



**Universidade do Minho**

Escola de Psicologia

Ana Catarina Miranda Canário

## **Ajustamento psicológico e relacionamento conjugal em casais na gravidez e pós-parto**

julho de 2014



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Trabalho realizado sob a orientação da  
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Carvalho Figueiredo**

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# AJUSTAMENTO PSICOLÓGICO E RELACIONAMENTO CONJUGAL EM CASAIS NA GRAVIDEZ E PÓS-PARTO

## Resumo

**Objetivos:** Este estudo teve como objetivos avaliar (1) as trajetórias dos sintomas de ansiedade e de depressão, e das dimensões positiva e negativa da relação com o companheiro desde o início da gravidez até aos 30 meses pós-parto, avaliando os efeitos de tempo, género e paridade, e considerando a interdependência das variáveis dependentes ao nível do casal; e (2) a associação entre as trajetórias das dimensões positiva e negativa da relação com o companheiro e dos sintomas de ansiedade e de depressão ao longo da transição para a parentalidade, avaliando o efeito de género, e controlando o efeito de paridade.

**Método:** 260 casais ( $N = 520$ ) recrutados no serviço de obstetria de um hospital (Portugal) preencheram medidas autorrelato de ansiedade e de depressão, e de qualidade do relacionamento conjugal em cada trimestre de gravidez, no parto, aos três e aos 30 meses pós-parto. Curvas diádicas de crescimento segmentadas foram realizadas através de modelos multinível.

**Resultados:** Desde o primeiro trimestre de gravidez até aos três meses pós-parto verificou-se a diminuição dos sintomas de ansiedade e de depressão, e das dimensões positiva e negativa da relação com o companheiro. Entre os três e os 30 meses pós-parto, verificou-se o aumento dos sintomas de ansiedade e de depressão, e da dimensão negativa da relação com o companheiro, enquanto a dimensão positiva da relação com o companheiro diminuiu. Em mulheres e participantes múltiparos verificou-se a diminuição da dimensão positiva da relação com o companheiro, e em participantes primíparos a diminuição da dimensão negativa da relação com o

companheiro, entre o primeiro trimestre de gravidez e os três meses pós-parto. Em participantes primíparas verificou-se uma diminuição mais pronunciada na dimensão positiva da relação com o companheiro, e em mulheres múltiparas um aumento mais pronunciado dos sintomas de ansiedade e de depressão entre os três e os 30 meses pós-parto. Durante este período verificou-se ainda que homens com menor dimensão positiva da relação com a companheira apresentaram um aumento mais pronunciado dos sintomas de ansiedade, e que mulheres e homens com elevada dimensão negativa da relação com o(a) companheiro(a) apresentaram um aumento mais pronunciado dos sintomas de depressão. Os sintomas de ansiedade e de depressão, assim como as dimensões positiva e negativa da relação com companheiro demonstraram estar correlacionados ao nível da diáde.

**Conclusão:** O período compreendido entre o primeiro trimestre de gravidez e os três meses pós-parto revelou ser um período de ajustamento psicológico, enquanto o período compreendido entre os três e os 30 meses pós-parto demonstrou ser um período de risco psicológico. Ao longo da transição para a parentalidade verificou-se ainda a deterioração da qualidade da relação conjugal. Os programas de prevenção e intervenção com vista à redução do risco psicológico e da deterioração da qualidade da relação conjugal ao longo da gravidez e pós-parto beneficiariam da inclusão de ambos os elementos do casal, mulheres e homens, primíparas e múltiparas, atendendo aos desafios particulares da transição de acordo com o género e a paridade, e da atribuição de particular atenção ao período posterior aos três meses pós-parto. Mais ainda, os programas de intervenção no âmbito da sintomatologia ansiosa e depressiva de mulheres e homens beneficiariam da promoção da qualidade do relacionamento conjugal.

# PSYCHOLOGICAL ADJUSTMENT AND PARTNER RELATIONSHIP IN COUPLES DURING PREGNANCY AND POSTPARTUM

## Abstract

**Aims:** The purposes of this study were to analyze (1) the trajectories of change for anxiety and depressive symptoms, and positive and negative partner relationship from early pregnancy to 30-months postpartum, assessing time, gender and parity effects, and considering partner's interdependence on the outcome variable; and (2) the association between the trajectories of positive and negative partner relationship, anxiety and depressive symptoms over the transition to parenthood, assessing gender effects, while controlling for parity.

**Method:** 260 couples (N=520) recruited from an Obstetrics Out-patient Unit (Portugal) completed self-report measures of anxiety and depression, and partner relationship quality at each pregnancy trimester, childbirth, 3- and 30-months postpartum. Using multilevel modeling, piecewise dyadic growth curve models were performed.

**Results:** From the first trimester of pregnancy to 3-months postpartum anxiety and depressive symptoms, and positive and negative partner relationship decreased. From 3- to 30-months postpartum anxiety and depressive symptoms, and negative partner relationship increased, whereas positive partner relationship decreased. Women and multiparous parents presented a decrease in positive partner relationship, and primiparous parents a decrease in negative partner relationship from the first trimester to 3-months postpartum. Primiparous parents presented a steeper decrease in positive partner relationship, and multiparous women a steeper increase in anxiety and depressive symptoms from 3- to 30-months postpartum. Moreover, over this period, men's anxiety symptoms showed a steeper increase when they had low positive partner

relationship, and both women's and men's depressive symptoms presented a steeper increase when they reported high negative partner relationship. Anxiety and depressive symptoms, and positive and negative partner relationship were correlated within-dyad.

**Conclusions:** From the first trimester to 3-months postpartum psychological adjustment was enhanced, whereas from 3- to 30-months postpartum the risk for psychological symptoms increased. Partner relationship quality deteriorated over the transition to parenthood. Prevention and intervention programs aimed at reducing the risk of psychological symptoms and partner relationship quality deterioration over pregnancy and the postpartum period would benefit from including both partners, women and men, primiparous and multiparous, attending to the specific challenges posed by these periods according to gender and parity, and by devoting particular attention to the period after 3-months postpartum. Additionally, intervention programs targeting women's and men's anxiety and depressive symptoms during the transition to parenthood would benefit from enhancing partner relationship quality.

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## SIGLAS E ABREVIATURAS

EPDS: Edinburgh Postnatal Depression Scale

MLM: Multilevel Modeling

RQ: Relationship Questionnaire

STAI: State-Trait Anxiety Inventory

SCID-I: Structured Clinical Interview for DSM-IV

TCS-PDN: Transcultural Study of Postnatal Depression

## INTRODUÇÃO

A transição para a parentalidade é identificada como um processo significativo que representa uma das mais importantes transições no ciclo de vida familiar (e.g., Cigoli & Scabini, 2006; Cowan & Cowan, 1995; Demick, 2002). Embora sejam consideradas fases gratificantes da vida de mulheres e homens, a gravidez e o pós-parto podem também constituir-se períodos de crise (e.g., Heinicke, 2002), tendo o potencial para comprometer o ajustamento psicológico individual e a qualidade da relação conjugal (e.g., Cowan & Cowan, 2003; Doss, Rhoades, Stanley, & Markman, 2009; Keeton, Perry-Jenkins, & Sayer, 2008; Moss, Skouteris, Wertheim, Paxton, & Milgrom, 2009). Neste sentido, esta dissertação tem como objetivos principais avaliar o ajustamento psicológico (através da sintomatologia ansiosa e depressiva), e a qualidade da relação conjugal (através das dimensões positiva e negativa da relação com o companheiro), bem como a sua associação, no âmbito da adaptação individual e diádica de 260 casais desde o primeiro trimestre de gravidez até aos 30 meses pós-parto.

Numa primeira parte é apresentado o enquadramento conceptual subjacente a este trabalho científico em que são apresentadas as teorias no âmbito da transição para a parentalidade, com particular enfoque na perspetiva desenvolvimental e na teoria da interdependência, assim como o estado da arte inerente à sintomatologia ansiosa e depressiva e à qualidade da relação conjugal na gravidez e pós-parto que justificam os objetivos desta dissertação.

Tais objetivos são avaliados em três estudos empíricos que visam contribuir para o estado da arte existente sobre a adaptação e ajustamento à transição para a parentalidade. O primeiro

estudo empírico, subordinado ao título *“Anxiety and Depressive Symptoms in Women and Men: From Early Pregnancy to 30-Months Postpartum”*, tem como objetivos avaliar as trajetórias dos sintomas de ansiedade e de depressão, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, analisando efeitos de género e de paridade, bem como a interdependência entre os sintomas dos elementos do casal. O segundo estudo empírico, subordinado ao título *“Partner Relationship from Early Pregnancy to 30-months Postpartum: Gender and Parity Effects”*, tem como objetivos avaliar as trajetórias das dimensões positiva e negativa da relação com o companheiro, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, analisando efeitos de género e de paridade, bem como a interdependência entre as dimensões da relação conjugal dos elementos do casal. Por sua vez, o terceiro estudo empírico, subordinado ao título *“The Moderation Effect of Partner Relationship Quality on Couple’s Anxiety and Depressive Symptoms from Early Pregnancy to 30-months Postpartum”*, tem como objetivos avaliar a associação entre as trajetórias das dimensões positiva e negativa da relação com o companheiro e as trajetórias de sintomas de ansiedade e de depressão, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, considerando a interdependência entre os sintomas e as dimensões da relação conjugal dos elementos do casal, analisando efeitos de género e controlando o efeito da paridade.

Por último, na conclusão é apresentada uma síntese dos resultados dos estudos empíricos, bem como a sua discussão à luz do enquadramento conceptual que suporta esta dissertação. São ainda apresentadas as limitações e mais-valias deste estudo científico, assim como as suas contribuições para a literatura, intervenção e investigação futura.

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## ENQUADRAMENTO CONCEPTUAL

### 1. Transição para a parentalidade

#### 1.1. Transição desenvolvimental

A perspectiva do ciclo de vida baseia-se na premissa de que as mudanças apresentadas pelos indivíduos ao longo da vida, desde a concepção e até à morte, fazem parte do seu desenvolvimento (Baltes, Reese, & Lipsitt, 1980). O estudo do desenvolvimento ao longo do ciclo de vida implica o estudo de mudanças sistemáticas individuais, do comportamento e, consequentemente, dos processos e sistemas que lhe estão inerentes ao longo do tempo (Overton, 2010).

A ontogénese, ou o desenvolvimento do indivíduo ao longo do ciclo de vida, é um dos principais focos de atenção do estudo do desenvolvimento humano (Overton, 2010). Especificamente, esta área de estudo permite organizar a estrutura e sequência do desenvolvimento ao longo da vida, identificar a ligação entre eventos de desenvolvimento precoce e tardio, identificar os fatores e mecanismos biológicos, psicológicos, sociais e ambientais que proporcionam a mudança ao longo do ciclo de vida, bem como especificar as oportunidades e constrangimentos que modelam o desenvolvimento dos indivíduos ao longo do tempo (Baltes, Lindenberger, & Staudinger, 2006). Assim, o estudo da ontogénese permite caracterizar a evolução do indivíduo nas, e entre, as diferentes fases de desenvolvimento (Overton, 2010; Soares, 2000a). Com efeito, permite avaliar as transições e tarefas de desenvolvimento que se processam ao longo do ciclo de vida e marcam o movimento ou transição de uma condição de desenvolvimento para

outra, levando os indivíduos a experienciar mudança e reorganização em muitos aspetos das suas vidas (e.g., Cowan & Cowan, 2003; Miller, 2010; Oerter, 1986).

As transições no desenvolvimento humano são processos de longo prazo que resultam numa reorganização qualitativa do *self* e do comportamento do indivíduo. Para que uma mudança na vida de um indivíduo se constitua uma transição no desenvolvimento, deve envolver não só uma reorganização qualitativa do *self*, influenciando o modo como o indivíduo conhece, compreende e sente o próprio e o ambiente, como também mudanças do seu comportamento, através da reorganização de papéis e das relações com as pessoas significativas, por exemplo (Cowan, 1991). Como um processo que é, a reorganização é uma característica fundamental nas transições desenvolvimentais, sendo que a mera evolução num marco temporal, como por exemplo a entrada na escola, ou a mudança de identidade, como por exemplo tornar-se cônjuge ou pai, não significa por si só que a transição tenha sido concluída (Cowan, Cowan, Heming, & Miller, 1991).

As transições no desenvolvimento dizem respeito a uma ampla gama de fenómenos, podendo ser classificadas como normativas ou não normativas (Cowan, 1991; Cowan & Cowan, 2003). As transições normativas dizem respeito a mudanças expectáveis que tendem a acontecer em todos os indivíduos (e.g., puberdade), ou numa vasta maioria de pessoas numa população definida (e.g., indivíduos adultos que se tornam pais). As transições não normativas concernem a mudanças menos comuns e que são frequentemente imprevisíveis (e.g., situações de guerra, desemprego, ou divórcio) (Cowan, 1991; Cowan & Cowan, 2003). São ainda conceptualizadas como transições no desenvolvimento a evolução nos períodos específicos do ciclo de vida (e.g., infância, adolescência, idade adulta e velhice), assim como outros eventos de vida passíveis de causar desenvolvimento ou crescimento pessoal (Oerter, 1986).

As transições no desenvolvimento operacionalizam-se através das tarefas de desenvolvimento. Estas requerem a utilização de estratégias e recursos, endógenos e exógenos, favoráveis ao desenvolvimento e reorganização, permitindo o alcance de níveis de organização mais complexos, nomeadamente a redefinição do próprio, dos seus papéis e comportamentos (Cowan, 1991; Figueiredo, 2011; Oerter, 1986). À medida que novas tarefas de desenvolvimento vão surgindo, os recursos adquiridos nas tarefas de desenvolvimento anteriores vão sendo hierarquicamente integrados e reorganizados (Soares, 2000a). Neste processo de desenvolvimento, a integração acontece dentro de, e entre, os domínios psicológico, social, comportamental, cognitivo, emocional e afetivo (Lerner, 2002; Oerter, 1986; Soares, 2000a).

Desde modo, o sucesso ou o insucesso do indivíduo na realização das tarefas de desenvolvimento tem impacto no desenvolvimento subsequente (Soares, 2000a). A tarefa de desenvolvimento que é cumprida com sucesso permite ao indivíduo lidar adequadamente com as exigências e desafios do presente e promove a sua adaptação futura ao ambiente, contribuindo assim para o crescimento e maturação, numa trajetória adaptativa de desenvolvimento (Figueiredo, 2011; Soares, 2000a). Por outro lado, quando a inexistência de estratégias e de recursos ditam o insucesso no cumprimento da tarefa de desenvolvimento, é comprometida a qualidade da integração, com implicações para a sua adaptação futura ao ambiente, contribuindo para uma trajetória indaptativa de desenvolvimento (Soares, 2000a).

