discuss below.

4.1.1. Sample

Studies 1 and 2 involved the recruitment of clinical samples navigating the pathway to parenthood across two contexts: the transition to parenthood and medically assisted reproduction. There are several strengths in recruiting clinical samples, namely that sexual growth and destiny beliefs, both theoretically and empirically, have been shown to be more salient and have consequences for well-being and behaviour when individuals are faced with challenges (Bohns et al., 2015; Dovala et al., 2018; Knee, 1998; Leith et al., 2014; Raposo et al., 2021; Sutherland & Rehman, 2018). Thus, by specifically recruiting couples likely experiencing challenges to their sexual well-being, I was able to adhere to the theoretical model that guided this dissertation and identify unique effects of sexual growth and destiny beliefs that have not been detected in prior work with community samples. Moreover, despite the difficulty in recruiting clinical samples, I recruited a much larger sample than prior work for both studies. The large sample of couples enhances the statistical power required to detect my hypothesized effects, especially given the complex statistical analyses. Relatedly, my laboratory has

developed strong recruitment and retention strategies (e.g., personalized contacts, increasing financial incentives over time) that were implemented in my two studies. Using these strategies facilitated rapport building between participants and the research team. Participants were actively involved in the research, resulting in excellent retention rates across time-points for both studies.

Recruiting both members of a couple is essential to capturing the complexity of interpersonal interactions. Indeed, research, including in the domain of sexuality, has called for the integration of partner-related factors in our understanding of individual's health and well-being (Dewitte, 2014; Reed et al., 2013). With both of my dissertation studies involving couples, I was able to find evidence of novel intra- and interpersonal effects of sexual growth and destiny beliefs. By including both partners in each of my studies, I learned that an individual's sexual growth and destiny beliefs have consequences for their partners' sexual well-being and the kind of dyadic coping they implement when managing stressors together.

Prior work in the areas germane to my dissertation have predominately recruited mixed-gender/sex couples. As such, the development and implementation of analytical tools have largely been conducted through a heteronormative lens, limiting knowledge of how to analyze data that includes more diverse couples. In particular, the area of medically assisted reproduction has mainly directed their efforts to understanding mixed-gender/sex couples' experiences with medical infertility, effectively excluding other couples who require MAR to conceive and who experience some similar challenges during the medical process. When same-gender/sex couples are recruited, they are typically excluded from analyses due to power concerns related to small sample sizes or

the complexity of the analyses required to include these couples (e.g., Cook & Kenny, 2005; Umberson et al., 2015). By employing targeted recruitment efforts to collect data from more diverse groups and learning to conduct the appropriate statistical analyses necessary (i.e., indistinguishable dyads), my dissertation offers important knowledge into conducting complex dyadic and longitudinal recruitment and statistical analyses in an inclusive manner.

There are also important limitations to my samples. Though a wide net was cast in terms of recruitment approaches, both samples were still mainly comprised of White, mixed- gender/sex couples with high income and education levels. The predominance of these groups in the sample hinders the applicability of the results to same gender/sex dyads, different racial groups, and couples from lower socioeconomic backgrounds. Despite including all couples within my analyses, the sample in Study 1 had only 14 same-gender/sex couples, preventing me from having a large enough sample to examine their experiences separately. Further considerations regarding inclusivity also pertain to my use of the terms “mothers” and “partners” to distinguish members of the couple during the transition to parenthood. It is possible that even though the “mothers” in my sample all reported a gender of “woman”, they may not use the term “mother” to describe themselves. Also, their partner may also identify as a mother. Recent research in this area has shifted to the terms “birth-giving” or “birthing-person” and “partner” (e.g., Fitzpatrick et al., 2021; Thomson et al., 2022). The use of more inclusive language is important to describe couple members more accurately and in a way that reflects how they themselves identify.

In Study 2, I aimed to increase the diversity of my sample and generalizability of my results by including all couples in the analyses regardless of their gender/sex, resulting in approximately 18% of my sample identifying as 2SLGBTQ+. To further enhance generalizability, I also included all couples regardless of their treatment status. Further contributing to this decision was that couples were not at consistent points in the treatment process throughout the longitudinal study. Parsing down the sample to only include couples at certain stages of treatment would have reduced my sample size significantly. To offset any differences between those who did or did not undergo MAR during the study period, I tested and found no significant mean differences in my key study variables across these groups. However, other differences between groups may not have been captured by the variables assessed in Study 2. Nevertheless, it is possible that only including couples who were actively undergoing MAR may have elicited stronger effects of sexual growth and destiny beliefs. Additionally, both mixed and same-gender/sex couples encounter sexual challenges during the pathway to parenthood, however, they might have different experiences. For example, during MAR, many cisgender men experience pressures to perform because of timed sexual intercourse during ovulation (Monga et al., 2004; Nelson et al., 2008), whereas same-gender/sex couples may not experience the same “sex on the clock” pressures. Thus, including all couples in Study 2 may have reduced my ability to capture the unique sexual challenges, and subsequently, the effects of sexual growth and destiny beliefs on positive and negative dyadic coping for mixed and same-gender/sex couples and those who underwent MAR.

4.1.2. Research Design

The methodology used in my dissertation studies have several strengths. First, the dyadic and longitudinal design of both studies is a substantial contribution to the literature exploring the pathway to parenthood. As described earlier, dyadic studies account for the interdependence between each couple member, allowing me to capture a more complete picture of the dynamic interplay between couples (Kenny et al., 2006), particularly as to how one member's cognitions (i.e., sexual growth and destiny beliefs) are associated with the other member's behaviours and sexual well-being. Longitudinal designs offer important information into the stability and variability of constructs over time (Salkind, 2010). This design also allows for examination into the applicability of proposed theoretical models that are used to ground hypotheses. For example, I was able to demonstrate longitudinal evidence of the second route within the VSA model such that changes in sexual growth and destiny beliefs predict subsequent changes in couples' negative dyadic coping.

Relatedly, the use of advanced dyadic statistical methods, including DLGCM's and RI-CLPM's afforded me the opportunity to assess longitudinal associations between my predictors and outcomes between romantic partners. Specifically, DLGCM's provided unique insight into the average changes of various facets of couples' sexual experiences over time, as well as the factors that predict these changes. A key advantage of the RI-CLPMs used in Study 2 is that they account for temporality of the study variables, which is one of the criteria used for assessing causal inference (Hill, 1965). As such, Study 2 offers preliminary evidence as to the temporal precedence of sexual growth and destiny beliefs for negative dyadic coping, which is a significant contribution to the

literature compared to cross-sectional correlational analyses that have been conducted in prior work (Maxwell et al., 2017; Raposo et al., 2021).

As described earlier, members within dyads have been typically distinguished by binary gender and sex. Studies 1 and 2 of my dissertation extend beyond this approach by referring to couple members as “mother’s” and “partner’s” (which includes partners of all genders) in Study 1 and treating dyads as indistinguishable in Study 2. Both approaches enabled me to include all couples in the sample, regardless of their gender or sex.

Another strength of my dissertation was the inclusion of patient partners in Study 2. In the preliminary stages of the project, I engaged patient partners with lived experiences of medically assisted reproduction. By connecting with patient organizations (such as the Maritime Strategy for Patient Oriented Research Support Unit), I recruited four Canadian couples, including those from the 2SLGBTQ+ community, who have undergone medically assisted reproduction. Each couple reviewed all the study materials (e.g., recruitment documents, measures) to provide feedback and were compensated for their contribution. The feedback received was crucial to the development of the project, including revision of our measures and advertisements to better reflect the unique needs of 2SLGBTQ+ couples and adaptation of our medical questionnaire to capture the intricacies of fertility treatment. This approach to study development and implementation continues to be under-utilized in sex research. My approach facilitated the revision of the research to incorporate patient-identified needs and included their perspectives in many phases of the research. By engaging in this process, I gained more information as to the kind of researcher that I am aiming to be in the future—one that is patient-oriented and

guided by the needs of the population for which I aim to understand and develop interventions.

There are, however, components of the research design in each study that could be improved for future research. One shortcoming of my two dissertation studies is their sole reliance on self-report measures. Potential limitations of using self-report measures include the risk of biased responses (e.g., social desirability), reliance on participant's answering truthfully, and the assumption that participants have the awareness to report on their experiences accurately (Chan, 2009). An additional drawback with self-reporting behaviour is "sentiment override", which refers to one's tendency to use their overall perception of their relationship to inform their judgement of specific relationship processes. Sentiment override may have had an effect on couples' report of their own and their partners' positive and negative coping (Weiss, 1980). As such, research may benefit from observational paradigms that offer more objective information as to couples' coping behaviours.

The design of my research questions and studies are based on the VSA model, which is predicated on the assumption that stress exacerbates the relationship between strengths/vulnerabilities and outcomes. However, without a comparison group of couples outside of the pathway to parenthood (i.e., a non-stressed sample), I cannot explicitly test whether the relationship between sexual growth and destiny beliefs and my outcomes are heightened during the pathway to parenthood. It would be useful for further research to assess and compare the effects of sexual growth and destiny beliefs between stressed and non-stressed couples.

In Study 1, sexual growth and destiny beliefs were only assessed once in mid-pregnancy, which may not have been a period of significant sexual challenges in which the beliefs become most salient. Additionally, only one assessment of these beliefs precluded the ability to assess whether sexual growth and destiny beliefs also demonstrate change in average trajectories over time, which would have furthered our understanding of whether and how these beliefs change over periods of challenges for couples. Additionally, my research question for Study 2 focused on the longitudinal associations between sexual growth and destiny beliefs and positive and negative dyadic coping. It may have been useful to modify the models to also assess concurrent associations within time-points, which may have prompted identification of specific periods of vulnerability for couples that are closer in time. Relatedly, a limitation of longitudinal designs and the use of cross-lagged analyses more broadly are the inferences required when selecting the length of time lags between longitudinal time-points. It is possible that the 6-month lags were too long or too short to capture the causal relationships that may exist between my study variables. Further, many factors can arise within a 6-month time-frame that may influence couples' outcomes but could not be tested in the current research.

4.1.3. Open Science

A significant strength of my dissertation has been my adoption of open science practices. In addition to enhancing the rigor of my work, developing a preregistration (study 1) and sharing my data/syntax openly heeds the call for increased transparency of scientific practices the field of psychology, and more specifically, in sex research (Lorenz, 2020). For Study 1, I developed a preregistration that assisted me in clarifying

my research design, hypotheses, and analytical plan. Having completed this prior to running analyses and writing not only afforded me ease in preparing the manuscript, but also aided in the decision making process when analytical plans didn't quite go as plan. For example, I researched and planned alternative routes of analysis in advance so that I already knew how to approach modifying my syntax to improve model fit when necessary. Additionally, I uploaded all syntax and an anonymized dataset for this manuscript to the Open Science Framework, which facilitates the reproducibility and replicability of my analyses by other teams. In addition to these efforts, I was transparent in the published manuscript that many of my preregistered hypotheses were not supported, which can inform future research in this area regarding the kinds of effects that can be expected. As described in the transition chapter between chapters 2 and 3, I had intended on replicating the hypotheses and analyses in Study 1 with the MAR population. Since Study 1 did not produce robust effects, I aimed to conduct an exploratory analysis, rather than pre-register the study. When it became clear that both this original approach nor the use of the RI-CLPM's would be feasible, I decided to shift to another theoretical and empirically relevant outcome to couples seeking MAR. Instead of putting my original analyses away in the proverbial "file drawer", I disclosed this process within my dissertation to be transparent and open with readers.

Despite there being many advantages to using an open science approach, there are some limitations. Throughout the publication process of Study 1, one reviewer highlighted the lack of support for slope effects, and on that basis, expressed concerns regarding the contribution of the work. It is important that null effects are still considered contributions to the literature as sharing these results can reduce publication bias and

guide researchers towards fruitful areas for future research. With respect to Study 2, I was transparent in my transition chapter of this dissertation by including the limited and inconsistent findings from the initial analyses testing the associations between sexual growth and destiny beliefs and sexual well-being during MAR. However, it is still not published within an academic journal, which may reach a wider audience and be better positioned to influence future research. Lastly, the anonymized data and syntax for Studies 1 and 2 are shared on OSF, but given the sensitivity of these data, I chose to remove all sociodemographic data from participant's responses to further deidentify them and protect their anonymity. Should other researchers wish to reproduce or replicate my work, sociodemographic considerations may not be feasible.

4.2. Future Research Directions

Though each study included in my dissertation outlined relevant future research directions, there are broader suggestions that can be implemented to build upon this dissertation and the current body of research.

4.2.1. Examining Directionality and Causality

The studies included in this dissertation utilized longitudinal designs, which offer preliminary evidence as to the temporality of the relationship between sexual growth and destiny beliefs and my outcomes (i.e., sexual well-being, dyadic coping). To further extend our understanding of directionality and the effects of sexual growth and destiny beliefs, future research might consider an experimental research design. This design would enhance the ecological validity of prior work that has used priming methods to manipulate sexuality-oriented growth and destiny beliefs (Bohns et al., 2015; Maxwell et al., 2017; Sutherland & Rehman, 2018). Couples who are navigating sexual challenges

(e.g., sexual dysfunction, transition to parenthood, MAR) could be randomly assigned to 1) a brief intervention that involves psychoeducation about common sexual challenges, as well as learning about and identifying the personal costs and benefits of sexual growth and/or destiny beliefs or 2) a control condition where they are only provided general psychoeducation about common sexual challenges. Pre, mid, and post-assessments could include measures of change in sexual growth and destiny beliefs, sexual well-being (e.g., distress, desire, satisfaction) and behaviour (e.g., coping). Outcomes within and between intervention groups could then be compared to evaluate the unique effects of sexual growth and destiny beliefs on outcomes.

Considering that growth and destiny beliefs across domains appear to become more salient during periods of challenge, it is important to employ research designs that can more effectively capture these challenges in real time. Specifically, daily diary designs may be used to examine daily variability in couples' sexual growth and destiny beliefs, sexual well-being, and dyadic coping during the transition to parenthood and MAR. This design would allow researchers to tap into the experience of sexual challenges, and subsequent cognitions and behaviours, closer in time to their occurrence. Maxwell and colleagues (2017) utilized daily diary methodology to examine the effects of sexual growth and destiny beliefs on relationship and sexual satisfaction. They found that those endorsing higher sexual growth beliefs on one day demonstrated greater relationship quality the following day and more positive sexual experiences the following day if they engaged in sexual activity. In contrast, those reporting greater sexual destiny beliefs at baseline reported more daily negative sexual experiences. Interestingly, using a daily diary approach, they captured that those reporting greater sexual destiny beliefs,

relative to their own average, also reported greater relationship quality. Using cross-lagged analyses, they also found emerging directional effects of sexual growth and destiny beliefs. Previous day increases in sexual growth beliefs predicted next day increases in positive sexual experiences and relationship quality, and an increase in sexual destiny beliefs the previous day was also related to an increase in relationship quality the next day. As such, implementing more frequent assessment of beliefs and outcomes, especially during theoretical time-frames in which they might be experiencing the most sexual challenges (e.g., resuming sexual activity post-childbirth, actively receiving MAR), may offer compelling, ecologically valid evidence of the effects of sexual growth and destiny beliefs on their real-time sexual well-being and coping behaviours. The use of diary methodology can also reduce the biases associated with recalling experiences over a longer time-frame, such as the 4-weeks I used in both dissertation studies.

4.2.2. Potential Mediators and Moderators

Future work should continue to operate within a theoretical framework that can guide the selection of factors that explain or build upon the associations between sexual growth and destiny beliefs and outcomes in couples experiencing sexual challenges. In accordance with the VSA model, I hypothesized that there were two routes through which sexual growth and destiny beliefs may operate. In Study 1, I did not find as many direct effects of sexual growth and destiny beliefs on sexual well-being outcomes (i.e., route 1) as predicted. Instead, it is possible that the association between these beliefs and sexual well-being may only exist through a mechanism. Indirect-only mediation suggests that a direct effect between two variables may not exist, but a mediated effect can still

occur (MacKinnon et al., 2000; Zhao et al., 2010). Indeed, the VSA model also posits a route in which vulnerabilities and strengths promote more or less adaptive processes, which then influence overall relationship quality. As such, assessing adaptive processes as mediators may explain the relationship between sexual growth and destiny beliefs and outcomes or reveal associations that would not have been otherwise detected.

4.2.2.1. Sexual Flexibility as a Mediator

Prior research has examined mediators of relationship growth and destiny beliefs on relationship outcomes (e.g., self-expansion; Mattingly et al., 2018), but as discussed below, sexual growth and destiny beliefs may relate more strongly to adaptive processes within the same domain. Wu and Zheng (2022) found that both sexual growth and sexual destiny beliefs were associated with higher levels of sexual communal motivation (i.e., motivation to meet partners' sexual needs) and motivation to express love for partner, which in turn, were associated with higher satisfaction with sexual communication. It is possible that sexual flexibility (i.e., the SexFlex scale) acts as a mediator whereby sexual growth or destiny beliefs prompt the engagement in more or less sexual flexibility, that in turn accounts for consequences to sexual well-being. For instance, believing that sexual well-being requires effort and work (i.e., sexual growth beliefs) may promote expansion in one's sexual repertoire when difficulties emerge, which could reduce their own and their partners' sexual distress and promote greater sexual satisfaction. In contrast, believing sexual challenges reflect incompatibility may lead an individual to be less flexible in modifying their sexual activity or avoid sex altogether, which could enhance their own and their partners' distress and reduce satisfaction. Future research should investigate whether other processes within the sexual domain mediate the effects of

sexual growth and destiny beliefs on outcomes, as this may reveal further modifiable factors that can be targeted in interventions.

4.2.2.2. Perceived Partner Fit as a Moderator

There may also be factors that enhance or qualify the relationship between sexual growth and destiny beliefs and outcomes. In their series of cross-sectional, daily diary, and experimental studies, Maxwell et al. (2017) examined the effects of sexual growth and destiny beliefs on individual's and couples' sexual and relationship satisfaction. Although they found that the endorsement of greater sexual growth beliefs was consistently related to individuals and couples' greater relationship and sexual satisfaction, many of the effects of sexual destiny beliefs were contingent on sexual compatibility and/or perceived partner fit (i.e., how well their partner aligned with their ideal sexual partner). They found that lower relationship and sexual well-being was evidenced for individuals reporting greater sexual destiny beliefs but mainly when they also perceived lower partner fit or greater sexual disagreements. These associations were tested in predominately cross-sectional study designs and with couples in shorter, less committed relationships. Couples in the transition to parenthood or seeking MAR are making significant investments into the relationship, and as such, might already perceive higher sexual compatibility or partner fit. Alternatively, perceptions of low partner fit and/or incompatibility may be perceived as even more threatening during these contexts of high-investment. Thus, future research could consider exploring whether the associations found in Studies 1 and 2 are moderated by partner fit and/or compatibility. For instance, in Study 1, new mothers who perceive lower partner fit may have reported even poorer sexual well-being if they endorsed greater sexual destiny beliefs. In Study 2,

we might have detected nuanced patterns as to the effects of greater sexual destiny beliefs on greater negative dyadic coping, whereby individuals reported more or less negative dyadic coping depending on their perceptions of partner fit.

4.2.2.3. Gender as a Moderator

Gender has been tested as a moderator in the relationship between sexual growth and destiny beliefs and sexual and relationship outcomes. Maxwell and colleagues (2017) detected several moderations by gender. For instance, the positive effects of sexual growth beliefs on sexual satisfaction were stronger for women than men, women's, but not men's, own greater sexual destiny beliefs were negatively associated with their relationship satisfaction, and men reported lower relationship satisfaction when they had a partner with higher sexual destiny beliefs. In their sample of couples in the transition to parenthood, when new mothers reported higher sexual destiny beliefs, they and their partner also reported lower relationship satisfaction. However, when the studies were meta-analyzed, no significant gender moderations emerged, suggesting that sexual growth and destiny beliefs function similarly for women and men. These studies used a binary conceptualization of gender, which does not encompass the multidimensional and dynamic experience of gender identity and sexuality (van Anders, 2015).

In Study 1, I considered these meta-analyzed effects and the fact that I had few same-gendered couples in my sample. Including gender as a covariate would have involved regressing gender onto mothers' beliefs when mothers are all one gender in our sample. A similar process would then occur with partners' beliefs where they are mainly men. Instead, I ran the models with and without same-gender/sex couples, which showed no differences in my findings. Integrating the findings from Study 1 and the evidence

from Maxwell and colleagues (2017), I decided to treat dyads as indistinguishable in Study 2. This decision also allowed me to include all couples within the analyses, regardless of their gender/sex. Notably, in my sample, when couples were receiving treatment, it was primarily women who were the primary treatment receivers. Thus, it is possible that the salience of sexual growth and destiny beliefs and subsequent adaptive processes may be different for women or people with a uterus who are undertaking more of the physical and psychological burden of treatment than partners who are not receiving treatment and are predominately men (e.g., Huppelschoten et al., 2013; Verhaak et al., 2007). However, any differences detected would likely be better accounted for by dyads being distinguished as “treatment receiver” and “partner”, rather than gender differences. Nevertheless, future research in this area exploring gender/sex as a moderator is encouraged to consider whether and how aspects of multiple dimensions of gender (e.g., identity, expression, roles) can be assessed conceptually and statistically. For example, Merwin and colleagues (2021) explored gender/sex effects beyond the binary of woman/man by considering dyad type (e.g., same-gender/sex, mixed-gender/sex) and each couple member’s gender identity (e.g., woman, man, gender/sex diverse) as moderators within their research questions.