## **1.2. A perspetiva desenvolvimental da transição para a parentalidade**

As famílias evoluem ao longo de um extenso período de tempo, experienciando transições que são elementos das trajetórias familiares e que possuem significado para os seus membros (Miller, 2010). O ciclo familiar, que corresponde ao período de tempo ao longo do qual as famílias se constituem e evoluem, caracteriza-se por um conjunto de estágios ordenados, definidos pelas

variações na composição e tamanho da família. Concretamente, os principais fatores de mudança na família incluem o abandono da família nuclear, o casamento, o nascimento dos filhos, a saída de casa dos filhos, a reforma de um ou de ambos os cônjuges, e a dissolução marital pela morte de um dos cônjuges (Elder, 1991; McGoldrick & Carter, 2003). Destes, o nascimento de um filho é considerado o mais significativo, representando uma das mais importantes transições do ciclo de vida da família (Cigoli & Scabini, 2006; Cowan & Cowan, 1995; Demick, 2002).

Ao longo do tempo, a investigação científica tem-se interessado não só pelas transições significativas individuais no curso de vida dos indivíduos, como por exemplo tornar-se pai, mas também com o estudo e compreensão das famílias que estão em processo de constituição e reorganização, por exemplo, através da transição para a parentalidade ou da alteração do sistema familiar pelo nascimento de mais um filho. A perspectiva desenvolvimental de transição familiar assume assim relevância, pois a mudança que ocorre ao nível da família pode despoletar o desequilíbrio e a reorganização de todo o sistema, repercutindo-se nas múltiplas trajetórias desenvolvimentais de cada membro (Cowan, 1991).

A transição para a parentalidade é conceptualizada como uma mudança normativa na vida dos indivíduos (e.g., Baltes et al., 1980; Cowan, 1991; Cowan & Cowan, 2003). Consiste num período de ajustamento individual e familiar, durante o qual o casal emprega estratégias e recursos que lhe permitem lidar com a inclusão de um novo membro na família (Cowan et al., 1991; Krieg, 2007). A literatura não define claramente quando começa ou termina este processo. Se, para alguns casais, a transição se inicia durante a gravidez, para outros casais inicia-se previamente à conceção, quando planeiam ser pais (Cowan et al., 1991). No que concerne à conclusão, enquanto alguns autores consideram que ocorre por altura do parto (e.g., Cigoli & Scabini, 2006), para outros autores ocorre no primeiro ano pós-parto (e.g., Mercer, 1986). Outros

autores ainda, não identificando claramente a conclusão temporal desta mudança familiar, apontam a hipótese de que a transição se conclui por volta dos dois anos pós-parto (Cowan et al., 1991; Demick, 2002).

O processo de transição para a parentalidade tem sido alvo de significativos estudos nas últimas décadas, sendo não só caracterizado como um período gratificante na vida de mulheres e homens, mas também como uma das crises mais significativas das suas trajetórias de vida (Cowan et al., 1991; Heinicke, 2002). Do ponto de vista desenvolvimental tornar-se pai/mãe implica o ingresso numa nova fase do ciclo de vida, e o nascimento de um segundo ou terceiro filho envolve a alteração da dinâmica e sistema familiar, levando a uma redefinição de tarefas e papéis (Canavarro & Pedrosa, 2005).

Assim, a transição para a parentalidade não se limita à gravidez e nascimento de um primeiro filho. A gravidez e nascimento dos filhos subsequentes, igualmente concetualizadas como transições normativas (Volling, 2012), implicam tensão e mudança do ponto de vista individual e familiar (Cowan et al., 1991; Krieg, 2007).

Do ponto de vista individual, a transição para a parentalidade resulta numa reorganização qualitativa do *self* e do comportamento (Cowan, 1991). No que diz respeito à organização qualitativa do *self*, esta transição envolve desafios e perdas que proporcionam oportunidades de crescimento e integração significativas (Demick, 2002; Slade, Cohen, Sadler, & Miller, 2009). Ao mesmo tempo que se estabelece uma mudança na regulação interna do afeto, tornam-se necessários recursos que permitam lidar com novos desafios (Cowan & Cowan, 2003). A reorganização do comportamento envolve a alteração dos papéis sociais e a reestruturação das relações próximas. Aos papéis sociais previamente desempenhados pelos indivíduos, adiciona-se o de pai ou mãe. Esta alteração implica a reorganização dos restantes papéis na rede de relações

centrais dos indivíduos, causando nestas um desequilíbrio e consecutiva necessidade de redefinição (Cowan & Cowan, 2003; Slade et al., 2009). Que, por sua vez, contribuem para a diminuição significativa do tamanho das redes sociais de suporte, identificada em diversos estudos longitudinais focados na experiência de transição para a parentalidade (Wrzus, Hänel, Wagner, & Neyer, 2013).

Do ponto de vista familiar, a transição para a parentalidade acarreta a diferenciação e o ajustamento do sistema. Com o nascimento do primeiro filho ocorre a diferenciação dos subsistemas parental, coparental e filial (Relvas & Lourenço, 2006; Van Egeren, 2004). O sistema coparental, subsidiário do sistema parental, consiste na relação colaborativa que se estabelece entre os pais enquanto figuras de prestação de cuidados ao filho (Van Egeren, 2004). Posteriormente, com o nascimento de outros filhos surge o subsistema fraternal. O sistema familiar complexifica-se com o número de filhos, por um lado porque os pais assumem o papel de pais de diferentes crianças, mas também porque os filhos se organizam como irmãos, definindo um novo espaço familiar, com novos limites e fronteiras (Relvas & Lourenço, 2006).

No que concerne ao ajustamento familiar, a investigação tem demonstrado que a transição para a parentalidade se constitui um fator de *stress* na vida das famílias, implicando mudanças mais profundas e significativas do que qualquer outra fase de desenvolvimento do ciclo de vida familiar (Cowan & Cowan, 1995). Adicionar uma nova identidade ao sistema familiar leva à diferenciação de papéis e tem impacto na frequência, intensidade, qualidade e conteúdo das transações familiares (Cowan & Cowan, 2003).

### **1.2.1. Tarefas de desenvolvimento da gravidez e pós-parto**

À semelhança das diferentes transições desenvolvimentais com que os indivíduos lidam ao longo do ciclo de vida, também ao longo da gravidez e do pós-parto existe a necessidade de

resolver tarefas de desenvolvimento específicas. Estas permitem o alcance de níveis de organização e desenvolvimento mais complexos (Brazelton & Cramer, 1993; Canavarro, 2006; Canavarro & Pedrosa, 2005; Figueiredo, 2000).

Ao longo da gravidez, os pais têm a oportunidade de se preparar física e psicologicamente para a parentalidade. Definida num período compreendido entre a conceção e o parto, a gravidez engloba o processo fisiológico de desenvolvimento e maturação do feto, a par de adaptações psicológicas particulares da grávida (Brazelton & Cramer, 1993; Slade et al., 2009). O parto inicia um estágio mais longo ao qual corresponde a condição de ser mãe ou pai (Figueiredo, 2000).

A parentalidade é um processo a longo prazo, que envolve relações bidirecionais entre membros de duas ou mais gerações, prolonga-se ao longo do ciclo de vida, e insere-se na dinâmica da sociedade, sendo fortemente influenciada pelos padrões culturais, representações sociais, crenças, valores, políticas e ideologias de uma população (Brazelton & Cramer, 1993; Ford & Lerner, 1992; Slade et al., 2009). Este processo assume maior relevância nos primeiros anos após o parto, dada a necessidade de prestação de numerosos cuidados à criança, de modo a proporcionar o seu bem-estar e desenvolvimento adequado (Canavarro, 2006).

As tarefas de desenvolvimento da gravidez e do pós-parto são relevantes para a adaptação de mães e pais ao filho que integrará o sistema familiar (Cowan, 1991; Oerter, 1986). Concretamente, estas tarefas visam promover o envolvimento emocional dos pais, a aceitação e a segurança do bebé (Figueiredo, 2013, 2014; Rubin, 1984). Ao longo do tempo tem havido a tentativa de sistematizar as sucessivas tarefas de desenvolvimento que caracterizam esse período. No entanto, deve ser salientado que à luz das diferenças intra e interindividuais, a sucessão destas tarefas não é linear, sendo que as mesmas se podem sobrepor (Canavarro, 2006).

Assim, as tarefas de desenvolvimento da gravidez e do pós-parto compreendem: aceitar a gravidez; aceitar a realidade do feto; reavaliar a relação com os pais; reavaliar e reestruturar a relação com o cônjuge; aceitar o bebê como uma pessoa separada; reavaliar e reestruturar a identidade do próprio; construir o sistema coparental; reavaliar e reestruturar a relação com os filhos anteriores, no caso dos indivíduos que não são pais pela primeira vez; e operacionalizar a parentalidade.

A tarefa que diz respeito à aceitação da gravidez caracteriza-se por um sentimento de ambivalência afetiva, em que os indivíduos sentem satisfação pela notícia a par de preocupação pela responsabilidade associada (Brazelton & Cramer, 1993; Canavarro, 2006; Figueiredo, 2000; Slade et al., 2009).

A aceitação da realidade do feto é a tarefa que representa a individualização do feto relativamente à mãe, sendo que este passa a ser considerado uma entidade fisicamente distinta que se prepara para um funcionamento autónomo (Brazelton & Cramer, 1993; Canavarro, 2006; Figueiredo, 2000).

Na tarefa de reavaliação da relação com os pais, o modelo de parentalidade destes no passado e no presente é avaliado, no sentido dos novos pais encontrarem um equilíbrio nas práticas a desempenhar (Ammaniti, 1994; Canavarro, 2006; Cowan & Cowan, 1992; Figueiredo, 2000). O estabelecimento da identidade enquanto mãe ou pai envolve a ativação das representações internas da relação com os pais e das experiências precoces de prestação de cuidados (Slade et al., 2009).

Por outro lado, a reavaliação e reestruturação da relação com o cônjuge pressupõe a realização de um reajustamento na relação conjugal, em função das alterações que serão incorporadas no agregado pelo nascimento (Canavarro, 2006; Cowan & Cowan, 1992; Figueiredo, 2000; Slade et al., 2009). Tal pode ativar recursos pessoais e relacionais e consolidar a

identidade do casal, mas pode também ter o efeito oposto. Neste âmbito, a principal tarefa que o casal enfrenta é a de integrar as dimensões conjugal e parental da sua relação, a par do desenvolvimento de uma nova identidade relacional (Cigoli & Scabini, 2006).

Ao aceitar o bebé como uma pessoa separada, os indivíduos preparam-se para a separação do bebé que será determinada pelo parto, levando ao reconhecimento do bebé como um ser com características e necessidades próprias (Brazelton & Cramer, 1993; Canavarro, 2006; Cowan & Cowan, 1992; Figueiredo, 2000). Esta tarefa prende-se ainda com a idealização do bebé e o desenvolvimento de expectativas sobre este (Rubin, 1984). À medida que as transformações físicas vão ocorrendo ao longo da gravidez, o investimento emocional da mãe é redirecionado do mundo exterior para o bebé, o que potencia a transição psicológica para a maternidade (Slade et al., 2009). Paralelamente, neste período, há também a necessidade de uma reavaliação e reestruturação da identidade do próprio, que se processa pelo exercício do novo papel de mãe ou pai e que necessariamente implica a reorganização dos restantes papéis previamente desempenhados (Canavarro, 2006; Cowan & Cowan, 1992; Slade et al., 2009).

A tarefa de construção do sistema coparental prevê o estabelecimento de uma relação de cooperação e colaboração entre os pais, em que estes desenvolvem uma aliança emocional e comportamental, que lhes permite a tomada de decisão e partilha de experiências conjuntas com vista à resposta adequada às necessidades da criança (Figueiredo, 2000, 2005; Van Egeren, 2004).

Nos sistemas familiares que já integram filhos, é também necessário reavaliar e reestruturar a relação estabelecida com estes previamente ao nascimento de mais um filho, dadas as alterações que o sistema familiar sofrerá (Canavarro, 2006; Slade et al., 2009).

Por último, a tarefa de operacionalização da parentalidade implica a prestação de cuidados ao bebé adequados ao seu desenvolvimento e necessidades manifestadas (Figueiredo, 2000; 2005).

### 1.2.2. Modelo desenvolvimental multidimensional da transição para a parentalidade

A perspetiva desenvolvimental da transição para a parentalidade propõe um *continuum* de dimensões com vista à identificação dos fatores que contribuem para o *distress*, bem como para a adaptação do sistema familiar (e.g., Cowan & Cowan, 1992, 2003; Cowan et al., 1991). Assim, são dimensões relevantes na transição para a parentalidade:

- a) A ansiedade dos progenitores perante o facto de se tornarem pais, subjacente à reorganização qualitativa do *self*, bem como o seu nível de bem-estar e de *distress* (Cowan & Cowan, 1992, 2003; Cowan et al., 1991).
- b) A qualidade dos relacionamentos na família, particularmente, a qualidade do relacionamento dos progenitores com os seus próprios pais, e a qualidade do relacionamento estabelecido entre cada um dos progenitores e o(s) filho(s) (Cowan & Cowan, 1992, 2003; Cowan et al., 1991); a qualidade do relacionamento intergeracional entre os progenitores, os seus pais e o(s) seu(s) filho(s) (Cowan et al., 1991); e a qualidade do relacionamento fraterno quando há dois ou mais filhos na família (Cowan & Cowan, 2003).
- c) A qualidade do relacionamento entre o casal, especificamente no que concerne à negociação dos novos papéis e decisões na família, à divisão das tarefas e aos padrões de comunicação (Cowan & Cowan, 1992, 2003; Cowan et al., 1991).

- d) A ligação entre a família nuclear e os indivíduos ou instituições alheias à família, com particular ênfase no trabalho, estudos, e no equilíbrio entre fatores de risco e de proteção ou adaptação (Cowan & Cowan, 2003; Cowan et al., 1991).
- e) As consequências do nascimento de um filho nas diferentes áreas de funcionamento dos indivíduos, que se encontram interligadas de formas complexas (Cowan & Cowan, 1992).