4.2.2.4. Sexual Self-Efficacy and Inhibition/Excitation as Moderators

As described in the future directions section in Study 1, many couples may feel overwhelmed by the array of challenges that they are facing, in addition to their sexual concerns. Even if they endorse greater sexual growth beliefs, they may not have or believe that they have the capacity to apply effort to make changes (i.e., self-efficacy). As such, the benefits of sexual growth beliefs for sexual well-being may be moderated by

their beliefs as to their ability to engage in pleasurable sexual activity. With the focus on examining factors that pertain to the sexual domain, future research could consider using the Sexual Self-Efficacy scales (International Research and Training Institute, 2000) to ascertain a person's perceived ability to engage their sexual response. The extent of sexual inhibition/excitation (i.e., dual control mechanisms responsible for inhibiting or stimulating sexual response) a person experiences might have promoting or interfering effects of sexual growth and destiny beliefs on sexual well-being. Using the Sexual Inhibition/Excitation Scales (Janssen et al., 2002), we might find that the consequences of greater, relative to lower, sexual destiny beliefs are buffered by a sensitive sexual excitation system. For example, even in the face of challenges or concerns regarding incompatibility, individuals with more sensitive excitation systems may be more easily aroused and able to pursue satisfying sexual experiences. In contrast, the benefits of greater, compared to lower, sexual growth beliefs may be dampened by higher levels of sexual inhibition that limit the effort they are willing to put in to manage a sexual challenge. Indeed, during the transition to parenthood and MAR, couples may be exposed to high levels of stimuli that promotes inhibition of their sexual response (e.g., fatigue, stress, caregiving demands)

4.2.2.5. Congruence as a Moderator

Research in the domain of sexual growth and destiny beliefs has certainly shifted to include the perspectives of both members of a couple. However, no study to my knowledge, has examined whether congruence in couple members' implicit theories about sexuality is associated with their sexual well-being. For example, is the effect between an individual's sexual growth beliefs and greater sexual satisfaction amplified

by their partner also endorsing greater sexual growth beliefs? It is essential that future work in this area explores how couples' beliefs interact with one another and the consequences of discrepancies in the endorsement of sexual growth or destiny beliefs. This avenue of research may offer important contributions to the development of couple-based interventions that seek to understand the interactive effects of couples' cognitions, emotions, and behaviours (e.g., cognitive-behavioural couples therapy).

4.2.3. Evaluating Other Outcomes Related to Sexual Growth and Destiny Beliefs

Prior work has demonstrated that implicit theories in a particular domain are often more strongly related to outcomes within that same domain (Dweck, 2012; Hughes, 2015; Knee, 1998; Zhu et al., 2020). For example, growth or destiny-oriented beliefs towards intelligence more strongly predict test-taking behaviour (e.g., studying harder after receiving a poor grade) relative to behaviours in a romantic relationship. Thus, it is possible that other adaptive processes within the second route of the VSA model (i.e., beliefs to behaviour) that are sexuality-specific may be more strongly related to sexual growth and destiny beliefs. For instance, some research has found strong associations between sexual growth and destiny beliefs with other types of sexuality based relationship processes, such as sexual communal strength (i.e., willingness to meet a partners' sexual needs) positive or negative sexual experiences, sexting behaviour, and sexual self-disclosure (Kafae & Kohut, 2021; Maxwell et al., 2017; Wu & Zheng, 2022). Future work can consider examining the relationship between sexual growth and destiny beliefs and other adaptive processes, such as sexual communication, touch behaviours, and approach and avoidance motivations for sex, which could be enhanced by targeting individual's and couples' implicit theories about sexuality.

Relatedly, I might have found greater support for sexual growth and destiny beliefs operating through the second route of the VSA model had I utilized an outcome that was more specific to managing challenges in the sexual domain. The SexFlex scale assesses one's flexibility in their sexual script, particularly when approaching a sexual challenge (Gauvin & Pukall, 2018). The scale includes items such as "I immediately change my approach to sex if a certain approach doesn't work" and "I think of different options for sex when my normal sexual routine is not successful because of my sexual problem(s)". An individual who endorses greater sexual growth beliefs would potentially be more flexible with adapting their repertoire of sexual activities in the face of a challenge in contrast to someone endorsing greater sexual destiny beliefs. Sexual script flexibility can be helpful amid sexual challenges as these behaviours may allow couples to better weather the bumps that can arise during significant life stressors. Notably, unlike the dyadic coping measure used in Study 2, the SexFlex scale only assesses individual's sexual script flexibility and does not account for their partner's sexual challenges or the flexibility of their partners' sexual scripts. It would be important to adapt the SexFlex scale to incorporate perceptions of a partners' sexual flexibility, which would further capture a person's perception of their own and their partners' sexual flexibility when navigating a sexual challenge.

4.3. Theoretical Implications

4.3.1. Updated Conceptualization of Sexual Growth and Destiny Beliefs

Integrating the findings across both studies, my dissertation found varying evidence for the two routes within the VSA model. Although several of my hypotheses across studies were supported, there were findings contrary to my expectations. Namely,

partners' greater sexual destiny beliefs were associated with their own and new mothers' higher sexual desire, whereas a partners' greater sexual growth beliefs were related to new mothers' lower sexual desire. These results expand beyond my earlier conceptualization of sexual growth and destiny beliefs as strengths and vulnerabilities, respectively. Although the broader literature has demonstrated significant strengths of holding sexual growth beliefs relative to sexual destiny beliefs, my work contributes to the understanding that the usefulness of these beliefs be evaluated on a case-by-case basis. In fact, since the original conceptualization of my dissertation, McNulty et al. (2021) proposed a revised VSA model, which refers to enduring "vulnerabilities and strengths" as "enduring qualities" instead. Despite research highlighting the adverse effects of sexual destiny beliefs and benefits of sexual growth beliefs, exceptions have been evidenced, wherein sexual growth and destiny beliefs have resulted in unexpected effects for individuals in certain contexts (Raposo et al., 2021; Rossi et al., 2022; Wu & Zheng, 2022). As such, the updated terminology in the VSA model allows for the inclusion of an array of cognitive and behavioural responses that may have positive or negative implications that are dependent on 1) the context they are employed within, and 2) what outcome they are predicting. For example, I found that in Study 1, sexual destiny beliefs promoted greater sexual well-being in some cases, whereas the only significant effect pertaining to sexual growth beliefs was that they related to new mother's lower sexual desire. Although this contrasted with prior work, I examined the effects of these beliefs for the first time in a sample of couples actively undergoing sexual challenges, which is a different context from previous research. For Study 2, I found that greater sexual growth beliefs were consistently related to less negative dyadic coping and greater

sexual destiny beliefs were associated with greater negative dyadic coping. The discrepancy between the results of Study 1 and 2 reflect the understanding that when examining a new context and outcome, there may be different consequences enacted by sexual growth and destiny beliefs.

4.3.2. Sexual Growth and Destiny Beliefs in Vulnerable Contexts

Although the VSA model stipulates stress as the contextual factor exacerbating the interaction between enduring qualities, adaptive behaviours, and outcomes, most studies examining the effects of growth and destiny beliefs within and outside the domain of sexuality did not use samples of individuals or couples experiencing an actual stressor (e.g., Bohns et al., 2015; Knee, 1998; Mattingly et al., 2018; Maxwell et al., 2017; Sutherland & Rehman, 2018). Building on the unexpected association between greater sexual growth beliefs and lower sexual desire evidenced in a sample of couples coping with sexual dysfunction (Raposo et al., 2021), my dissertation findings identified unique costs and benefits of sexual growth and destiny beliefs in clinical samples experiencing sexual challenges. Research examining sexual growth and destiny beliefs rooted within the VSA model must establish the appropriate conditions (i.e., stress) to fully capture the salience of these beliefs and their subsequent effects on sexual well-being and adaptive behaviours. McNulty and colleagues (2021) posit that past work using the VSA model as their theoretical model has been remiss in measuring actual stress levels. As such, it may be necessary for future work to measure stress directly (i.e., through physiological measures) or indirectly (i.e., perceived stress) alongside sexual growth and destiny beliefs and outcomes.

Indeed, prior work in areas outside of sexuality have shown that measures of acute stress are related to adaptive processes in the moment (Buck & Neff, 2012; Hicks et al., 2021). In the face of a chronic stressor, such as the transition to parenthood or MAR, the build-up of more or less adaptive behaviours over time may have greater consequences for long-term outcomes (McNulty et al., 2021). As such, the longitudinal designs of my research highlights the importance of frequent assessments of sexual growth and destiny beliefs and outcomes during periods of known stressors. For instance, the effects of sexual growth and destiny beliefs in pregnancy had consequences for couples' sexual well-being 3-months later. Similarly, in Study 2, most of the observed effects pertained to the 6-and 12-month timepoints. Collectively, these findings suggest that longitudinal or daily diary research designs are necessary for ascertaining the cumulative effects of stress and sexual growth and destiny beliefs on couples' well-being. Together, my dissertation studies demonstrated support for routes within the VSA model as applied to new populations undergoing stressors to their sex lives. More specifically, they expanded understanding of the effects and function of a novel psychosocial factor – sexual growth and destiny beliefs – for couples within the pathway to parenthood.

4.4. Potential Clinical Implications

By recruiting clinical samples for both dissertation studies, I gathered preliminary evidence as to whether and how sexual growth and destiny beliefs may be relevant targets for clinical interventions. Moreover, the longitudinal and dyadic design of each of my dissertation studies offered novel information regarding the temporality of sexual growth and destiny beliefs, highlighting that there may be specific points in time in which these beliefs could be targeted in interventions. Considering several of my hypotheses were not

supported, it is important to note that the effects and directionality of sexual growth and destiny beliefs should be further explored in accordance with the recommendations described earlier. From there, it is possible that conclusive clinical recommendations can be offered. Nonetheless, I will outline below some possible clinical implications that could be drawn from my dissertation.