De acordo com esta perspectiva, a família é concetualizada como um sistema organizado, constituído por sistemas diádicos e triádicos independentes, que se influenciam mutuamente ao longo do tempo. As ligações que se estabelecem entre os elementos do casal, assim como entre os progenitores e o(s) filho(s), são circulares, sendo que no sistema familiar estes elementos influenciam-se mutuamente. Como tal, as famílias possuem características de autorregulação. Uma transição, como uma perturbação que afeta o sistema familiar, leva ao desempenho de um conjunto de tarefas com vista ao ajustamento do sistema (Cowan & Cowan, 2003). Esta perspectiva é consistente com a abordagem teórica proposta por Bronfenbrenner (1979). Para compreender o que acontece aos membros da família e aos seus relacionamentos durante as transições significativas no ciclo de vida familiar, é necessário avaliar as interconexões entre os diferentes domínios (Cowan et al., 1991).

Desde a transição para a parentalidade, pais e filhos estão interligados, não só do ponto de vista estrutural, mas também do ponto de vista funcional, num sistema de múltiplos níveis que inclui dimensões biológicas, psicológicas, interpessoais, socioculturais, e históricas (Demick, 2002; Lerner, 2002). No exercício da parentalidade, os pais são influenciados por e, simultaneamente, influenciam os diferentes níveis do sistema desenvolvimental (Lerner, Rothbaum, Boulos, & Castellino, 2002). A complexidade dos domínios envolvidos na transição para a parentalidade demonstra que este processo é multideterminado e não linear. Igualmente, a

complexidade das interações entre os domínios pode permitir identificar aqueles que são mais vulneráveis, potenciais fatores de risco, mas também aqueles que potencialmente se podem constituir como fatores de proteção e adaptação (Canavarro & Pedrosa, 2005).

### **1.3. Outros contributos teóricos relevantes**

A transição para a parentalidade representa uma mudança significativa na vida de mulheres e homens. A investigação científica tem procurado, desde os anos 40, caraterizar este processo, descrevendo-o não só como um período gratificante, mas também como um período de crise significativa (Heinicke, 2002). Tem, igualmente, procurado avaliar e compreender o processo de transição para a parentalidade, e o seu impacto ao nível individual, diádico e familiar, à luz de diferentes modelos teóricos (Roy, Schumm, & Britt, 2014). A perspetiva desenvolvimental, anteriormente descrita, é porventura um dos modelos teórico mais utilizado nos estudos referentes ao processo de transição para a parentalidade (Roy et al., 2014). Não obstante, apresentar-se-á, de seguida, uma breve caraterização do processo de transição para a parentalidade, no âmbito da teoria da vinculação, da teoria ecológica, e da teoria da interdependência, enquanto contributos teóricos relevantes para a perspetiva desenvolvimental.

No quadro da teoria da vinculação, o sistema de prestação de cuidados corresponde a um conjunto de comportamentos específicos que têm uma função adaptativa com vista à proteção e proximidade da criança (Bowlby, 1982; George & Solomon, 2008). Este sistema, guiado por representações internas da prestação de cuidados, e tendo por base as experiências precoces com o prestador de cuidados na infância (Solomon & George, 1996), é ativado na gravidez (Slade et al., 2009), de modo a que os pais estejam capazes de prestar cuidados à criança após o nascimento (Figueiredo, 2014). Desenvolve-se sobretudo ao longo da transição para a

parentalidade, fruto da complexa interação entre fatores de natureza biológica, psicológica e social (Rabouam & Morálès-Huet, 2004), modificando em função da interação com a criança (Figueiredo, 2014).

O sistema de prestação de cuidados é complementar e recíproco do sistema de vinculação (Bowlby, 1982; George & Solomon, 2008). A vinculação diz respeito à ligação emocional duradora que se estabelece entre a criança e o prestador de cuidados (Bowlby, 1982). Os comportamentos que permitem aos indivíduos ficar próximos das suas figuras preferenciais e privilegiadas são considerados comportamentos de vinculação (Bowlby, 1982; Guedeney, 2004). É através dos objetivos do sistema de vinculação da criança que o sistema de prestação de cuidados é corrigido, sendo guiado pelo sistema de *feedback*, responsável pela monitorização dos sinais internos (biológicos e representativos) e externos (comportamentos de sinalização, aversivos e ativos) da criança (Belsky & Cassidy, 1994; Bowlby, 1982).

A regulação emocional da criança, inerente ao desenvolvimento do sistema de vinculação, é fortemente influenciada pela sensibilidade e responsividade da figura de vinculação (Ainsworth, Blehar, Waters, & Wall, 1978), nomeadamente no que concerne à capacidade da figura de vinculação perceber e interpretar corretamente os sinais emitidos pela criança e de lhes responder pronta e adequadamente. A sensibilidade e a responsividade integram o sistema de prestação de cuidados (George & Solomon, 2008). Dada a interdependência e reciprocidade dos sistemas comportamentais do prestador de cuidados e da criança, a figura de vinculação que se constitua um prestador de cuidados disponível, sensível e responsivo contribuirá para o desenvolvimento de uma vinculação segura na criança. Pelo contrário, a figura de vinculação que se afigure enquanto um prestador de cuidados indisponível, insensível, não responsivo ou imprevisível pode contribuir para o desenvolvimento de uma vinculação insegura na criança (George & Solomon, 1996).

A partir das experiências de vinculação e da sua interpretação, as crianças vão desenvolvendo representações generalizadas sobre si e sobre as suas figuras de vinculação, que a orientam no modo como reage, percebe e se comporta nas suas relações interpessoais. Tal corresponde aos modelos operantes internos, que se começam a desenvolver sensivelmente por volta dos seis meses de idade e que acompanham o indivíduo ao longo da sua vida (Bowlby, 1980). Mais concretamente, os modelos operantes internos vão-se desenvolvendo ao longo do tempo, pela integração de novas experiências e informações, tornando-se mais complexos e diferenciados, e guiando os indivíduos no modo como lidam com situações desafiantes, bem como no modo como se comportam nos seus relacionamentos próximos e preferenciais (Roy et al., 2014; Soares, 2000b).

Dado que o estilo de vinculação na idade adulta é um significativo preditor do ajustamento individual e conjugal, vários estudos demonstraram, nos últimos anos, o seu impacto no ajustamento durante a transição para a parentalidade (e.g., Conde, Figueiredo & Bifulco, 2011; Feeney, Alexander, Noller, & Hohaus, 2003; Möller, Hwang, & Wickberg, 2006; Rholes et al., 2011). Com efeito, a investigação científica realizada tendo por base a teoria da vinculação contribuiu significativamente para a compreensão da transição para a parentalidade. No entanto, tais estudos centram-se essencialmente na contribuição dos estilos de vinculação para o ajustamento ao nível dos sistemas individual e conjugal, não contemplando outros fatores ou as complexas ligações entre os sistemas que podem contribuir para uma caracterização mais detalhada do processo da transição para a parentalidade.

A teoria ecológica baseia-se na premissa de que o comportamento do indivíduo deve ser analisado e compreendido na interação com os múltiplos sistemas (Roy et al., 2014). De acordo com esta teoria, o desenvolvimento humano é encarado como o resultado da interação diádica

entre o indivíduo e o meio, sendo que o meio se organiza em múltiplos sistemas hierarquicamente integrados (Lerner et al., 2002; Roy et al., 2014). Os sistemas que integram a teoria ecológica do desenvolvimento humano são o microssistema, o mesossistema, o exossistema, e o macrosistema (Bronfenbrenner, 1979).

O microssistema é o primeiro sistema do meio e descreve o ambiente em que os indivíduos se comportam num determinado momento (Bronfenbrenner, 1979). Neste sistema as relações são bidirecionais e a inclusão de um terceiro elemento a este nível influencia a qualidade das mesmas (Roy et al., 2014). O mesossistema integra as interações entre vários microssistemas, num determinado período de tempo da vida dos indivíduos (Bronfenbrenner, 1979). O exossistema compreende um conjunto de características sociais que incidem sobre o indivíduo afetando a sua experiência de desenvolvimento (Bronfenbrenner, 1979). Por sua vez, o macrosistema é composto pelos restantes sistemas e envolve o conjunto de leis e valores, dinâmicas socioculturais e políticas a que está sujeito o indivíduo em desenvolvimento (Bronfenbrenner, 1979).

Ao longo do tempo, a teoria ecológica evoluiu no sentido de considerar que todos os níveis de organização envolvidos na vida do ser humano estão ligados de forma integrada na constituição da ontogenia individual (Bronfenbrenner & Morris, 1998; Lerner et al., 2002). Assim, o modelo teórico passou a conceptualizar o sistema de desenvolvimento através de quatro componentes interrelacionados, nomeadamente o processo, a pessoa, o contexto e o tempo (Bronfenbrenner & Morris, 1998). O processo envolve os relacionamentos dinâmicos do indivíduo no seu contexto; a pessoa contempla o repertório individual de características biológicas, emocionais, cognitivas e comportamentais; o contexto compreende o conjunto de sistemas estabelecidos na ecologia do desenvolvimento humano; e o tempo concerne às diferentes dimensões cronológicas que explicam a teoria do ciclo de vida (Bronfenbrenner & Morris, 1998).

O modelo processo-pessoa-contexto-tempo permite assim contemplar a interação relacional, as características individuais, o contexto e o tempo na compreensão do desenvolvimento humano, remetendo para uma abordagem interacionista que integra variáveis pessoais e de contexto na predição do ajustamento dos indivíduos (Lerner et al., 2002; Roy et al., 2014).

Consistente com este modelo é a proposta de Belsky (1994) sobre os determinantes da função parental. De acordo com Belsky (1994), a parentalidade é determinada por múltiplos fatores, nomeadamente as características individuais de cada progenitor, da criança, e o vasto contexto social em que a relação entre os progenitores e a criança se estabelece e desenvolve. A relação conjugal, a rede de suporte social, e as características da ocupação profissional constituem fatores de *stress* ou de suporte, presentes no contexto social, que, a par da história de desenvolvimento pessoal dos progenitores, da sua personalidade e bem-estar psicológico, e das características individuais da criança, influenciam a função parental e, por conseguinte, o desenvolvimento da criança (Belsky, 1994). No entanto, tal não se verifica apenas a partir do nascimento da criança. Também a experiência da gravidez é fortemente influenciada pelo contexto social e cultural que os indivíduos se inserem, e assim como pelas relações conjugal, com os filhos, e com a família de origem (Slade et al., 2009).

Deste modo, a teoria ecológica proporciona uma ampla compreensão do impacto que a transição para a parentalidade tem nos indivíduos e respetivas famílias (Shannon, Baumwell, & Tamis-LeMonda, 2013). Tendo por base este enquadramento, diferentes estudos no âmbito da transição para a parentalidade foram realizados nas últimas décadas (e.g., Levy-Shiff, 1994; Parke et al., 2004; Tamis-LeMonda, Kahana-Kalman, & Yoshikawa, 2009).

A perspetiva desenvolvimental da transição para a parentalidade anteriormente descrita é consistente com a teoria ecológica (Cowan & Cowan, 2003; Cowan et al., 1991). Tal justifica-se

pelo facto de ambos os modelos considerarem diferentes dimensões e sistemas independentes, que se relacionam entre si ao longo do tempo, contribuindo para o desenvolvimento do indivíduo. No entanto, enquanto a teoria ecológica dá maior ênfase aos aspetos alheios ao sistema familiar e ao contexto, a perspetiva desenvolvimental da transição para a parentalidade privilegia a reorganização qualitativa do *self* e do comportamento do indivíduo, a par do ajustamento conjugal e familiar.

A investigação tem consistentemente demonstrado que a gravidez e o pós-parto são períodos da vida dos indivíduos que requerem um ajustamento não só individual, mas também diádico (e.g., Cowan & Cowan, 2003; Figueiredo, 2000; Roy et al., 2014). À semelhança de outros fenómenos, a transição para a parentalidade constitui um processo interpessoal, na medida em que não diz respeito meramente a um indivíduo, mas a múltiplos indivíduos, envolvidos num determinado contexto de gravidez e pós-parto.

Tomando em consideração este processo interpessoal, a teoria da interdependência representa um racional teórico muito importante para a compreensão destas interações diádicas. Ao longo do tempo, esta teoria evoluiu no sentido de explicar, além das condições inerentes às relações interdependentes, os fatores individuais e contextuais que contribuem para padrões específicos de interdependência (Kelley et al., 2003). Os elementos de uma díade afetam-se um ao outro de forma complexa. A teoria da interdependência considera que, além dos elementos da díade se influenciarem mutuamente, o modo como se organizam enquanto díade também influencia o funcionamento de cada elemento. Como tal, a mudança de um elemento da díade pode surtir efeito não só no outro elemento, como na própria díade (Wickman & Knee, 2012).

Um casal, enquanto díade, apresenta não só um vínculo voluntário, resultado do desenvolvimento de laços afetivos significativos ao longo do tempo, bem como um vínculo

familiar, resultante quer da conjugalidade, quer da parentalidade (Kenny, Kashy, & Cook, 2006). Nestes vínculos, existem diferentes fatores suscetíveis de causar interdependência (Kenny, 1996; Kenny & Judd, 1986). O primeiro consiste no efeito de composição que corresponde às características comuns dos elementos que contribuíram para a formação da díade. A partir do momento em que a díade se encontra constituída, existem outros três fatores que justificam a interdependência, designadamente: o efeito do parceiro, em que uma característica ou comportamento de um elemento da díade afeta o outro; a influência mútua, quando existe reciprocidade, sendo que os elementos da díade se influenciam mutuamente; e o destino comum, subjacente à circunstância em que ambos os elementos da díade estão expostos aos mesmos fatores causais. No que concerne aos casais que se encontram no processo de transição para a parentalidade, os principais fatores de interdependência são, assim, a influência e o destino comum.

Em suma, o racional teórico no qual o presente trabalho de investigação se baseia consiste na perspetiva desenvolvimental da transição para a parentalidade (Cowan, 1991; Cowan & Cowan, 1992, 1995, 2003; Cowan et al., 1991). Esta concerne na teoria mais frequentemente elencada nos estudos realizados no âmbito da transição para a parentalidade (Roy et al., 2014), sendo também aquela que estudos anteriores apontam como mais relevante para guiar a investigação futura (Heinicke, 2002).