4.4.1 Cognitive-Behavioural Interventions

To my knowledge, there are no specific interventions aimed at working with growth and destiny beliefs within or outside the sexual domain. The malleability of these beliefs, as demonstrated by experimental methods used to prime an individual to endorse growth or destiny beliefs (e.g., Maxwell et al., 2017), indicate the potential feasibility of interventions aimed at identifying and modifying these particular cognitions. Cognitive-Behavioural Therapy (CBT) is an empirically-supported approach for reducing unhelpful thinking styles and promoting more effective behaviours (Beck, 2020), which may be applied to sexual growth and destiny beliefs.

CBT that targets sexual growth and destiny beliefs could involve psychoeducation, practice in identifying unhelpful thoughts for the individual/couple, and strategies for challenging and modifying unhelpful thoughts. In the context of the pathway to parenthood, educational tools related to CBT principles have been provided for couples in the transition to parenthood (Rosen et al., 2021b) and CBT has been implemented to improve individual's and couples' well-being undergoing MAR (Luk & Loke, 2016). Considering mounting evidence—including from this thesis—of the need for a broader conceptualization of sexual growth and destiny beliefs that highlights their unique and contextualized benefits and costs, it is potentially more important that these

beliefs and their function are first identified, prior to interventions aimed at promoting one over the other. Prioritizing their function for couples' sexual well-being and dyadic coping during the pathway to parenthood over a generalized “good” versus “bad” approach can lead to more personalized interventions. As couples manage the stressors related to the transition to parenthood and MAR, they may better understand how these beliefs impact their own emotions (e.g., sexual distress) and behaviours (e.g., negative dyadic coping), rather than just the content itself.

I also found early evidence as to the bidirectionality of sexual growth beliefs and negative dyadic coping. This result is in accordance with the VSA and CBT models, in which there is a circular process through which situations can prompt certain thoughts, which can lead to emotions and corresponding behaviours, which can then influence thoughts and ultimately initiate another iteration in the cycle (Beck, 2020). As such, the evidence from Study 2 suggests behaviour could be addressed first, whereby clinicians may assist couples with reflecting on the strategies they use to cope with stressors, with a focus on identifying their negative dyadic coping strategies. By enhancing awareness of these behaviours and their consequences, couples may be directed to engage in more adaptive processes. In doing so, this may reduce their engagement in negative dyadic coping, prompt greater sexual growth beliefs, and subsequently lower negative dyadic coping in the future. However, since we did not find evidence of an association between sexual growth and destiny beliefs and positive dyadic coping, it is unclear what behaviour clinicians would encourage couples to replace negative dyadic coping with. As such, it is important that future research explores whether sexual growth and/or destiny beliefs promote other adaptive processes that clinicians could focus their interventions towards.

4.4.2. Acceptance-Based Interventions

Under the umbrella of CBT is Acceptance and Commitment Therapy (ACT), which involves the development of psychological skills to make room for difficult thoughts and feelings and engage in value-based behaviours (Hayes, 2004). There are several strategies within ACT that may assist couples with managing sexual growth and destiny beliefs when they become unhelpful and have negative implications for behaviour. Thoughts tend to be believed as veritable truths (e.g., Shipherd & Fordiani, 2015), which individuals follow and use to guide their behaviour. Cognitive defusion involves a range of strategies that operate to create distance between oneself and thoughts, allowing them to come and go, without attempting to change or follow them (Harris, 2006). By practicing cognitive defusion strategies, individuals and couples navigating the transition to parenthood and MAR may be able to allow their sexual growth and/or destiny beliefs to arise, without interpreting them as a cause to action. For example, allowing unhelpful thoughts related to sexual destiny beliefs to “come and go” may enhance a person’s comfort with sitting with feelings of being overwhelmed, and thus limit their reliance on avoidance-related coping behaviours. ACT may be a particularly helpful approach for couples as they navigate sexual challenges such as the transition to parenthood and MAR, given that many of their thoughts may in fact be accurate (i.e., my sex life is worse than before I had a baby; Having sex on a schedule is not satisfying) but can contribute to the development of further unhelpful thoughts and implementation of ineffective coping behaviours.

An ACT-based approach could also target the bidirectional effect I detected in Study 2 whereby higher than average negative dyadic coping was associated with lower

than average sexual growth beliefs 6-months later. Rather than addressing unhelpful thoughts directly through cognitive defusion, clinicians can work with clients to identify their values, the kind of partner they want to be in their relationship, and the behaviours that would reflect these values. From there, individuals or couples can work on engaging in behaviours that embody their values as a romantic partner. These behaviours likely involve less negative dyadic coping, which in accordance with my findings, may prompt greater sexual growth beliefs.

Mindfulness-based tools are another key component in acceptance-based interventions, such as ACT and Dialectical Behaviour Therapy (DBT). As individuals begin to practice the core processes within mindfulness (i.e., described in DBT as observing, describing, and participating), there are specific ways in which to engage in these processes (Linehan, 2014). Relevant to sexual growth and destiny beliefs is the ability to apply *non-judgemental awareness* of what an individual is observing, describing, and participating in. Applying a non-judgemental lens within mindfulness exercises offers the opportunity for attention to be redirected away from the content of thoughts, and thus limiting the extent to which sexual challenges are used as a barometer for the success of a relationship. All in all, there are several approaches clinicians may use to enhance the flexibility in which sexual growth and destiny beliefs are applied and reduce their functional consequences. Nevertheless, these tools should be examined in future research to provide more evidence as to their role in paving the way towards couples' experiencing greater sexual well-being and engaging in less negative dyadic coping.

4.5. Conclusions

Despite being a common goal for many, the pathway to parenthood can be paved with bumps and challenges for couples' sexual well-being. My dissertation demonstrated that couples' implicit theories about sexuality – sexual growth and destiny beliefs –relates to how they traverse this pathway. Indeed, across two dyadic and longitudinal studies of couples' navigating significant stressors to their romantic and sexual relationship, I found associations between sexual growth and destiny beliefs and couples' sexual well-being and dyadic coping. Among couples in the transition to parenthood, I found novel effects as to the unique benefits and costs of sexual growth and destiny beliefs for new parent's sexual desire, satisfaction, and distress early in the postpartum period. As couples seek MAR, I found that their sexual growth and destiny beliefs were also related to their engagement in less adaptive dyadic coping strategies. My dissertation provides insight into the temporal nature of sexual growth and destiny beliefs and their effects on couples' sexual well-being and coping behaviours. Additionally, the findings within my dissertation underscore the importance of 1) researchers employing a balanced perspective when exploring the function and consequences of sexual growth and destiny beliefs and 2) couples' flexible application of these beliefs when navigating sexual challenges in their romantic relationship.

Taken together, these findings provide a solid foundation on which further longitudinal, dyadic, and experimental research can build upon to clarify the mechanisms, moderators, and clinical utility of sexual growth and destiny beliefs. Developing interventions that help couples identify, modify, or be mindful of unhelpful beliefs about

sex may ultimately improve their quality of life during these vulnerable and highly distressing periods in their lives.

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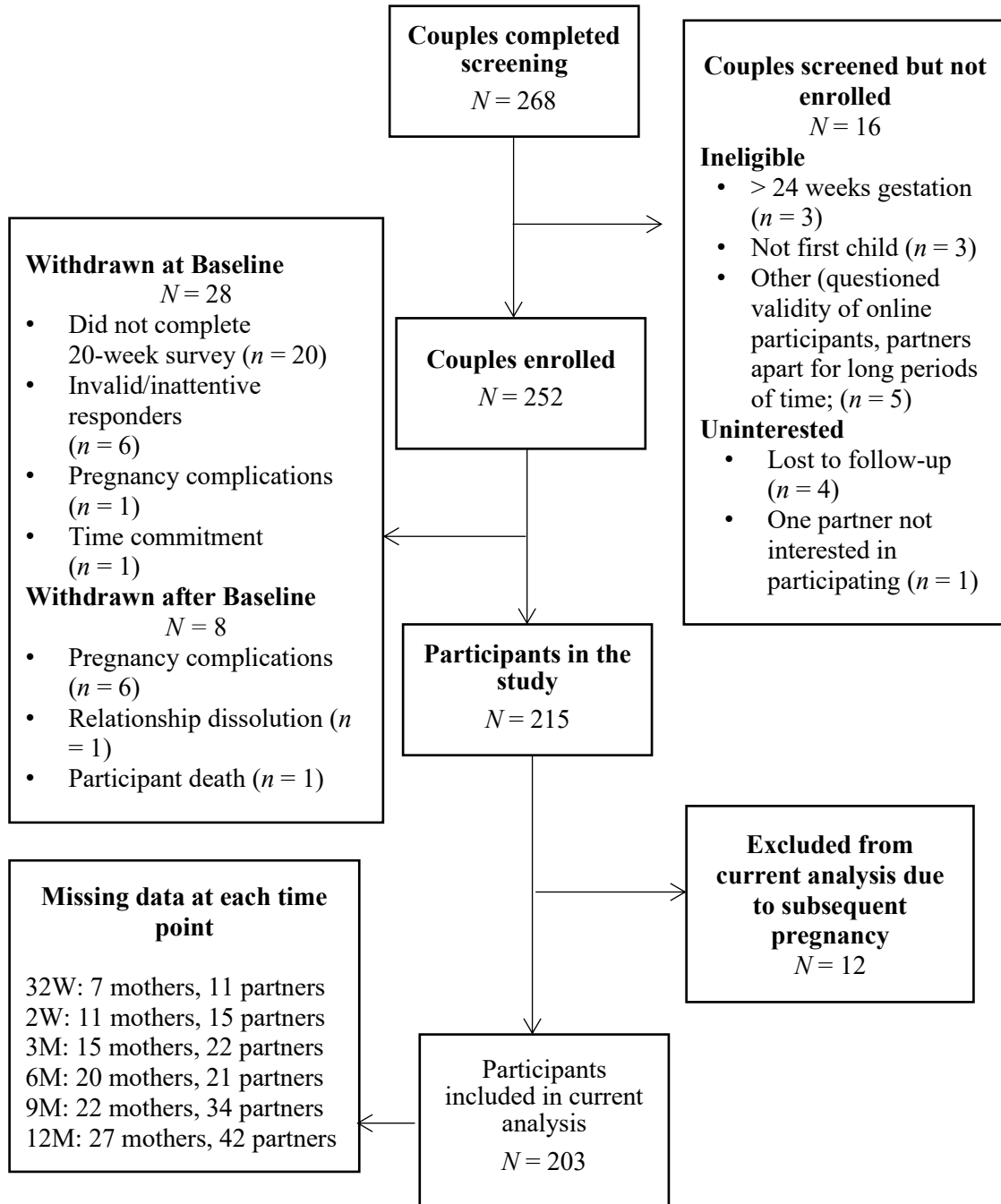
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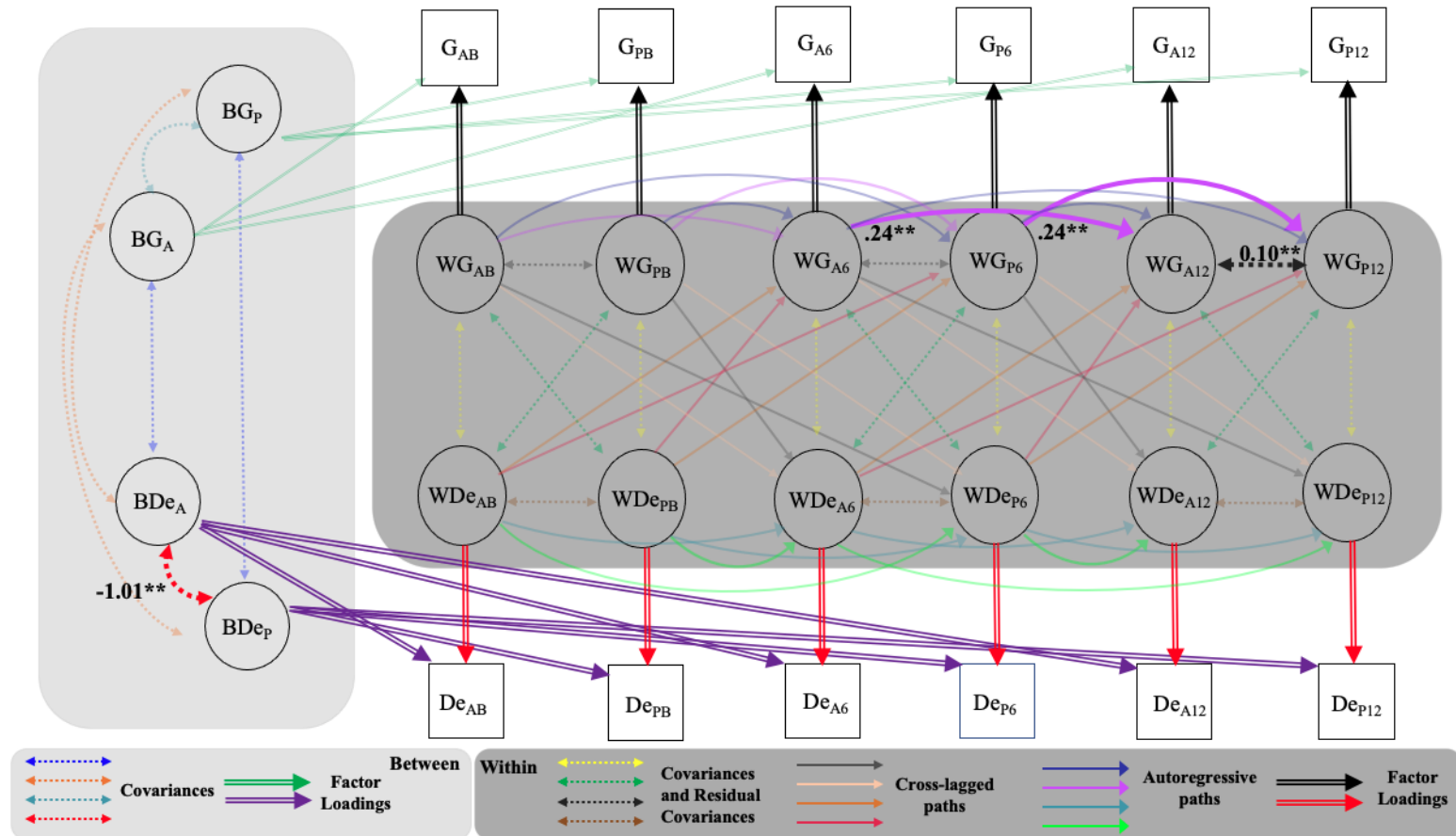
APPENDIX A. Supplemental Materials for Study 1

Supplemental Figure A.1.
Participant Recruitment Flow Chart



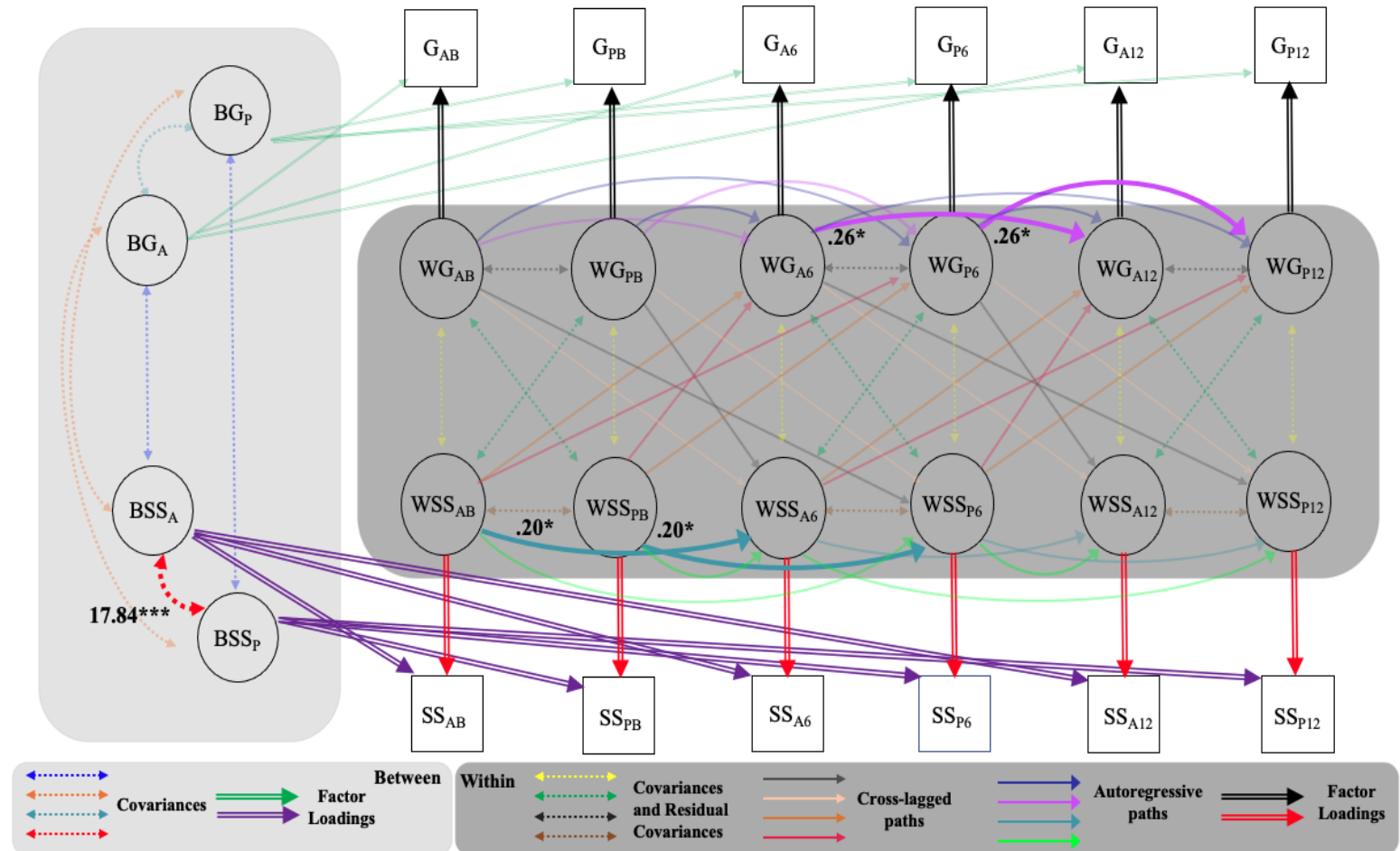
APPENDIX B. Supplemental Materials for 2.10

Supplemental Figure B.1. Sexual Growth Beliefs and Sexual Desire RI-CLPM



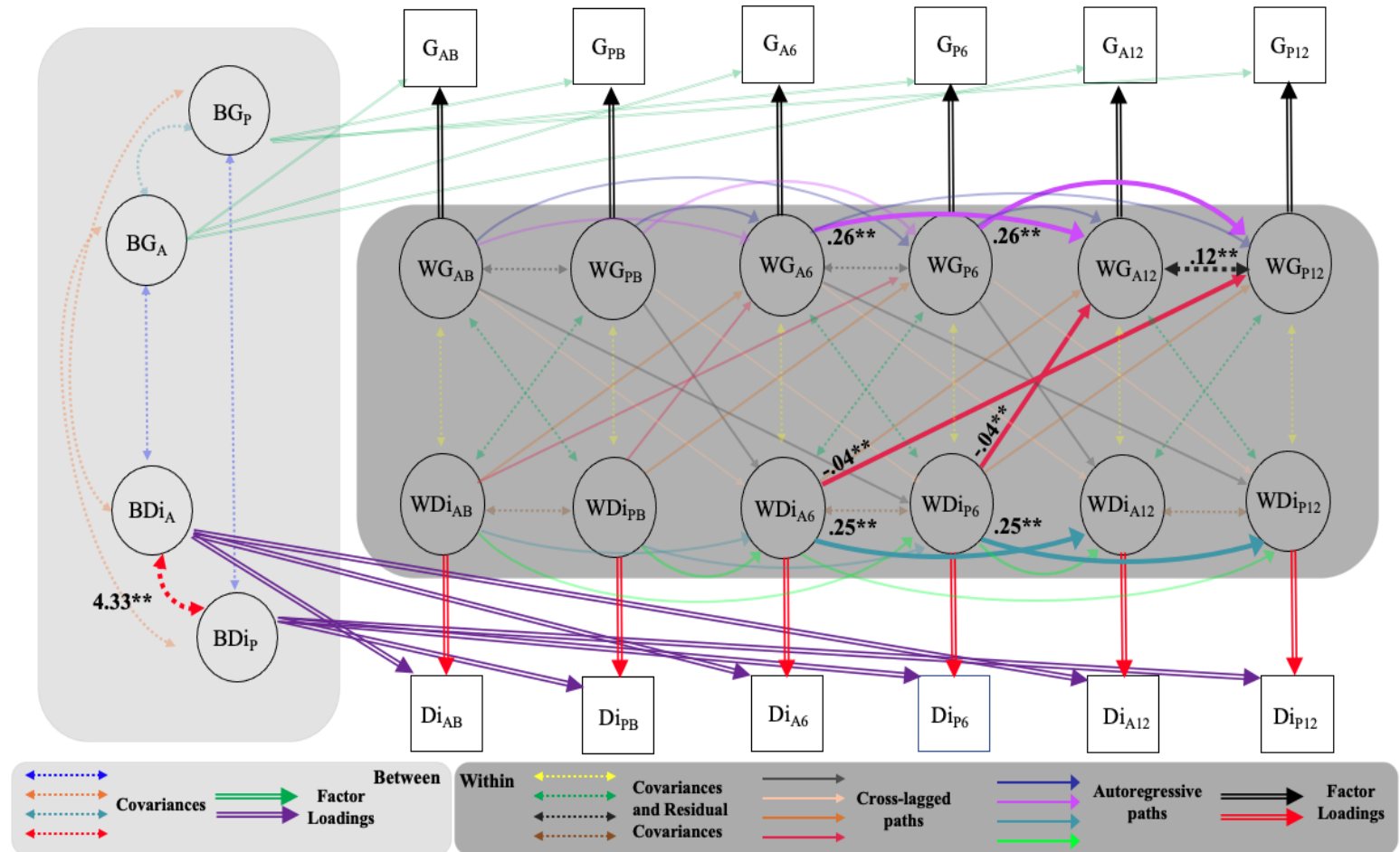
Note. **B** = Between-person, **W** = Within-person, **G** = Sexual Growth Beliefs, **De** = Sexual Desire, **AB** and **PB** = Actor and Partner Baseline Score, **A6** and **P6** = Actor and Partner 6-Month Score, **A12** and **P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded. The primary study hypotheses are depicted in the cross-lagged paths (i.e., the grey, light and dark orange, and red arrows), which are all non-significant in this model.