A opção pela perspetiva desenvolvimental, enquanto racional teórico no presente estudo, justifica-se pelo facto de a gravidez e o pós-parto, classificados como a mais significativa alteração do ciclo de vida familiar (e.g., Cowan & Cowan, 1995), implicarem uma profunda reorganização qualitativa do *self* e do comportamento dos indivíduos que a experienciam, bem como a alteração e ajustamento dos sistemas conjugal e familiar (e.g., Cowan & Cowan, 2003). Prende-se ainda

com o facto deste racional teórico propor um conjunto de dimensões relevantes na identificação dos fatores que contribuem para o (des)ajustamento do sistema familiar, interrelacionadas entre si (e.g., Cowan & Cowan, 1992, 2003; Cowan et al., 1991). Especificamente, deste conjunto de dimensões, duas são objeto de análise nos estudos empíricos deste trabalho, nomeadamente, o ajustamento psicológico experienciado pelos indivíduos e a qualidade do relacionamento conjugal na gravidez e no pós-parto. A articulação deste racional teórico com a teoria da interdependência, uma teoria flexível ao ponto de permitir a sua combinação com outros modelos teóricos (Wickman & Knee, 2012), justifica-se pela consideração da interdependência entre os elementos do casal, na análise das dimensões acima referidas.

## **2. Ajustamento psicológico na gravidez e pós-parto**

O período que compreende a gravidez e o pós-parto é reconhecido como uma das transições mais exigentes que os indivíduos enfrentam ao longo do seu desenvolvimento e a mais exigente transição do seu ciclo de vida familiar (e.g., Cigoli & Scabini, 2006; Cowan, 1991; Cowan & Cowan, 1992). Neste contexto, a saúde mental pode ser um recurso que facilite a transição, mas pode, ao mesmo tempo, ser comprometida, na medida em que o ajustamento a esta transição pode colocar mulheres e homens em risco de morbilidade psicológica (Le Strat, Dubertret, & Le Foll, 2011; Perren, Von Wyl, Bürgin, Simoni, & Von Klitzing, 2005; Quevedo et al, 2011).

O impacto que a gravidez e o pós-parto acarretam na saúde mental dos indivíduos que a experienciam tem sido foco de atenção da investigação científica nas últimas décadas. De acordo com Figueiredo (2000), a investigação científica neste âmbito organizou-se, numa primeira fase, através da análise dos registos de admissão de puérperas em hospitais psiquiátricos e, posteriormente, através da utilização de medidas de avaliação psicológica com vista à avaliação da morbilidade psicológica na gravidez e no pós-parto.

Efetivamente, os primeiros estudos, realizados entre 1960 e 1970, tiveram por finalidade avaliar as perturbações mentais associadas à gravidez e ao pós-parto a partir dos registos de admissão de hospitais psiquiátricos (e.g., Paffenberg, 1964; Pitt, 1973, 1978). Como resultado, estes estudos permitiram concluir que no pós-parto muito frequentemente as mulheres apresentavam sintomas psicológicos clinicamente significativos aos quais correspondiam diagnósticos de perturbação mental. As perturbações mentais eram assim mais comuns no pós-parto do que na gravidez, sendo que o risco de uma mulher ser admitida num hospital psiquiátrico era superior no primeiro ano pós-parto do que em qualquer outro momento da sua

vida (Paffenberg, 1964). No entanto, estes estudos permitiram também constatar que a presença de sintomatologia ansiosa e depressiva era comum quer na gravidez quer no pós-parto (Pitt, 1973 1978).

Face a estas constatações, a investigação científica passou então a organizar-se no sentido de avaliar a morbilidade psicológica na gravidez e no pós-parto, com recurso a medidas de avaliação psicológica (e.g., Gotlib, Whiffen, Mount, Milne, & Cordy, 1989; Kumar & Robson, 1984; O'Hara, 1986). Alguns destes estudos identificaram a gravidez como um período caracterizado por significativo bem-estar psicológico em que as mulheres se encontravam protegidas das perturbações mentais, ao contrário do pós-parto (Kendell, Chalmers, & Platz, 1987; Kendell, Wainwright, Hailey, Shannon, 1976; Kumar & Robson, 1984; O'Hara, Neunaber, & Zekoski, 1984). No entanto, o estudo de O'Hara, Zekoski, Philipp e Wright (1990) identificou taxas semelhantes de depressão *minor* e *major* entre mulheres grávidas e mulheres que não se encontravam grávidas, sugerindo que a gravidez não constitui um fator de proteção da saúde mental da mulher. Consistentes com estes dados, outros estudos identificaram elevados níveis de sintomas psicológicos clinicamente significativos durante a gravidez (Gotlib et al., 1989; O'Hara, 1986, 1995). Assim, tal como o pós-parto, a gravidez passou a ser considerada um período de risco para a saúde mental da mulher.

Os primeiros estudos realizados neste âmbito centraram-se em participantes do sexo feminino. No entanto, à medida que a investigação neste âmbito evoluiu, foi sendo identificado que, tal como as mulheres, também os homens experienciavam mudanças significativas aquando do nascimento de um filho (Jordan, 1990), assim como sintomatologia psicopatológica na gravidez e pós-parto (Areias, Kumar, Barros, & Figueiredo, 1996a; Durkin, Morse & Buist, 2001; Skari et al., 2002).

A gravidez e o pós-parto têm sido identificados na literatura como momentos de maior propensão à morbidade psicológica, nomeadamente pelo aumento de sintomatologia ansiosa e depressiva nestes períodos (e.g., Giardinelli et al., 2012; Heron, O'Connor, Evans, Golding, & Glover, 2004; Moss, Skouteris, Wertheim, Paxton, & Milgrom, 2009). Ao longo do tempo, a investigação científica foi privilegiando a realização de estudos longitudinais prospetivos que permitissem a melhor caracterização da sintomatologia ansiosa e depressiva na gravidez e pós-parto. Tais estudos demonstraram a continuidade da sintomatologia ao longo do tempo. Assim, sintomatologia ansiosa na gravidez precede e/ou constitui-se um preditor da sintomatologia ansiosa no pós-parto (e.g., Grant, McMahon, & Austin, 2008; Heron et al., 2004; Moss et al., 2009). De igual modo, também a sintomatologia depressiva na gravidez precede e/ou se constitui um preditor da sintomatologia depressiva no pós-parto (e.g., Gotlib et al., 1989; Heron et al., 2004; Milgrom et al., 2008; O'Hara & Swain, 1996).

Além da continuidade da sintomatologia ansiosa e depressiva ao longo da gravidez e do pós-parto, os estudos realizados permitiram também identificar a sintomatologia ansiosa na gravidez como um preditor da sintomatologia depressiva no pós-parto (Austin, Tully, & Parker, 2007; Coelho, Murray, Royal-Lawson, & Cooper, 2011; Grant et al., 2008; Heron et al., 2004; Moss et al., 2009; Skouteris, Wertheim, Rallis, Milgrom, & Paxton, 2009). No entanto, noutros estudos, a sintomatologia depressiva na gravidez não demonstrou ser um preditor da sintomatologia ansiosa no pós-parto (e.g., Moss et al., 2009).

Deve ainda ser salientado que os estudos que avaliaram concomitantemente sintomatologia ansiosa e depressiva ao longo da gravidez e do pós-parto permitiram identificar a comorbidade dos sintomas (e.g., Austin et al., 2010; Heron et al., 2004; Kessler, Keller, & Wittchen, 2001; Moss et al., 2009; Wenzel, 2011), demonstrando que estes tendem a coexistir ao longo da transição.

Assim, os sintomas de ansiedade e de depressão representam as variáveis utilizadas neste estudo enquanto indicadores do ajustamento psicológico na gravidez e pós-parto, tendo em consideração a continuidade dos sintomas, bem como a sua comorbilidade, ao longo da gravidez e pós-parto, identificadas nos estudos previamente referidos.

### **2.1. Mudanças na sintomatologia ansiosa e depressiva ao longo da gravidez e pós-parto**

Diferentes estudos empíricos procuraram determinar a prevalência de sintomas clinicamente significativos de ansiedade e depressão, em mulheres e homens, na gravidez e pós-parto. Na sua maioria, estes estudos foram realizados em diferentes países. Alguns utilizaram instrumentos de autorrelato como o *State-Trait Anxiety Inventory* (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) ou o *Edinburgh Postnatal Depression Scale* (EPDS; Cox, Holden, & Sagovsky, 1987), outros recorreram a entrevistas de diagnóstico estruturadas como o *Structured Clinical Interview for DSM-IV* (SCID-I; Gorman et al., 2004), e outros ainda à utilização conjunta de instrumentos de autorrelato e entrevistas de diagnóstico. Não obstante, constata-se um razoável consenso na prevalência dos sintomas clinicamente significativos de ansiedade e depressão na gravidez e pós-parto reportados pelos diferentes estudos.

Estudos nacionais indicam que a prevalência da sintomatologia ansiosa na gravidez varia entre 12% e 18% para as mulheres, e entre 8% e 10% para os homens; enquanto a sintomatologia depressiva no mesmo período varia entre 19% e 22% para as mulheres, e entre 6% e 11% para os homens (Figueiredo & Conde, 2011a; Figueiredo, Pacheco, & Costa, 2007; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009). Já no período pós-parto, a prevalência da sintomatologia ansiosa é de 5% para as mulheres e de 4% para os homens; enquanto a prevalência da sintomatologia depressiva varia entre 11% e 17% para as mulheres, e é de 7% para os homens (Costa, Pacheco, & Figueiredo, 2007; Figueiredo & Conde, 2011a; Figueiredo et al., 2007)

Por outro lado, estudos internacionais apontam uma prevalência de sintomas de ansiedade na gravidez e pós-parto superior aos dados nacionais. De acordo com tais estudos, a prevalência da sintomatologia ansiosa na gravidez varia entre 20% e 25% para as mulheres (Giardinelli et al., 2012; Heron et al., 2004; Parfitt & Ayres, 2014), e entre 19% e 25% para os homens (Boyce, Condon, Barton & Corkindale, 2007; Parfitt & Ayres, 2014). Já no pós-parto, a prevalência da sintomatologia ansiosa varia entre 14% e 17% para as mulheres (Heron et al., 2004; Stuart, Couser, Schilder, O'Hara, & Gorman, 1998), e entre 7% e 8% para os homens (Bradley, Slade, & Levinston, 2008; Parfitt & Ayres, 2014).

Mais próximos dos dados nacionais, estudos internacionais sobre a prevalência da sintomatologia depressiva na gravidez, identificam que esta varia entre 22% e 24% para as mulheres (Giardinelli et al., 2012; Melo et al., 2012), e entre 5% e 10% para os homens (Condon, Boyce, & Corkindale, 2004; Gawlik et al., 2014). No pós-parto, a prevalência da sintomatologia depressiva varia entre 10% e 15% para as mulheres (Giardinelli et al., 2012; Kumar & Robson, 1984; Melo et al., 2012), e entre 2% e 8% para os homens (Bradley et al., 2008; Condon et al., 2004; Gawlik et al., 2014). Ainda neste âmbito, o estudo transcultural da depressão pós-natal (*Transcultural Study of Postnatal Depression*, TCS-PDN), que envolveu participantes de 11 países, identificou a sintomatologia depressiva na gravidez e pós-parto como sendo uma condição frequente em Portugal, assim como noutros países da Europa, da América do Norte, e de África (Bernazzani et al., 2004; Gorman et al., 2004; Oates et al., 2004).

Para além dos estudos realizados com o intuito de caraterizar a prevalência dos sintomas de ansiedade e de depressão na gravidez e no pós-parto, vários estudos procuraram, na última década, caraterizar as trajetórias dos sintomas de ansiedade e de depressão ao longo da gravidez

e pós-parto. No entanto, tais estudos apresentam resultados inconsistentes, propondo trajetórias de sintomatologia ansiosa e depressiva diferentes.

Assim, alguns estudos referem a estabilidade da sintomatologia ansiosa e depressiva de mulheres e homens ao longo da gravidez e pós-parto (e.g., Grant et al., 2008; Milgrom et al., 2008), enquanto outros revelam o aumento da sintomatologia ansiosa e depressiva de mulheres e homens desde o terceiro trimestre de gravidez até aos 12 meses pós-parto (e.g., Keeton, Perry-Jenkins, & Sayer, 2008; Moss et al., 2009; Paulson & Bazemore, 2010)

Por outro lado, estudos diferentes identificam a diminuição da sintomatologia ansiosa e depressiva de mulheres e homens ao longo da gravidez (e.g., Andersson, Sundström-Poromaa, Wulff, Åström, & Bixo, 2006; Buist, Gotman, & Yonkers, 2011; Matthey & Ross-Hamid, 2012). Neste âmbito, outros estudos ainda revelam um padrão em U da sintomatologia ansiosa na gravidez, com níveis mais elevados de sintomas no primeiro e no terceiro trimestre de gravidez do que no segundo (Lee et al., 2007; Teixeira et al., 2009).

Consistentes com os estudos que indicam a diminuição sintomatologia ansiosa e depressiva de mulheres e homens ao longo da gravidez, outros estudos apontam a diminuição da sintomatologia desde o terceiro trimestre de gravidez até aos três, quatro, seis e mesmo até aos 24 meses pós-parto (e.g., DiPietro, Costigan, & Sispma., 2008; Figueiredo & Conde, 2011a, 2011b; Matthey, Barnett, Ungerer, & Waters, 2000; Whisman, Davila, & Goodman, 2011). Tais resultados fortemente sugerem que o ajustamento psicológico é potenciado desde a gravidez até ao período pós-parto.

No entanto, os estudos que avaliam as trajetórias da sintomatologia ansiosa e depressiva desde o início da gravidez e ao longo do pós-parto são raros. Na sua maioria, os estudos que se centram nas trajetórias da sintomatologia ansiosa e/ou depressiva avaliaram os sintomas desde o final da gravidez até aos primeiros meses pós-parto, tendo incluído poucos momentos de

avaliação antes e/ou depois do parto (e.g., Austin et al., 2007; Giardinelli et al., 2012; Grant et al., 2008).

Atendendo a tais limitações, o primeiro estudo empírico deste trabalho, tendo por objetivo avaliar as trajetórias da sintomatologia ansiosa e depressiva de mulheres e homens ao longo da gravidez e pós-parto, acompanhou os participantes desde o primeiro trimestre de gravidez, em seis momentos de avaliação realizados antes e depois do parto, até aos 30 meses pós-parto.

## **2.2. Interdependência da sintomatologia ansiosa e depressiva em casais**

Diversos estudos têm permitido identificar a interdependência da sintomatologia ansiosa e depressiva em casais (e.g., Chung, Moser, Lennie, & Rayens, 2009; Dekel et al., 2013; Parker, Johnson, & Ketring, 2012). No entanto, estes foram realizados em outros contextos que não o da transição para a parentalidade. Embora a teoria da interdependência seja concetualizada como racional teórico flexível, permitindo a sua combinação com outros modelos teóricos (Wickman & Knee, 2012), no que concerne à avaliação do ajustamento psicológico de casais na transição para a parentalidade, até à data apenas o estudo de Rholes et al. (2011) avaliou a interdependência da sintomatologia depressiva. Neste estudo, os resultados determinaram a interdependência negativa da sintomatologia depressiva entre os elementos da díade, indicando que quanto maior sintomatologia depressiva apresenta um elemento da díade, menor sintomatologia apresenta o outro.

No entanto, desde há várias décadas são descritos na literatura os resultados de estudos subordinados à sintomatologia ansiosa e depressiva de casais na gravidez e pós-parto que, não tendo considerado ou avaliado a interdependência dos sintomas, apresentam resultados que apontam no sentido de uma interdependência positiva e, consequentemente, fundamentam a consideração e avaliação da interdependência dos sintomas em estudos futuros. Salientam-se,

assim, diferentes estudos que sugerem a interdependência da sintomatologia depressiva na gravidez e pós-parto através do efeito do parceiro, ao indicar a maior probabilidade de depressão materna e paterna no pós-parto, quando há sintomatologia ou perturbação depressiva do cônjuge durante a gravidez ou nos primeiros dias pós-parto (Areias et al., 1996a; Areias, Kumar, Barros, & Figueiredo, 1996b; O'Hara & Swain, 1996). Igualmente assumem relevância os estudos que demonstram elevadas correlações positivas entre a sintomatologia ansiosa e depressiva de mulheres e homens quer na gravidez, quer no pós-parto (Areias et al., 1996a; Dudley, Roy, Kelk, & Bernard, 2001; Keeton et al., 2008), assim como os estudos que indicam a comorbilidade do casal (e.g., Matthey et al., 2000).

Assim, a interdependência da sintomatologia ansiosa e depressiva nos casais será considerada no primeiro estudo empírico deste trabalho. Tal justifica-se pelos resultados dos estudos que apontam no sentido de uma interdependência positiva dos sintomas, bem como pela escassez de estudos que consideram a interdependência na avaliação da sintomatologia ansiosa e depressiva de casais ao longo da gravidez e pós-parto.

### **2.3. Diferenças e efeitos de género**

A sintomatologia ansiosa e depressiva de mulheres na gravidez e pós-parto tem sido amplamente estudada desde a década de 60 (Figueiredo, 2000). No entanto, a constatação de que também os homens experienciavam mudanças significativas, assim como sintomatologia psicopatológica na gravidez e pós-parto (Areias et al., 1996a; Durkin et al., 2001; Jordan, 1990) veio demonstrar a relevância de avaliar a sintomatologia ansiosa e depressiva de homens, também. Com efeito, a investigação recente tem procurado caracterizar a sintomatologia ansiosa e depressiva de homens ao longo da gravidez e pós-parto (e.g., Bradley et al., 2008; deMontigny, Girard, Lacharité, Dubeau, & Devault, 2013; Don & Mickelson, 2012). De igual modo, tem

também permitido caraterizar a sintomatologia ansiosa e depressiva de mulheres e homens ao longo da gravidez e pós-parto, considerando as suas semelhanças e diferenças (e.g., Kerstis, Engstrom, Edlund, & Aarts, 2013; Parfitt, Pike, & Ayers, 2013; Perren et al., 2005).

A literatura indica que as mulheres têm uma probabilidade duas vezes superior aos homens de sofrer uma perturbação de humor e/ou de ansiedade, sendo que a altura de maior incidência destas perturbações ocorre durante o período de idade fértil da mulher, entre os 25 e os 44 anos (Eaton, Kessler, Wittchen, & Magee, 1994; Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993). No que concerne às diferenças de género identificadas na sintomatologia ansiosa e depressiva na gravidez e pós parto, a literatura apresenta dados consistentes. Concretamente, os resultados dos estudos apontam para a evidência de maior sintomatologia ansiosa e depressiva em mulheres, do que em homens, no terceiro trimestre de gravidez, no parto, aos três e aos 12 meses pós parto (e.g., Escribà-Aguir & Artacoz, 2011; Escribà-Aguir, Gonzalez-Galarzo, Barona-Vilar, & Artazcoz, 2008; Matthey et al., 2000).

Pelo contrário, no que diz respeito aos efeitos de género nas trajetórias de sintomatologia ansiosa e depressiva ao longo da gravidez e pós-parto, a literatura apresenta dados inconsistentes. Alguns estudos revelam padrões ou trajetórias de sintomatologia ansiosa e depressiva ao longo da gravidez e/ou pós-parto semelhantes para mulheres e homens (e.g., Figueiredo & Conde, 2011b; Parfitt et al., 2013; Perren et al., 2005). Outros estudos, por outro lado, identificam trajetórias de sintomatologia ansiosa e depressiva ao longo da gravidez e pós-parto diferentes para mulheres e homens. Assim, o estudo de Keeton et al. (2008) sugere que a trajetória de sintomatologia ansiosa é estável para as mulheres desde o final da gravidez até aos 12 meses pós-parto, enquanto para os homens diminui. Relativamente à sintomatologia depressiva, estudos sugerem que a trajetória da sintomatologia depressiva para as mulheres aumenta desde o final da gravidez

até aos 12 (Keeton et al., 2008) e aos 24 (Rholes et al., 2011) meses pós-parto, enquanto para os homens se mantém estável.

Atendendo à inconsistência dos dados apresentados na literatura, sobre os efeitos de género nas trajetórias da sintomatologia ansiosa e depressiva, desde a gravidez até ao período pós-parto, o primeiro estudo empírico deste trabalho teve como finalidade avaliar as trajetórias da sintomatologia ansiosa e depressiva de mulheres e homens ao longo da gravidez e pós-parto, considerando os efeitos de género.

#### **2.4. Diferenças e efeitos de paridade**

A paridade é uma das variáveis apontadas como constituindo um fator de risco para a saúde mental dos indivíduos na gravidez e pós-parto. No entanto, se alguns estudos indicam que as mulheres e homens primíparos apresentam menor probabilidade de desenvolver perturbação mental na gravidez e maior probabilidade no pós-parto do que os múltiparos, outros estudos revelam o contrário (e.g., Paffenber, 1964; Priest & Barnett, 2008).

Os estudos que avaliam as diferenças e efeitos de paridade na gravidez e pós-parto são raros e incluem essencialmente participantes do sexo feminino (e.g., DiFlorio et al., 2014; Melo et al., 2012; Sutter-Dallay, Cosnefroy, Glatigny-Dallay, Verdoux, & Rascle, 2012). Estudos que avaliam as diferenças e efeitos de paridade na gravidez e pós-parto em homens, ou em mulheres e homens concomitantemente, são ainda mais raros (Condon & Esuvaranathan, 1990; Figueiredo & Conde, 2011b; Teixeira et al., 2009). Enquanto o estudo Condon e Esuvaranathan (1990) identifica mais sintomas psicológicos em homens primíparos do que em múltiparos no terceiro trimestre de gravidez, o estudo de Teixeira et al. (2009) identifica mais sintomas de ansiedade em mulheres e homens primíparos no primeiro trimestre de gravidez, e em mulheres e homens múltiparos no terceiro trimestre de gravidez. No mesmo sentido, o estudo de Figueiredo e Conde

(2011b) revela maior sintomatologia ansiosa e depressiva em mulheres e homens múltiparos do que em primíparos no terceiro trimestre de gravidez, indicando ainda a que a sintomatologia ansiosa e depressiva diminui desde o terceiro trimestre de gravidez até ao parto para os participantes múltiparos, enquanto para os participantes primíparos aumenta.

Os poucos estudos que avaliaram os efeitos de paridade ao longo da gravidez e pós-parto apresentam resultados inconsistentes. Alguns estudos indicam trajetórias semelhantes de sintomatologia ansiosa e depressiva para mulheres primíparas e múltiparas (e.g., Breitkopf et al., 2006; DiPietro, Novak, Costigan, Atella, & Reusing, 2006; Giardinelli et al., 2012). Por sua vez, outros estudos indicam o aumento (e.g., DiPietro et al., 2008; Melo et al., 2012; Sutter-Dallay et al., 2012) ou a diminuição (e.g., DiFlorio et al., 2014; Giakoumaki, Vasilaki, Lili, Skouroliahou, & Liosis., 2009; Mori et al., 2011) da sintomatologia ansiosa e depressiva em mulheres primíparas comparativamente às mulheres múltiparas.

Em virtude dos dados inconsistentes apresentados na literatura, bem como da escassez de estudos que avaliem os efeitos de paridade em homens, o primeiro estudo empírico deste trabalho considerou os efeitos de paridade, e também o efeito de interação entre género e paridade, na avaliação das trajetórias da sintomatologia ansiosa e depressiva de mulheres e homens, ao longo da gravidez e pós-parto.

### 3. Relacionamento conjugal na gravidez e pós-parto

Na década de 50, o estudo retrospectivo de LeMasters (1957) identificou o nascimento do primeiro filho como uma crise. A partir de então, o período de transição passou a ser conceptualizado não só como um período de realização pessoal e felicidade pelo nascimento do filho, mas também como um período de significativos desafios para mulheres e homens, assim como para a sua relação enquanto casal (e.g., Cowan et al., 1991; Heinicke, 2002). No entanto, isto pode não estar limitado ao nascimento do primeiro filho, na medida em que a integração de um novo membro num sistema familiar preexistente desencadeia a necessidade de novos ajustamentos individuais, bem como de um reajustamento familiar (Cowan et al., 1991; Krieg, 2007).

Diversos estudos identificaram mudanças desfavoráveis significativas na relação com o companheiro (Figueiredo et al., 2008), na qualidade da relação marital (Belsky, Lang, & Rovine, 1985; Belsky & Rovine, 1990), bem como na satisfação conjugal (Lawrence, Nylen, & Cobb, 2007; Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008). Estas mudanças parecem ser características da transição para a parentalidade, uma vez que os casais que se encontram neste processo apresentam um declínio mais acentuado na satisfação conjugal do que os casais sem filhos, o que sugere que o declínio na satisfação conjugal é acentuado pela transição para a parentalidade (Lawrence et al., 2008; Nomaguchi & Milkie, 2003; Twenge, Campbell, & Foster, 2003). Esta mudança desfavorável é também identificada na literatura como sendo consequência da diminuição linear dos sentimentos de amor e de responsividade emocional e de comportamentos de manutenção da relação (Belsky & Rovine, 1990; Kluwer, 2010), assim como o aumento linear de conflitos e de sentimentos de ambivalência (Belsky & Rovine, 1990; Kluwer & Johnson, 2007).

Neste estudo, a avaliação da qualidade da relação conjugal ao longo da gravidez e pós-parto foi realizada considerando as dimensões positiva e negativa da relação com o companheiro.

### **3.1. Mudanças do relacionamento conjugal ao longo da gravidez e pós-parto**

A gravidez e o parto têm sido identificados como períodos onde pode existir um aumento dos sentimentos positivos dos casais, como felicidade, alegria, contentamento e realização (Hirschberger, Srivastava, Marsh, Cowan, & Cowan, 2009; Kluwer, 2010; Schwerdtfeger, Todd, Oliver, & Hubler, 2013; Twenge et al., 2003). Estes sentimentos contribuem para um período de lua-de-mel, caracterizado por uma experiência de união e cooperação, particularmente no final da gravidez, em que os elementos do casal se encontram mais centrados nas necessidades do outro e consideram que o nascimento do filho contribuirá positivamente para a sua relação (Cowan & Cowan, 1992; Feeney, Hohaus, Noller, & Alexander, 2001; Houts, Barnett-Walker, Paley, & Cox, 2008).

Estudos longitudinais, no entanto, têm identificado a deterioração da relação conjugal desde a gravidez até ao período pós-parto (e.g., Belsky & Rovine, 1990; Cowan & Cowan, 1992; Doss, Rhoades, Stanley, & Markman, 2009). Esta alteração pode estar relacionada com fatores específicos do período pós-parto que são suscetíveis de influenciar negativamente a relação conjugal, nomeadamente falta de tempo, alterações de humor, prestação de cuidados à criança, maiores gastos de dinheiro, a alteração dos padrões de relacionamento com a família e amigos, e a mudança do foco das necessidades próprias e do casal para as necessidades da criança (Belsky & Pensky, 1988; Kluwer, 2010; Lawrence, Rothman, Cobb, & Bradbury, 2010).

No mesmo sentido, uma deterioração significativa da relação conjugal foi identificada ao longo do pós-parto (Lawrence et al., 2007), sendo que os estudos identificam uma deterioração

mais acentuada um ano após o parto (Mitnick, Heyman, & Smith Slep, 2009; Shapiro, Gottman, & Carrère, 2000), que pode persistir nos anos seguintes (Hirscheberg et al., 2009; Kluwer & Johnson, 2007; Schulz, Cowan, & Cowan, 2006). Mais concretamente a deterioração da relação conjugal foi identificada até aos dois, (Kohn et al., 2012), três, quatro (Belsky & Rovine, 1990; Kluwer & Johnson, 2007) e 14.5 anos pós-parto (Hirschberger et al., 2009).

Todavia, a maior parte dos estudos subordinados ao relacionamento conjugal na gravidez e pós-parto avaliou o relacionamento conjugal desde o final da gravidez e/ou durante o período pós-parto, sendo que poucos estudos longitudinais incluíram vários momentos de avaliação antes e depois do parto (e.g., Belsky, 1985; Lawrence et al., 2008; Schulz et al., 2006). De igual modo, poucos foram os estudos que avaliaram tanto aspetos positivos como aspetos negativos da relação conjugal (e.g., Hirschberger et al., 2009). Tomando tais limitações por referência, o segundo estudo empírico deste trabalho teve como finalidade avaliar as dimensões positiva e negativa da relação com o companheiro ao longo da gravidez e pós-parto. Para tal, o acompanhamento dos participantes foi realizado desde o primeiro trimestre de gravidez, em seis momentos de avaliação realizados antes e depois do parto, até aos 30 meses pós-parto

### **3.2. Interdependência do relacionamento conjugal em casais**

Diversos estudos realizados noutros contextos que não o da gravidez e pós-parto, identificaram a interdependência positiva da qualidade da relação conjugal em casais (e.g., Butzer & Campbell, 2008; Chi, Fang, Epstein, Lam, & Li, 2013; Pruchno, Wilson-Genderson, & Cartwright, 2009). Contudo, no que diz respeito ao período da transição para a parentalidade, até à data apenas o estudo de Keizer e Schenk (2012) identificou a interdependência da satisfação na relação conjugal em casais. De acordo com este estudo, a qualidade da relação de conjugal ao longo da transição para a parentalidade em casais varia em tandem, isto é, quanto mais ou

menos satisfeito está um elemento da díade com a relação conjugal, mais ou menos satisfeito tende a estar o outro elemento.