Supplemental Figure B.2. Sexual Growth Beliefs and Sexual Satisfaction RI-CLPM



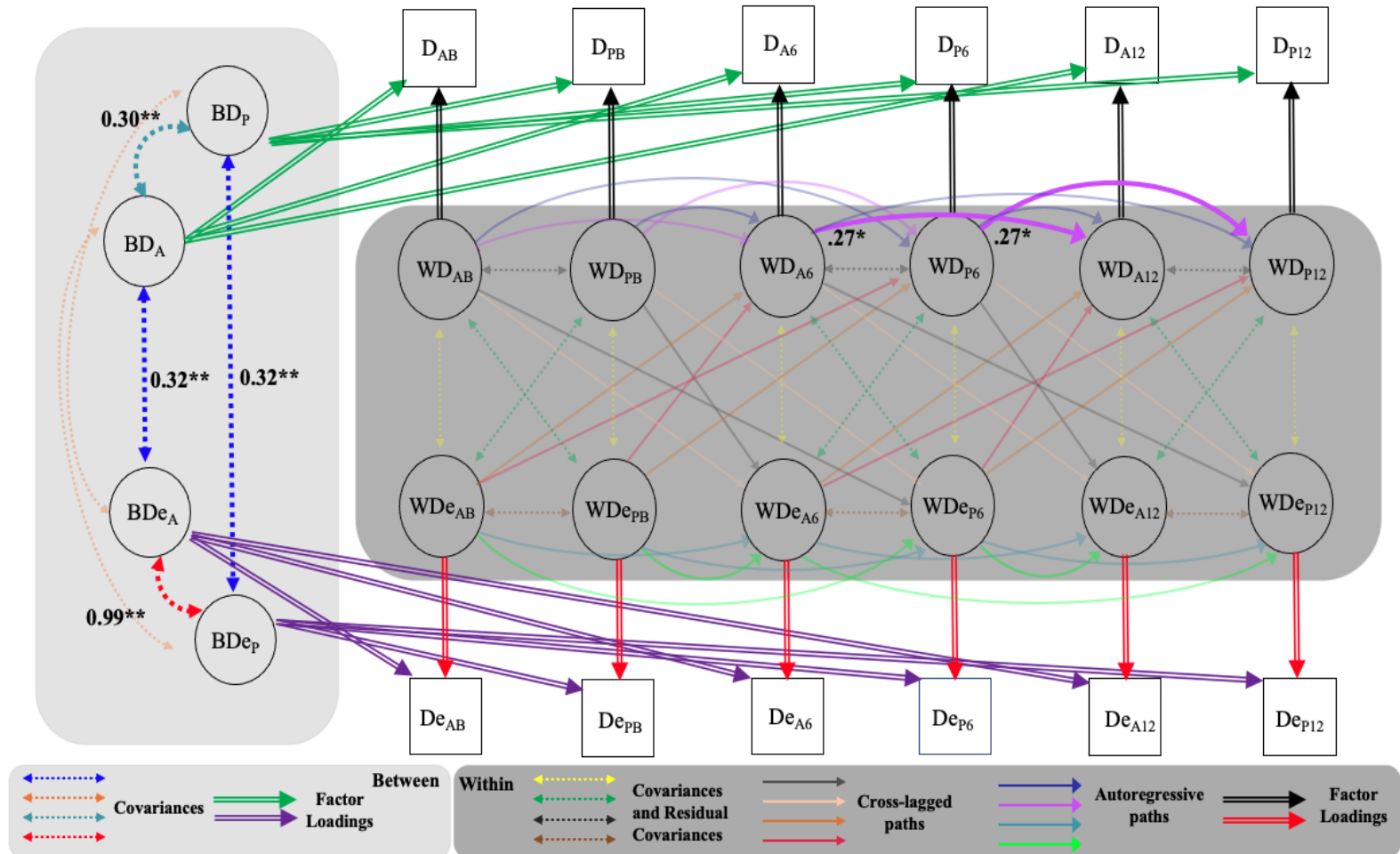
Note. **B** = Between-person, **W** = Within-person, **G** = Sexual Growth Beliefs, **SS** = Sexual Satisfaction, **AB** and **PB** = Actor and Partner Baseline Score, **A6** and **P6** = Actor and Partner 6-Month Score, **A12** and **P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded. The primary study hypotheses are depicted in the cross-lagged paths (i.e., the grey, light and dark orange, and red arrows), which are all non-significant in this model.

Supplemental Figure B.3. Sexual Growth Beliefs and Sexual Distress RI-CLPM



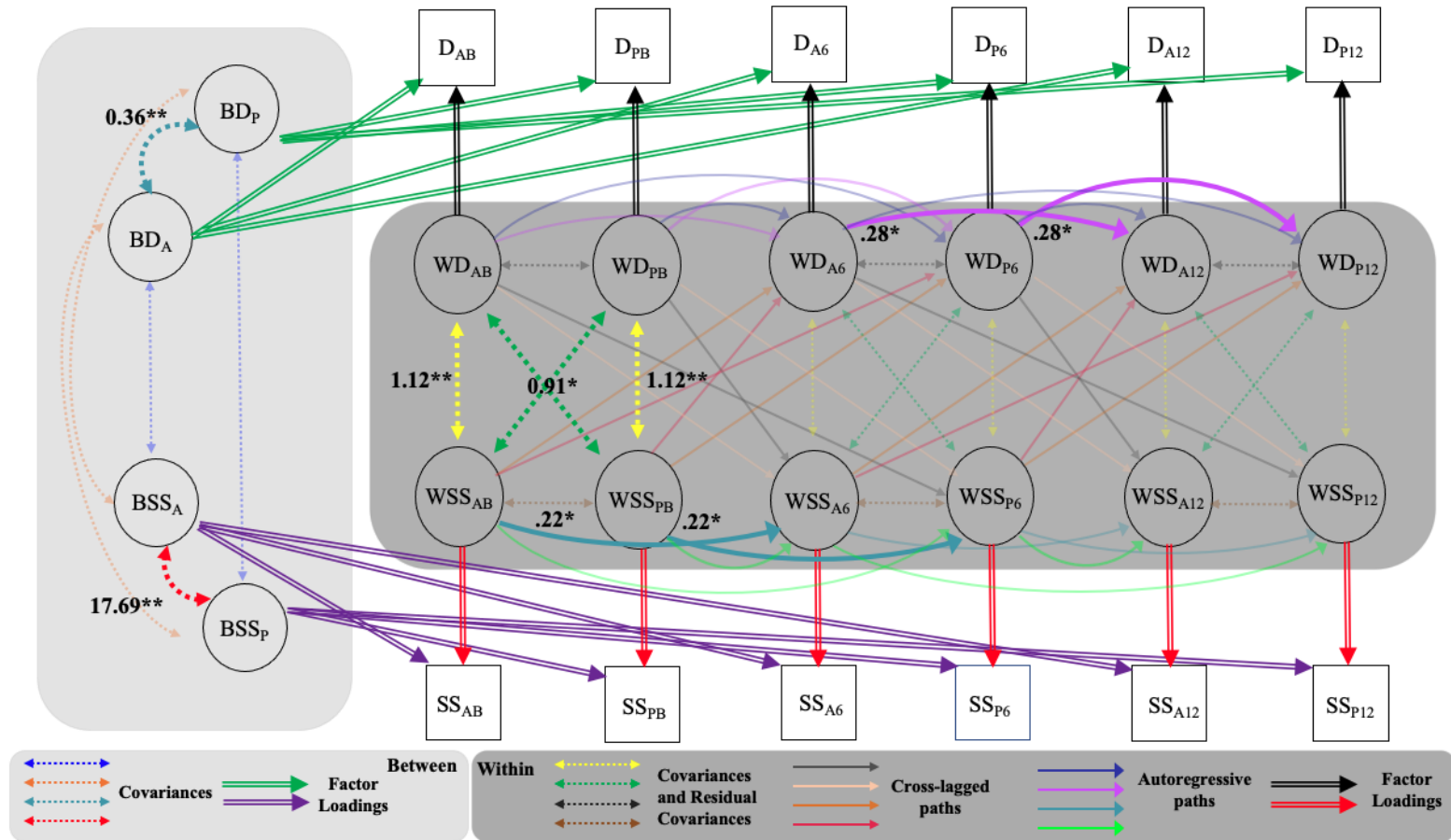
Note. **B** = Between-person, **W** = Within-person, **G** = Sexual Growth Beliefs, **Di** = Sexual Distress, **AB** and **PB** = Actor and Partner Baseline Score, **A6** and **P6** = Actor and Partner 6-Month Score, **A12** and **P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded. The primary study hypotheses are depicted in the cross-lagged paths (i.e., the grey, light and dark orange, and red arrows), which are mainly non-significant in this model.