Outros estudos, embora não tenham considerado a interdependência, identificam correlações positivas significativas moderadas a altas entre a satisfação conjugal reportada por mulheres e homens em diversos momentos da gravidez e/ou do pós-parto (Hirschberger et al., 2009; Houts et al., 2008; Shapiro et al., 2000). Tal justifica a consideração e avaliação da interdependência do relacionamento conjugal reportado por casais ao longo da gravidez e da parentalidade. No segundo estudo empírico deste trabalho, à semelhança do primeiro, a interdependência foi alvo de avaliação.

### **3.3. Diferenças e efeitos de género**

A relação conjugal é porventura a variável mais avaliada na investigação científica, no âmbito da transição para a parentalidade, ao longo da gravidez e do pós-parto. Nomeadamente, os estudos têm tentado compreender se a forma como mulheres e homens avaliam a sua relação conjugal neste processo é igual ou diferente. No entanto, os resultados dos estudos que avaliam as diferenças e/ou os efeitos de género são inconsistentes.

Alguns estudos indicam trajetórias semelhantes da relação conjugal para mulheres e mulheres, apontando que ambos se tornam menos satisfeitos com a sua relação conjugal desde a gravidez até ao período pós-parto (Hirschberger et al., 2009; Mitnick et al., 2009). Pelo contrário, outros estudos apontam que a deterioração da relação conjugal entre a gravidez e o período pós-parto é mais pronunciada em mulheres do que em homens (Belsky & Rovine, 1990; Doss et al., 2009; Kluwer, 2010; Lawrence et al., 2007; Shapiro et al., 2000; Twenge et al., 2003). A deterioração mais pronunciada em mulheres no pós-parto pode ser explicada, segundo Doss et al.

(2009), pelo aumento de problemas para resolver, a par da diminuição da capacidade para resolver conflitos.

Numa relevante contribuição para a literatura sobre efeitos de género na satisfação com a relação conjugal na transição para a parentalidade, o estudo de Lawrence et al. (2007) identificou que satisfação com a relação conjugal tende a diminuir para as mulheres desde o início do casamento até ao terceiro trimestre de gravidez, enquanto para os homens permanece estável. Este resultado sugere, então, que a deterioração da relação conjugal ocorre previamente ao terceiro trimestre de gravidez, mas apenas para as mulheres.

Deste modo, considerando a inconsistência dos dados apresentados na literatura sobre os efeitos de género nas trajetórias do relacionamento conjugal, ao longo da transição para a parentalidade, e pretendendo contribuir para o corpo de literatura existente, o segundo estudo empírico deste trabalho avaliou o efeito do género nas trajetórias das dimensões positiva e negativa da relação com o companheiro, desde o início da gravidez até aos 30 meses pós-parto.

### **3.4. Diferenças e efeitos de paridade**

Até ao momento, não é claro na literatura o impacto que o nascimento de um primeiro ou segundo filho tem na relação conjugal dos pais. Os estudos que têm procurado avaliar diferenças e/ou efeitos de paridade têm incluído sobretudo mulheres como participantes (e.g., Krieg, 2007; Mortensen, Torsheim, Melkevik, & Thuen, 2012), ficando por conhecer o impacto da paridade na relação conjugal do ponto de vista de homens. Mais ainda, estes estudos apresentam resultados inconsistentes.

Enquanto alguns estudos sugerem padrões de alteração semelhantes entre mulheres primíparas e multiparas ao longo da transição para a parentalidade, outros estudos sugerem que a deterioração continua após a transição e que aumenta com o número de filhos, variável que tem

vindo a ser associada com o conflito conjugal e baixos níveis de satisfação conjugal (Belsky, Spanier, & Rovine, 1983; Mortensen et al., 2012; Twenge et al., 2003). Uma vez que há poucos estudos sobre as diferenças de paridade que apresentam resultados inconsistentes, diferentes autores recomendam a realização de estudos que comparem mulheres e homens, primíparos e multiparos, para melhor compreender a relação conjugal ao longo da transição para a parentalidade (Krieg, 2007; Doss et al., 2009; Mortensen et al., 2012). Cumprindo com tais recomendações, o segundo estudo empírico deste trabalho avaliou também o efeito de paridade, bem como o efeito de interação entre gênero e paridade, nas trajetórias das dimensões positiva e negativa da relação com o companheiro desde o início da gravidez até aos 30 meses pós-parto.

### **3.5. Associação com o ajustamento psicológico**

Diferentes estudos procuram, nas últimas décadas, documentar os efeitos da transição para a parentalidade na relação conjugal, e na sintomatologia ansiosa e depressiva evidenciada por mulheres e homens (e.g., DiPietro et al., 2008; Doss et al., 2009; Heron et al., 2004). Embora a importância de cada uma destas dimensões, assim como a sua interação, sejam reconhecidas na literatura (e.g., Figueiredo et al., 2008; Røsand, Slinning, Eberhard-Gran, Røysamb, & Tambs, 2011, 2012; Whisman et al., 2011), a natureza e direção da interação entre as dimensões permanece pouco clara.

Alguns estudos revelam a influência da sintomatologia ansiosa e depressiva na qualidade da relação conjugal na gravidez e também na transição para a parentalidade, demonstrando que a maior sintomatologia está associada com a deterioração da relação conjugal (e.g., Bower, Jia, Schoppe-Sullivan, Mangelsdorf, & Brown, 2012; Cox, Paley, Burchinal, & Payne, 1999; Figueiredo et al., 2010; Parfitt & Ayres, 2009). No entanto, outros estudos têm consistentemente demonstrado a influência de fatores interpessoais, como a qualidade da relação conjugal, na

sintomatologia ansiosa e depressiva ao longo da transição para a parentalidade (e.g., Figueiredo et al., 2008; Gawlick et al., 2014; Røsand et al., 2012; Sockol, Epperson, & Barber, 2014; Stapleton et al., 2012.) Não só na gravidez, mas também no pós-parto, a insatisfação com a relação conjugal, a pobre interação e o conflito com o companheiro têm sido associados com maior *distress* emocional e sintomatologia depressiva (Røsand et al., 2012; Don & Mickelson, 2012; Page & Wilhelm, 2007). Corroborando estes dados, outros estudos revelam que a fraca qualidade da relação conjugal no período pré-natal influencia o aumento da sintomatologia ansiosa e depressiva ao longo do pós-parto (Don, Chong, Biehle, & Mickelson, 2014; Gawlick et al., 2014; Stapleton, 2012). Por outro lado, os estudos revelam ainda que uma relação conjugal de suporte, com elevada dimensão positiva e baixa dimensão negativa, contribui para a diminuição da sintomatologia ansiosa de mulheres e homens na gravidez e pós-parto (Figueiredo et al., 2008; Gawlick et al., 2014; Parfitt & Ayres, 2014; Whisman et al., 2011).

Apesar de pertinentes, estes estudos apresentam limitações que devem ser consideradas. Na sua maioria, estes estudos avaliam o efeito da qualidade da relação conjugal na sintomatologia depressiva na gravidez e pós-parto, sendo que poucos estudos, até à data, avaliaram o papel da qualidade da relação conjugal na sintomatologia ansiosa nos mesmos períodos (e.g., Don et al., 2014; Whisman et al., 2013). Mais ainda, apenas dois estudos avaliaram o efeito da qualidade da relação conjugal nas trajetórias da sintomatologia ao longo da transição para a parentalidade, sendo que um avaliou o efeito da relação conjugal nas trajetórias de sintomatologia depressiva materna (Parade, Blankson, Leerkes, Crockenberg, & Faldowski, 2014), e, outro, avaliou o efeito da qualidade da relação conjugal pré-natal nas trajetórias de sintomatologia ansiosa de mulheres e homens (Don et al., 2014).

Outra das limitações prende-se com o facto de poucos estudos terem utilizado amostras com mulheres e homens na análise da associação entre a qualidade da relação conjugal e a

sintomatologia ansiosa e/ou depressiva, sendo que não revelam diferenças de género significativas, como também não avaliam a interdependência dos sintomas psicológicos entre os elementos do casal (Don et al., 2014; Figueiredo et al., 2008; Røsand et al., 2012). Paralelamente, a literatura não apresenta estudos que avaliem efeitos de género no âmbito da associação entre as trajetórias da qualidade da relação conjugal e da sintomatologias ansiosa e/ou depressiva. Reconhecendo este facto, o estudo recente de Parade et al. (2014) aponta a necessidade de se avaliar as trajetórias de sintomas psicológicos ao longo da transição para a parentalidade não só de mulheres, mas também de homens, considerando a qualidade da relação conjugal.

Assim, atendendo às limitações descritas, o terceiro estudo empírico deste trabalho teve como finalidade avaliar a associação entre as trajetórias das dimensões positiva e negativa da relação com o companheiro, da sintomatologia ansiosa e da sintomatologia depressiva, desde o início da gravidez até aos 30 meses pós-parto, analisando os efeitos de género, e considerando a interdependência dos elementos do casal.

#### 4. Objetivos de investigação

Os estudos longitudinais que acompanham as famílias ao longo das transições permitem desenvolver modelos conceptuais sobre a sua adaptação ao longo do tempo (Cowan & Cowan, 2003). Assim, centrada na perspectiva desenvolvimental da transição para a parentalidade (Cowan, 1991; Cowan & Cowan, 1992, 1995, 2003; Cowan et al., 1991) e suportada pela teoria da interdependência (Kelley et al., 2003; Wickman & Knee, 2012), esta investigação tem por finalidade avaliar o ajustamento psicológico (através da sintomatologia ansiosa e depressiva) e a qualidade da relação conjugal (através das dimensões positiva e negativa da relação com o companheiro), bem como a sua associação, no âmbito da adaptação dos indivíduos e dos casais que são pais pela primeira vez, ou que têm o seu sistema familiar alterado pelo nascimento de outro filho, ao longo da gravidez e pós-parto.

A investigação recente tem demonstrado a relevância da realização de estudos longitudinais referentes às trajetórias da sintomatologia ansiosa e/ou depressiva, assim como do relacionamento conjugal, na transição para a parentalidade. No entanto, estas dimensões têm sido essencialmente avaliadas desde o final da gravidez e até aos primeiros meses pós-parto, sendo que poucos estudos incluíram vários momentos de avaliação prévios e posteriores ao parto, e/ou participantes de ambos os sexos primíparos e múltiparos. Considerando tais limitações, o presente estudo, de carácter longitudinal prospetivo, foi desenvolvido ao longo de seis momentos temporais, nomeadamente, no primeiro, segundo e terceiro trimestre de gravidez, parto, três e 30 meses pós-parto, contando com a participação de 260 casais.

A investigação no âmbito da sintomatologia ansiosa e/ou depressiva e do relacionamento conjugal na transição para a parentalidade tem-se centrado na avaliação das trajetórias individuais. Todavia, este estudo reconhece a importância de avaliar a interdependência das variáveis ao nível da díade, neste caso, o casal. Tal justifica-se porque ambos os elementos do casal se encontram na mesma circunstância, isto é, ambos estão em processo de transição para a parentalidade, mas também porque os dois elementos do casal se influenciam mutuamente (Kenny et al., 2006).

A avaliação da interdependência tem consequências no que concerne à seleção do método de análise de dados apropriado, nomeadamente porque a interdependência viola um importante pressuposto da análise estatística, a independência das observações (Field, 2009; Kenny et al., 2006). Este pressuposto prevê que, após controlar a variância da variável independente, esta permanece não relacionada, ou independente, de qualquer outra variável no estudo (Kenny et al., 2006).

De modo a avaliar a adaptação dos indivíduos e dos casais que são pais pela primeira vez, ou que têm o seu sistema familiar alterado pelo nascimento de outro filho, ao longo da gravidez e do pós-parto, o presente estudo apresenta três objetivos de investigação, avaliados em três estudos empíricos apresentados no capítulo seguinte, nomeadamente:

1. Avaliar as trajetórias dos sintomas de ansiedade e de depressão, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, analisando efeitos de género e de paridade, bem como a interdependência entre os sintomas dos elementos do casal.

2. Avaliar as trajetórias das dimensões positiva e negativa da relação com o companheiro, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto,

analisando efeitos de gênero e de paridade, bem como a interdependência entre as dimensões da relação conjugal dos elementos do casal.

3. Avaliar a associação entre as trajetórias das dimensões positiva e negativa da relação com o companheiro e as trajetórias de sintomas de ansiedade e de depressão, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, considerando a interdependência entre os sintomas e as dimensões da relação conjugal dos elementos do casal, analisando efeitos de gênero e controlando o efeito da paridade.

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## ESTUDOS EMPÍRICOS

### 1. Anxiety and Depressive Symptoms in Women and Men: From Early Pregnancy to 30-Months Postpartum

#### 1.1. Abstract

*Aims:* To analyze individual and dyadic trajectories of anxiety and depressive symptoms from early pregnancy to 30-months postpartum, assessing time, gender and parity differences and effects. *Method:* 260 couples ( $N=520$ ) recruited from an Obstetrics Out-patient Unit (Portugal) completed self-report measures of anxiety and depression at each pregnancy trimester, childbirth, 3- and 30-months postpartum. Using multilevel modeling, piecewise dyadic growth curve models were performed. *Results:* Anxiety and depressive symptoms decreased from the first trimester to 3-months postpartum and increased from 3- to 30-months postpartum. No significant gender or parity effects were found for symptoms over time, with the exception of a steeper anxiety and depressive symptom increase in multiparous women from 3- to 30-months postpartum, whereas primiparous women's symptoms remained stable. Anxiety and depressive symptoms were positively correlated within-dyad over time. *Limitations:* This study had voluntary participation, data are based on self-reports and evidence for selective attrition exists. *Conclusion:* From the first trimester to 3-months postpartum psychological adjustment was enhanced, whereas from 3- to 30-months postpartum the risk for psychological symptoms increased. Symptoms trajectories over time were mostly similar for all parents. Within-dyad interdependence of psychological symptoms was found. Prevention and intervention programs aimed to reduce the risk of psychological

symptoms over pregnancy and the postpartum period would benefit from (a) including not only women but also their partner, (b) including not only primiparous but also multiparous parents, and (c) devoting particular attention to the period after 3-months postpartum.