Supplemental Figure B.4. Sexual Destiny Beliefs and Sexual Desire RI-CLPM



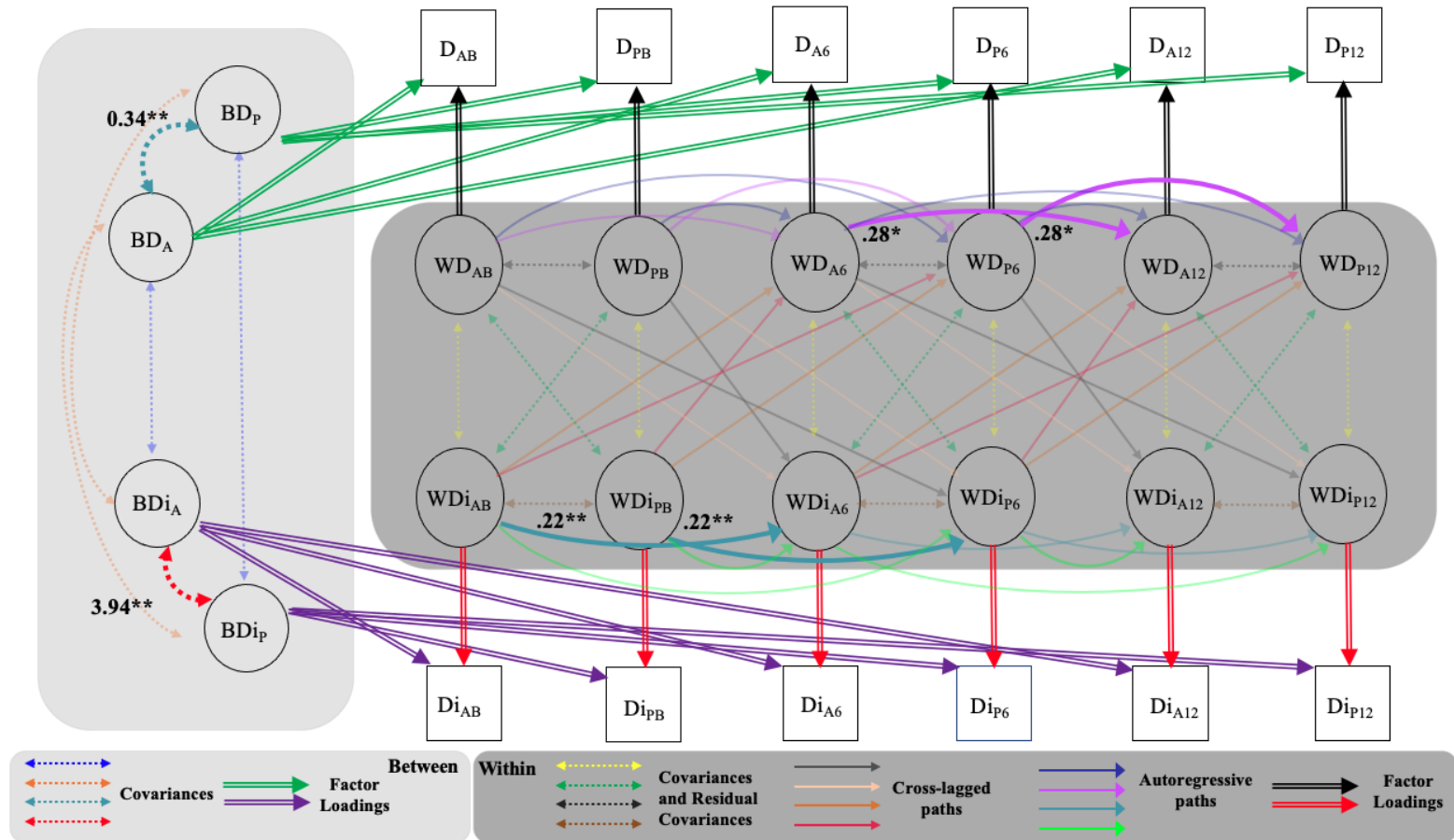
Note. **B** = Between-person, **W** = Within-person, **D** = Sexual Destiny Beliefs, **De** = Sexual Desire, **AB and PB** = Actor and Partner Baseline Score, **A6 and P6** = Actor and Partner 6-Month Score, **A12 and P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded. The primary study hypotheses are depicted in the cross-lagged paths (i.e., the grey, light and dark orange, and red arrows), which are all non-significant in this model.

Supplemental Figure B.5. Sexual Destiny Beliefs and Sexual Satisfaction RI-CLPM



Note. **B** = Between-person, **W** = Within-person, **D** = Sexual Destiny Beliefs, **De** = Sexual Satisfaction, **AB and PB** = Actor and Partner Baseline Score, **A6 and P6** = Actor and Partner 6-Month Score, **A12 and P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded. The primary study hypotheses are depicted in the cross-lagged paths (i.e., the grey, light and dark orange, and red arrows), which are all non-significant in this model.

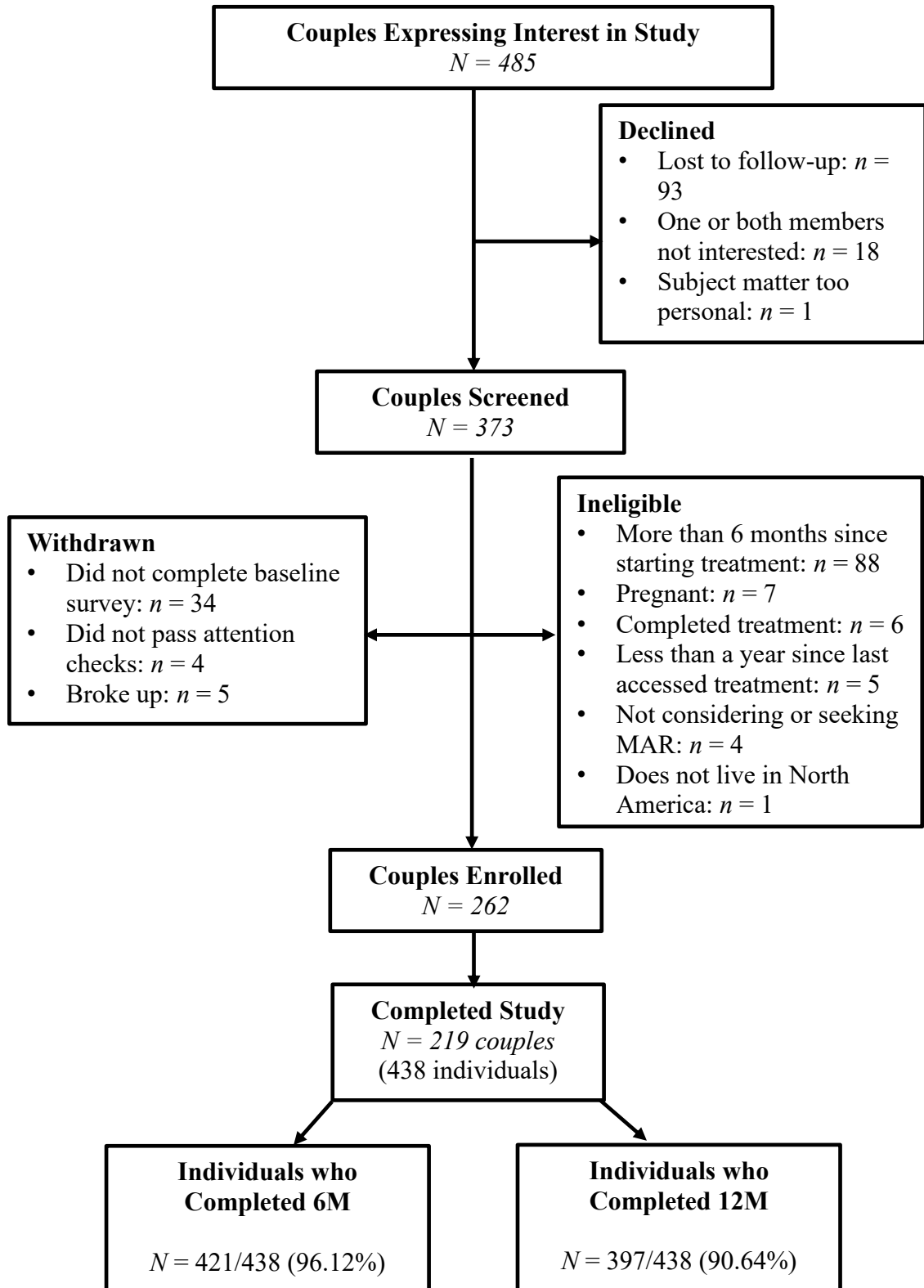
Supplemental Figure B.6. Sexual Destiny Beliefs and Sexual Distress RI-CLPM



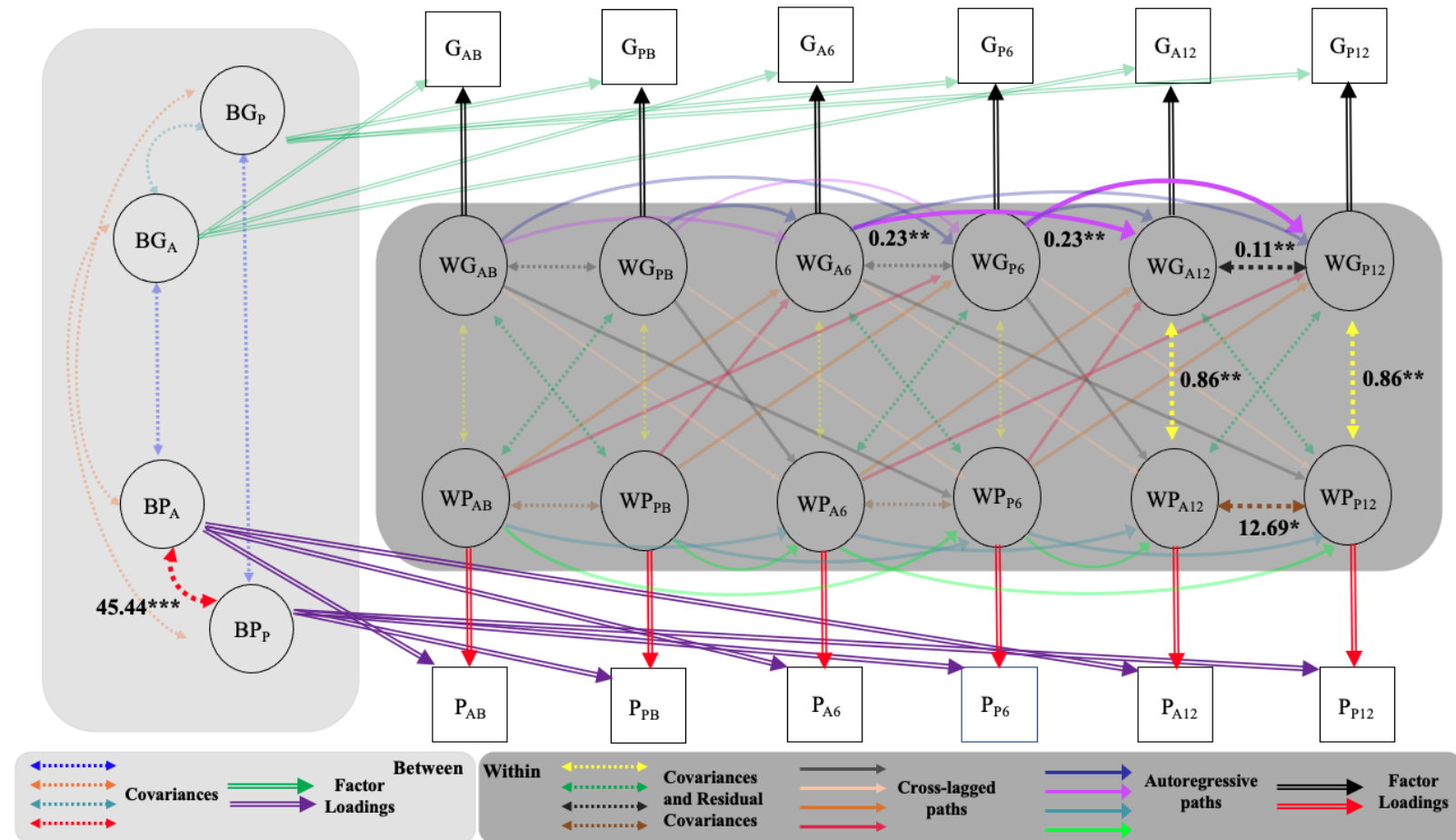
Note. **B** = Between-person, **W** = Within-person, **D** = Sexual Destiny Beliefs, **De** = Sexual Distress, **AB and PB** = Actor and Partner Baseline Score, **A6 and P6** = Actor and Partner 6-Month Score, **A12 and P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded. The primary study hypotheses are depicted in the cross-lagged paths (i.e., the grey, light and dark orange, and red arrows), which are all non-significant in this model.