*Keywords:* anxiety and depressive symptoms, pregnancy and postpartum, men and women, primiparity and multiparity, dyadic growth curve analyses

## **1.2. Background**

Pregnancy and the postpartum period are challenging times, requiring individual and dyadic adjustment to several bio-psychosocial changes. These demanding periods place men and women, both individually and as a couple, at risk for psychological difficulties (e.g., Le Strat, Dubertret, & Le Foll, 2011; Perren, Von Wyl, Bürgin, Simoni, & Von Klitzing, 2005; Quevedo et al., 2011). Recent literature suggests that strains might exist not only for first- but also for second-time parents (e.g., DiPietro, Costigan, & Sispma, 2008; Melo et al., 2012; Sutter-Dallay, Cosnefroy, Glatigny-Dallay, Verdoux, & Rascle, 2012). However, the particular risks that pregnancy and the postpartum period pose to psychological adjustment according to gender and parity remain, to this point, largely unclear.

Despite the great number of studies on anxiety and depressive symptoms over pregnancy and the postpartum period, varying symptoms trajectories over time have been proposed in the literature. Several studies indicated an increase in women's and men's anxiety and depressive symptoms from pregnancy to 12-months postpartum (e.g., Matthey, Barnett, Ungerer, & Waters, 2000; Moss, Skouteris, Wertheim, Paxton, & Milgrom, 2009; Paulson & Bazemore, 2010). Other studies noted the stability of women's and men's anxiety and depressive symptoms over

pregnancy and the postpartum period (e.g., Giardinelli et al., 2012; Heron, O'Connor, Evans, Golding, & Glover, 2004; Milgrom et al., 2008). And recent studies identified a decrease in women's and men's anxiety and depressive symptoms across pregnancy (e.g., Andersson, Sundström-Poromaa, Wulff, Aström, & Bixo, 2006; Buist, Gotman, & Yonkers, 2011; Matthey & Ross-Hamid, 2012), as well as from pregnancy to 4-, 6-, 12- and even 24-months postpartum (e.g., DiPietro et al., 2008; Matthey et al., 2000; Whisman, Davila, & Goodman, 2011), therefore suggesting that women's and men's psychological adjustment is enhanced from pregnancy to the postpartum period.

Studies providing information about anxiety and depressive symptoms' trajectories over pregnancy and the postpartum period are rare. Most of the studies have assessed anxiety or depressive symptoms from late pregnancy and only until the early postpartum period, including few time points before and/or after childbirth. Addressing these concerns, the present study started in the first trimester of pregnancy and included six assessment waves, with several time points before and after birth, until 30-months postpartum, to analyze anxiety and depressive symptoms' trajectories from pregnancy through the postpartum period.

Women's anxiety and/or depressive symptoms during pregnancy and the postpartum period have been extensively studied over the last 80 years. Research only recently began to look at men as well (e.g., Bradley, Slade, & Leviston, 2008; deMontigny, Girard, Lacharité, Dubeau, & Devault, 2013; Don & Mickelson, 2012), and both members of the couple were included as participants (e.g., Durkin, Morse, & Buist, 2001; Kerstis, Engstrom, Edlund, & Aarts, 2013; Perren et al., 2005). Gender differences have been noted in the literature. Women were usually found to present higher anxiety and depressive symptoms than men in the third pregnancy trimester, at childbirth, and 3- and 12-months postpartum (Escribà-Aguir & Artacoz, 2011; Escribà-Aguir,

Gonzalez-Galarzo, Barona-Vilar, & Artazcoz, 2008; Matthey et al., 2000). Regarding gender effects, the data are somewhat inconsistent. Some studies did not identify gender effects on anxiety and depressive symptoms over pregnancy and/or the postpartum period (e.g., Parfitt, Pike, & Ayers, 2013; Perren et al., 2005). In other studies, anxiety symptoms were found to remain stable for women while decreasing for men from late pregnancy to 12-months postpartum (Keeton, Perry-Jenkins, & Sayer, 2008), whereas depressive symptoms were found to increase until 12- (Keeton et al., 2008) or to decrease until 24-months postpartum (Rholes et al., 2011) in women while remaining stable for men from late pregnancy to 12- and 24-months postpartum. In view of these findings, the present study analyzed and compared men's and women's anxiety and depressive symptoms from early pregnancy to 30-months postpartum, using dyadic data analysis and considering the interdependence between partners within the dyad.

Studies assessing parity differences on anxiety and depressive symptoms over pregnancy and the postpartum period are rare and include mostly women (e.g., DiFlorio et al., 2014; Melo et al., 2012; Sutter-Dallay et al., 2012). As far as we can ascertain, data on the differences of parity on men's symptoms over pregnancy and the postpartum period are limited to a single study showing lower psychological symptoms in primiparous men when compared to multiparous men at the third trimester of pregnancy (Condon & Esuvaranathan, 1990). Moreover, results regarding parity effects on anxiety and depressive symptoms over pregnancy and the postpartum period are controversial. While some studies found no differences in anxiety and/or depressive symptoms between primiparous and multiparous women (e.g., Breitkopf et al., 2006; DiPietro, Novak, Costigan, Atella, & Reusing, 2006; Giardinelli et al., 2012), others noted more (e.g., DiPietro et al., 2008; Melo et al., 2012; Sutter-Dallay et al., 2012) or less (e.g., DiFlorio et al., 2014; Giakoumaki, Vasilaki, Lili, Skouroliahou, & Liosis, 2009; Mori et al., 2011) anxiety and/or depressive symptoms

in primiparous compared to multiparous women. Given the inconsistent results found, and above all the lack of information in the literature, particularly regarding primiparous and multiparous men, this study aims to assess parity differences and effects on anxiety and depressive symptoms from early pregnancy to 30-months postpartum, in a sample of primiparous and multiparous women and men.

In a couple, both members of the dyad undergo mutual influence: one partner affects and is affected by the other partner (Kenny, Kashy, & Cook, 2006). The interdependence between partners refers to this causal influence between members of a couple and has recently been identified for anxiety and/or depressive symptoms (e.g., Chung, Moser, Lennie, & Rayens, 2009; Dekel et al., 2013; Parker, Johnson, & Ketring, 2012). Over pregnancy and/or the postpartum period, even though some studies identified positive correlations between men's and women's anxiety and/or depressive symptoms, interdependence between partners was usually not considered (e.g., Areias, Kumar, Barros, & Figueiredo, 1996; Dudley, Roy, Kelk, & Bernard, 2001; Keeton et al., 2008). To the best of our knowledge, only one study has to date considered the interdependence between partners for depressive symptoms during pregnancy and the postpartum period (Rholes et al., 2011). This study's results revealed an unexpected negative correlation within-dyad, suggesting that if one partner was more depressed at a particular time point, the other tended to be less depressed at that time. This paper adds to existing research by assessing partners' mutual influence on anxiety and depressive symptoms from early pregnancy to later postpartum and by controlling for it in a large community sample of couples.

The purpose of this study was to analyze the individual and dyadic trajectories of men's and women's anxiety and depressive symptoms, using dyadic growth curve models: a) from the

first trimester to 30-months postpartum, b) assessing gender and parity differences and effects, and c) examining the interdependence between partners' symptoms. To the best of our knowledge, dyadic data analyses have not been applied to the longitudinal study of anxiety and depressive symptoms over pregnancy and the postpartum period. Thus, the longitudinal design including several time points prior to and after childbirth, the use of dyadic data analysis, and the large sample, including primiparous and multiparous women and men, represent significant novelties in this area of research and are major strengths of this study.

### **1.3. Method**

#### **1.3.1. Participants**

This study follows up previous work with a sample of 260 couples ( $N = 520$ ) surveyed from the first trimester until 3-months postpartum in an Obstetrics Out-patient Unit in Oporto, Portugal (see Figueiredo & Conde, 2011a, 2011b). As presented in Table 1.1, most of the participants were Portuguese (91.4%), aged between 20 and 39 years old (85.9%), came from low or medium-low socio-economic levels (57.4%), had nine or more years of education (67.2%), were employed (80.4%), married or cohabiting (88.4%), and primiparous (54.1% of the women and 56.1% of the men).

The previous study (Figueiredo & Conde, 2011a, 2011b) had five assessment waves, at the first, second and third pregnancy trimester, childbirth and 3-months postpartum. At the present study one assessment wave was added to the previous, between 24 and 36-months postpartum. All couples were contacted by telephone to understand if they were willing to participate in this assessment wave, 71 couples ( $n = 142$ , 27.3%) were no longer interested in participating, 37 couples ( $n = 74$ , 14.2%) could not be contacted, and 152 couples ( $n = 304$ ,

58.5%) agreed to participate. Questionnaires were sent by letter or by email (using an electronic form), and 129 couples ( $n = 258$ , 84.9%) filled in the questionnaires. All participants gave their informed consent.

Most of the couples who participated at the last assessment wave didn't had significant changes in their families ( $n = 218$ , 84.4%) from 3 to 30-months postpartum, however, 8 couples separated or divorced ( $n = 16$ , 6.20%) and 6 ( $n = 12$ , 4.66%) had another child. Participants who completed all six assessments were not different of those who did not regarding parity,  $\chi^2(1) = 1.515$ ,  $p = .214$ , and marital status,  $\chi^2(5) = 4.610$ ,  $p = .465$ . However, were more likely to be older,  $\chi^2(3) = 33.048$ ,  $p < .001$ , employed,  $\chi^2(6) = 16.322$ ,  $p = .012$ , belong to medium or high socio-economic levels,  $\chi^2(2) = 26.450$ ,  $p = .000$ , and have more years of education,  $\chi^2(2) = 29.017$ ,  $p = .000$ . Also, they reported less anxiety and depressive symptoms at the first trimester,  $t(503) = 2.186$ ,  $p = .029$ ,  $t(503) = 4.051$ ,  $p < .001$ , but not at 3-months postpartum,  $t(407) = .652$ ,  $p = .515$ ,  $t(407) = 1.841$ ,  $p = .066$ .

Table 1.1

*Participants' Socio-demographic Characterization at Baseline*

|                      | Men            | Women          | Primiparous    | Multiparous    | Total          |
|----------------------|----------------|----------------|----------------|----------------|----------------|
|                      | <i>n</i> = 260 | <i>n</i> = 260 | <i>n</i> = 320 | <i>n</i> = 200 | <i>N</i> = 520 |
|                      | %              | %              | %              | %              | %              |
| Age (years)          |                |                |                |                |                |
| ≤19                  | 4.2            | 11.5           | 12.4           | 2.6            | 7.9            |
| 20-29                | 38.9           | 47.0           | 51.6           | 33.3           | 42.9           |
| 30-39                | 46.9           | 39.2           | 33.9           | 55.4           | 43.1           |
| ≥40                  | 10.0           | 2.3            | 2.1            | 8.7            | 6.1            |
| Matrimonial status   |                |                |                |                |                |
| Cohabiting           | 32.5           | 32.6           | 35.8           | 28.5           | 32.5           |
| Married              | 55.7           | 55.8           | 49.7           | 63.2           | 55.8           |
| Single               | 10.2           | 11.2           | 14.5           | 6.1            | 10.7           |
| Divorced             | 1.6            | 0.4            | 0              | 2.2            | 1.0            |
| Socio-economic level |                |                |                |                |                |
| High                 | 9.3            | 16.4           | 15.6           | 8.9            | 12.5           |
| Medium-high          | 14.0           | 7.4            | 9.4            | 13.0           | 11.1           |
| Medium               | 18.6           | 19.6           | 16.5           | 21.9           | 19.0           |
| Medium-low           | 30.3           | 26.4           | 30.4           | 26.5           | 28.6           |
| Low                  | 27.8           | 30.2           | 28.1           | 27.7           | 28.8           |
| Occupational status  |                |                |                |                |                |
| Employed             | 89.0           | 71.8           | 77.7           | 83.5           | 80.4           |
| Unemployed           | 9.0            | 21.6           | 20.0           | 13.4           | 15.4           |
| Household/Student    | 2.0            | 6.6            | 5.3            | 3.1            | 4.2            |
| Years of education   |                |                |                |                |                |
| < 9                  | 38.6           | 26.9           | 29.3           | 37.8           | 32.8           |
| 9 – 12               | 47.9           | 54.3           | 53.0           | 50.0           | 51.0           |
| > 12                 | 13.5           | 18.8           | 17.7           | 12.2           | 16.2           |

### **1.3.2. Measures**

#### **1.3.2.1. Socio-demographic Questionnaire**

Information about the participants (e.g., age, matrimonial status, socio-economic level, occupational status and years of education) was collected using a socio-demographic questionnaire (Figueiredo, Teixeira, Conde, Pinto, & Sarmento, 2009).

#### **1.3.2.2. State-Trait Anxiety Inventory**

The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) is a self-report questionnaire that consists of two subscales, the state anxiety and the trait anxiety, each containing 20 items. The state anxiety subscale (STAI-S), which measures anxiety at the point of scoring, was used in this study.

The STAI-S has been used in several studies implemented during pregnancy and postpartum, with men and/or women (DiPietro et al., 2008, Figueiredo & Conde, 2011a; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009). The Portuguese version of the measure showed good internal consistency (Cronbach's alpha ranged from .87 to .93) (Biaggio, Natalicio, & Spielberger, 1976). Also, STAI-S has been identified as a screening tool of reasonable validity for anxiety in women during pregnancy and postpartum (Tendais, Costa, Conde, & Figueiredo, 2014). In the present sample, coefficient alphas ranged from .88 to .94 for men and women.

#### **1.3.2.3. Edinburgh Postnatal Depression Scale**

The Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987) is a self-report questionnaire composed of 10 items Likert scale of four points (0–3) to assess depressive symptoms within the previous seven days. This questionnaire has been used in studies

of men and women over pregnancy and postpartum (Figueiredo & Conde, 2011a; Perren et al., 2005; Teixeira et al., 2009). The EPDS Portuguese version showed good internal consistency (Cronbach's alpha of .85) (Figueiredo, Pacheco, & Costa, 2007), and, also demonstrated reasonable validity as a screening tool for depression in women over pregnancy and postpartum (Tendais et al., 2014). EPDS coefficient alphas in the present sample ranged from .78 to .88 for men and women.