APPENDIX C. Supplemental Materials for Study 2

Supplemental Figure C.1. Flow of Recruitment

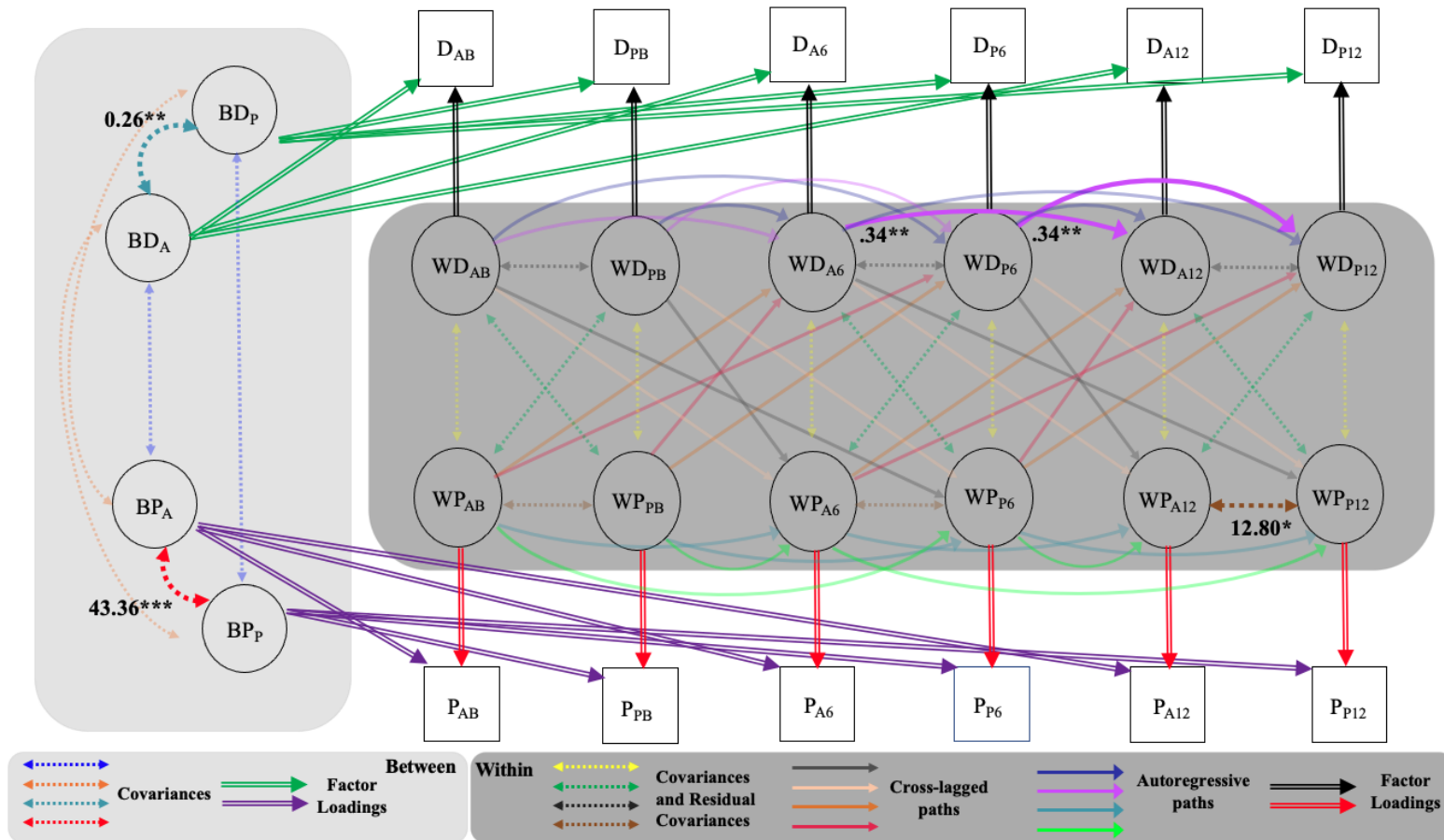


Supplemental Figure C.2. Sexual Growth Beliefs and Positive Dyadic Coping RI-CLPM



Note. **B** = Between-person, **W** = Within-person, **G** = Sexual Destiny Beliefs, **P** = Positive Dyadic Coping, **AB** and **PB** = Actor and Partner Baseline Score, **A6** and **P6** = Actor and Partner 6-Month Score, **A12** and **P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded.

Supplemental Figure C.3. Sexual Destiny Beliefs and Positive Dyadic Coping RI-CLPM



Note. **B** = Between-person, **W** = Within-person, **G** = Sexual Destiny Beliefs, **N** = Positive Dyadic Coping, **AB and PB** = Actor and Partner Baseline Score, **A6 and P6** = Actor and Partner 6-Month Score, **A12 and P12** = Actor and Partner 12-Month Score. Paths that share colour and arrow style are constrained to be equal between partners as dyads were indistinguishable. Paths were not constrained to be the same across time, which is not shown here for parsimony. Significant paths are bolded. Non-significant paths are faded.

Unconditional Latent Growth Curve Models for Sexual Growth and Destiny Beliefs

The unconditional dyadic latent growth curve model of the trajectory for sexual growth beliefs across one-year demonstrated adequate fit, $\chi^2(7) = 9.40, p = 0.23$; CFI = 0.99, TLI = 0.99; RMSEA = 0.04 [90% CI = 0.00 – 0.09]; SRMR = .02. Random estimates of the intercepts were all significant, indicating variability in sexual growth beliefs at baseline for each member of the couple ($M = 5.68; p = 0.00; M = 5.69; p = 0.00$). Significant variability in the random estimate of one partner's slope was found, indicating variability in sexual growth beliefs (i.e., change over time) across one-year for only one member of the couple ($\sigma^2 = 0.37, p = 0.00$).

The unconditional dyadic latent growth curve model of the trajectory for sexual destiny beliefs across one-year demonstrated good fit, $\chi^2(7) = 4.08, p = .77$; CFI = 1.00, TLI = 1.00; RMSEA = 0.00 [90% CI = 0.00 – 0.06]; SRMR = .02. Random estimates of the intercepts were all significant, indicating variability in sexual destiny beliefs for both partners ($M = 2.45; p = 0.00; M = 2.48; p = 0.00$) at baseline. Significant variability in the random estimate of one partner's slope was found, indicating variability in sexual destiny beliefs (i.e., change over time) across one-year for only one member of the couple ($\sigma^2 = .01, p = 0.00$).

Autoregressive Effects and Concurrent Associations from Study 2

Sexual Growth and Negative Dyadic Coping

Deviations in one's own negative dyadic coping at six months (from their own average levels) were related to deviations in their own negative dyadic coping at 12-months.

Deviations in one's own sexual growth beliefs at six months (from their own average levels) were related to deviations in their own sexual growth beliefs at 12-months.

We found several concurrent actor-partner associations. A person's greater negative dyadic coping at 6- and 12-months were related to their partners' lower sexual growth beliefs at each time point. Moreover, one member reporting greater sexual growth beliefs at 12-months, was related to their partner also endorsing greater sexual growth beliefs.

Sexual Destiny & Negative Dyadic Coping

We found a positive and significant between-dyad association for couples' negative dyadic coping, suggesting that individuals with higher-than-average levels of negative dyadic coping across one year tend to have partners with higher-than-average levels of negative dyadic coping as well. A similar effect was found for sexual destiny beliefs, such that individuals with higher-than-average levels of sexual destiny beliefs over a one-year period also have partners who report higher-than-average levels of sexual destiny beliefs.

Deviations in one's own negative dyadic coping at 6-months (from their average levels) are related to deviations in their negative coping at 12-months, such that reporting higher than typical negative dyadic coping at 6-months is associated with reporting higher than typical negative dyadic coping at 12-months.

The one concurrent association identified demonstrated that one member of the couple reporting greater negative dyadic coping at 6-months was related to their partner also endorsing greater negative dyadic coping.

Positive Dyadic Coping

We found a positive and significant between-dyad association for couples' positive dyadic coping, suggesting that individuals with higher-than-average levels of positive dyadic coping across one year tend to have partners with higher-than-average levels of positive dyadic coping as well.

A person's greater positive dyadic coping at 12-months was related to their own greater sexual growth beliefs at the same time. Moreover, one member reporting greater sexual growth beliefs and positive dyadic coping at 12-months was related to their partner also endorsing greater sexual growth beliefs and positive dyadic coping, respectively.

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Destiny Beliefs in the Transition to Parenthood

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Will you be translating? no

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Title SEXUAL GROWTH AND DESTINY BELIEFS: ASSOCIATIONS WITH COUPLES' SEXUAL WELL-BEING AND COPING DURING THE PATHWAY TO PARENTHOOD

Institution name Dalhousie University

Expected presentation date Aug 2022

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