### **1.3.3. Procedure**

This research received previous approval from the institution Ethical Commission. Participants were recruited in an Obstetrics Out-patients Unit at their first pregnancy appointment. The aims and the procedures of the study were explained. After signing an informed consent, the socio-demographic questionnaire was separately administered to the pregnant woman and partner, and the STAI and the EPDS were given to them (between weeks 8-14). The STAI and the EPDS were administered again during the second (between weeks 20-24) and third pregnancy trimester (between weeks 30-34), as well as at childbirth (between days 1-3), at 3-months (between weeks 10-14) and 30-months (between months 24-36) postpartum. The socio-demographic questionnaire was administered again at the 3- and 30-months postpartum.

### **1.3.4. Data Structure and Analytic Model**

Dyadic growth curve models were tested using multilevel modeling (MLM; Duncan, Duncan, & Strycker, 2006; Kenny et al., 2006; Kurdek, 2003) with IBM SPSS Statistics for Windows, v.19.0, to estimate women's and men's trajectories of change for anxiety and depressive symptoms over time, as well as symptoms' interdependence within-dyad. Within-dyad

interdependence was modeled as similarity on the average outcome and the specific time points, including correlations between the partners' intercept, slopes and time-specific residuals.

Analyses were performed in a pairwise person-period dataset, in which each person had a record for each time point. The data consisted of 3120 potential observations: 260 couples by 6 time points by 2 people (men and women). Two-level models were estimated for anxiety and depressive symptoms (outcome variables), in which level 1 referred to the participants' score at each time point and level 2 to the dyad. Individual differences for men and women were modeled at the dyad level.

An important issue in modeling growth curves is the scaling of time (Biesanz, Deeb-Sossa, Papadakis, Bollen, & Curran, 2004). Time 0 was defined as the date of the first assessment at the first trimester (baseline) and the time variable was scored in months since the baseline until the child's age of 30 months. Therefore, the intercept in the growth curve model refers to the outcome variables at the baseline and the slopes for time represents the degree to which the outcome variables change each month.

Mean scores at each assessment wave were examined for men and women, primiparous and multiparous, and the scores determined that the changes were different before and after 3-months postpartum. Thus, piecewise linear growth curve models (Duncan et al., 2006) were performed to assess the changes on the outcome variables at baseline, from baseline to 3-months postpartum, and from 3 to 30-months postpartum.

Fixed effects for gender (coded as -1 for women and 1 for men) and parity (coded as -1 for primiparous and 1 for multiparous) were also included in the models, as well as all possible interactions, resulting in two three-way interactions, one among time from the first trimester, gender and parity, and another among time from 3- to 30-months postpartum, gender and parity.

Deviance difference tests were performed between unconditional models and models with predictors to assess model fit improvements. Results were reported at a  $p < .05$  significance level. The effect size  $r^1$  (Rosenthal, Rosnow, & Rubin, 2000) was estimated to all significant effects and interpreted according to Cohen's guidelines (1988).

## 1.4. Results

### 1.4.1. Preliminary Analyses

In Table 1.2., descriptive statistics (mean and standard deviation) for men's and women's, primiparous and multiparous parents' anxiety and depressive symptoms at each assessment wave are presented.

Correlations among partners' symptoms for all assessment waves were statistically significant,  $\rho s < .001$  (Table 1.3). Men's and women's scores for the outcome variable at each assessment wave were correlated, revealing that these scores covary. Additionally, within-men and within-women correlations of the outcome variables show that men's and women's anxiety and depressive symptoms are related over time.

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<sup>1</sup> Effect size  $r = \sqrt{\left[\frac{t^2}{t^2 + df}\right]}$

Table 1.2

*Means for Anxiety and Depressive Symptoms for Men and Women, Primiparous and Multiparous*

| Symptoms                  | Men      |           | Women    |           | Primiparous |           | Multiparous |           |
|---------------------------|----------|-----------|----------|-----------|-------------|-----------|-------------|-----------|
|                           | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i>    | <i>SD</i> | <i>M</i>    | <i>SD</i> |
| Anxiety                   |          |           |          |           |             |           |             |           |
| 1 <sup>st</sup> trimester | 33.102   | 8.828     | 36.035   | 8.882     | 33.913      | 8.921     | 35.392      | 8.866     |
| 2 <sup>nd</sup> trimester | 31.172   | 8.067     | 34.682   | 9.365     | 31.513      | 7.896     | 34.759      | 9.789     |
| 3 <sup>rd</sup> trimester | 32.605   | 7.951     | 36.244   | 9.028     | 32.895      | 7.981     | 36.464      | 9.174     |
| Childbirth                | 32.723   | 9.129     | 35.760   | 10.248    | 33.987      | 10.614    | 34.615      | 8.770     |
| 3-months<br>postpartum    | 29.365   | 7.985     | 30.842   | 8.357     | 28.991      | 7.797     | 31.514      | 8.489     |
| 30-months<br>postpartum   | 33.767   | 9.435     | 34.453   | 9.478     | 32.310      | 8.278     | 36.788      | 10.414    |
| Depressive                |          |           |          |           |             |           |             |           |
| 1 <sup>st</sup> trimester | 5.237    | 3.960     | 6.419    | 4.191     | 5.417       | 4.077     | 6.335       | 4.066     |
| 2 <sup>nd</sup> trimester | 4.184    | 3.314     | 5.996    | 4.322     | 4.743       | 3.856     | 5.590       | 4.067     |
| 3 <sup>rd</sup> trimester | 4.076    | 3.259     | 5.492    | 4.245     | 4.297       | 3.754     | 5.445       | 3.915     |
| Childbirth                | 4.061    | 3.727     | 5.869    | 4.669     | 4.718       | 4.389     | 5.303       | 4.232     |
| 3-months<br>postpartum    | 3.505    | 3.458     | 4.718    | 4.206     | 3.615       | 3.731     | 4.754       | 4.025     |
| 30-months<br>postpartum   | 4.802    | 4.210     | 6.110    | 4.355     | 4.821       | 3.836     | 6.465       | 4.816     |

Table 1.3

*Correlations among Anxiety and Depressive Symptoms for Men and Women*

|                           | 1 <sup>st</sup><br>trimester | 2 <sup>nd</sup><br>trimester | 3 <sup>rd</sup><br>trimester | Childbirth  | 3-months<br>postpartum | 30-months<br>postpartum |
|---------------------------|------------------------------|------------------------------|------------------------------|-------------|------------------------|-------------------------|
| Anxiety symptoms          |                              |                              |                              |             |                        |                         |
| 1 <sup>st</sup> trimester | <b>.158</b>                  | .542                         | .570                         | .507        | .431                   | .342                    |
| 2 <sup>nd</sup> trimester | .603                         | <b>.312</b>                  | .652                         | .439        | .535                   | .336                    |
| 3 <sup>rd</sup> trimester | .543                         | .592                         | <b>.410</b>                  | .590        | .545                   | .387                    |
| Childbirth                | .360                         | .357                         | .516                         | <b>.516</b> | .564                   | .249                    |
| 3-months postpartum       | .414                         | .393                         | .509                         | .488        | <b>.309</b>            | .379                    |
| 30-months postpartum      | .363                         | .313                         | .473                         | .280        | .401                   | <b>.492</b>             |
| Depressive symptoms       |                              |                              |                              |             |                        |                         |
| 1 <sup>st</sup> trimester | <b>.309</b>                  | .691                         | .669                         | .601        | .513                   | .369                    |
| 2 <sup>nd</sup> trimester | .620                         | <b>.315</b>                  | .687                         | .604        | .544                   | .374                    |
| 3 <sup>rd</sup> trimester | .488                         | .698                         | <b>.368</b>                  | .680        | .544                   | .496                    |
| Childbirth                | .492                         | .594                         | .647                         | <b>.548</b> | .603                   | .497                    |
| 3-months postpartum       | .464                         | .615                         | .632                         | .689        | <b>.437</b>            | .461                    |
| 30-months postpartum      | .450                         | .510                         | .559                         | .533        | .514                   | <b>.421</b>             |

*Note.* Values on the diagonal (in bold) represent correlations between men and women, values above the diagonal represent within-men correlations, and values below the diagonal represent within-women correlations. All correlations were significant at a  $p < .001$  level.

The deviance difference tests revealed that the anxiety symptoms model,  $\chi^2(29) = 171.730$ ,  $p < .001$ , and the depressive symptoms model,  $\chi^2(29) = 202.000$ ,  $p < .001$ , provided good fits to the data, indicating that in each model, the predictors explained variance.

Two different multilevel models were performed to predict anxiety and depressive symptoms. Each model included time from the first trimester to 3-months postpartum, time from 3- to 30-months postpartum, gender and parity, as well as all possible interactions, as predictors of the outcome variables (Table 1.4). The fixed and random effects are presented in Table 1.4.

#### **1.4.2. Anxiety and Depressive Symptoms from Early Pregnancy to 30-Months Postpartum**

Main effects of time were found in both anxiety and depressive symptom models (Table 1.4). From the first trimester to 3-months postpartum, anxiety and depressive symptoms decreased (the average person's anxiety and depressive symptoms decreased 0.291 units per month, effect size  $r = .375$ , and 0.142 units per month, effect size  $r = .379$ , respectively). From 3- to 30-months postpartum, anxiety and depressive symptoms increased (the average person's anxiety and depressive symptoms increased 0.094 units per month, effect size  $r = .353$ , and 0.056 units per month, effect size  $r = .497$ , respectively).

Table 1.4

*Anxiety and Depressive Symptoms from Early Pregnancy to 30-Months Postpartum: Gender and Parity Differences and Effects*

| Fixed effects                                                      | Symptoms  |           |                     |            |           |                     |
|--------------------------------------------------------------------|-----------|-----------|---------------------|------------|-----------|---------------------|
|                                                                    | Anxiety   |           |                     | Depressive |           |                     |
|                                                                    | <i>b</i>  | <i>SE</i> | <i>95% CI</i>       | <i>b</i>   | <i>SE</i> | <i>95% CI</i>       |
| Intercept                                                          | 34.843    | 0.420     | [34.016, 35.671]*** | 5.749      | 0.198     | [5.359, 6.139]***   |
| Time from first trimester to 3-months postpartum                   | -0.291    | 0.049     | [-0.387, -0.195]*** | -0.142     | 0.023     | [-0.187, -0.097]*** |
| Time from 3 to 30-months postpartum                                | 0.094     | 0.022     | [0.050, 0.138]***   | 0.056      | 0.009     | [0.038, 0.074]***   |
| Gender                                                             | -1.773    | 0.318     | [-2.400, -1.146]*** | -0.712     | 0.133     | [-0.974, -0.450]*** |
| Parity                                                             | 0.835     | 0.402     | [0.044, 1.626]*     | 0.370      | 0.187     | [0.002, 0.737]*     |
| Gender x Parity                                                    | -0.113    | 0.323     | [-0.749, 0.522]     | -0.084     | 0.136     | [-0.351, 0.183]     |
| Gender x Time from first trimester to 3-months postpartum          | 0.087     | 0.045     | [-0.002, 0.176]     | 0.003      | 0.016     | [-0.030, 0.035]     |
| Gender x Time from 3 to 30-months postpartum                       | 0.022     | 0.019     | [-0.015, 0.059]     | -0.002     | 0.008     | [-0.013, 0.017]     |
| Parity x Time from first trimester to 3-months postpartum          | -0.006    | 0.048     | [-0.100, 0.089]     | 0.002      | 0.022     | [-0.041, 0.045]     |
| Parity x Time from 3 to 30-months postpartum                       | 0.033     | 0.022     | [-0.010, 0.075]     | 0.012      | 0.009     | [-0.006, 0.030]     |
| Gender x Parity x Time from first trimester to 3-months postpartum | 0.082     | 0.045     | [-0.007, 0.172]     | 0.030      | 0.017     | [-0.003, 0.063]     |
| Gender x Parity x Time from 3 to 30-months postpartum              | -0.059    | 0.019     | [-0.096, -0.021]**  | -0.019     | 0.008     | [-0.034, -0.003]*   |
| Random effects                                                     | Men       |           | Women               | Men        |           | Women               |
| Intercept                                                          | 45.541*** |           | 51.210***           | 10.375***  |           | 11.131***           |
| Slope for time from first trimester to 3-months postpartum         | 0.263**   |           | 0.403***            | 0.055***   |           | 0.078**             |
| Slope for time from 3- to 30-months postpartum                     | 0.058***  |           | 0.030*              | 0.009***   |           | 0.004*              |
| Residuals                                                          | 28.176*** |           | 36.912***           | 4.155***   |           | 6.733***            |

Note. Gender: -1 female, 1 male; Parity: -1 first-time parents, 1 second-time parents; \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

#### 1.4.3. Anxiety and Depressive Symptoms from Early Pregnancy to 30-Months Postpartum: Gender and Parity Differences and Effects

Main effects for gender were found in both anxiety and depressive symptom models (Table 1.4). At the first trimester, women had more anxiety (mean difference of 3.456, effect size  $r = .329$ ) and depressive (mean difference of 1.424, effect size  $r = .320$ ) symptoms than men did. No significant interactions were found between gender and time from the first trimester to 3-months postpartum or between gender and time from 3- to 30-months postpartum.

Main effects of parity were also found in both models (Table 1.4). At baseline, multiparous parents had more anxiety (mean difference of 1.670, effect size  $r = .118$ ) and depressive (mean difference of 0.740, effect size  $r = .104$ ) symptoms than primiparous parents did. As presented in Table 1.4, no significant interactions with parity were found, except for one significant interaction among time from 3- to 30-months postpartum, gender and parity, which was found in both models.

Both anxiety (Figure 1.1) and depressive (Figure 1.2) symptoms increased from 3- to 30-months postpartum for multiparous men and women, and for primiparous men, but not for primiparous women. Specifically, multiparous men's anxiety and depressive symptoms increased 0.090 units per month,  $p = .050$ , effect size  $r = .164$ , and 0.051 units per month,  $p = .008$ , effect size  $r = .238$ , respectively; multiparous women's anxiety and depressive symptoms increased 0.163 units per month,  $p < .001$ , effect size  $r = .293$ , and 0.087 units per month,  $p < .001$ , effect size  $r = .381$ , respectively; and primiparous men's anxiety and depressive symptoms increased 0.142 units per month,  $p < .001$ , effect size  $r = .307$ , and 0.064 units per month,  $p < .001$ , effect size  $r = .354$ , respectively. For primiparous women results revealed a non-significant increase of 0.020 units per month for anxiety,  $p = .576$ , and of .023 units per month for depressive symptoms,  $p = .119$ .

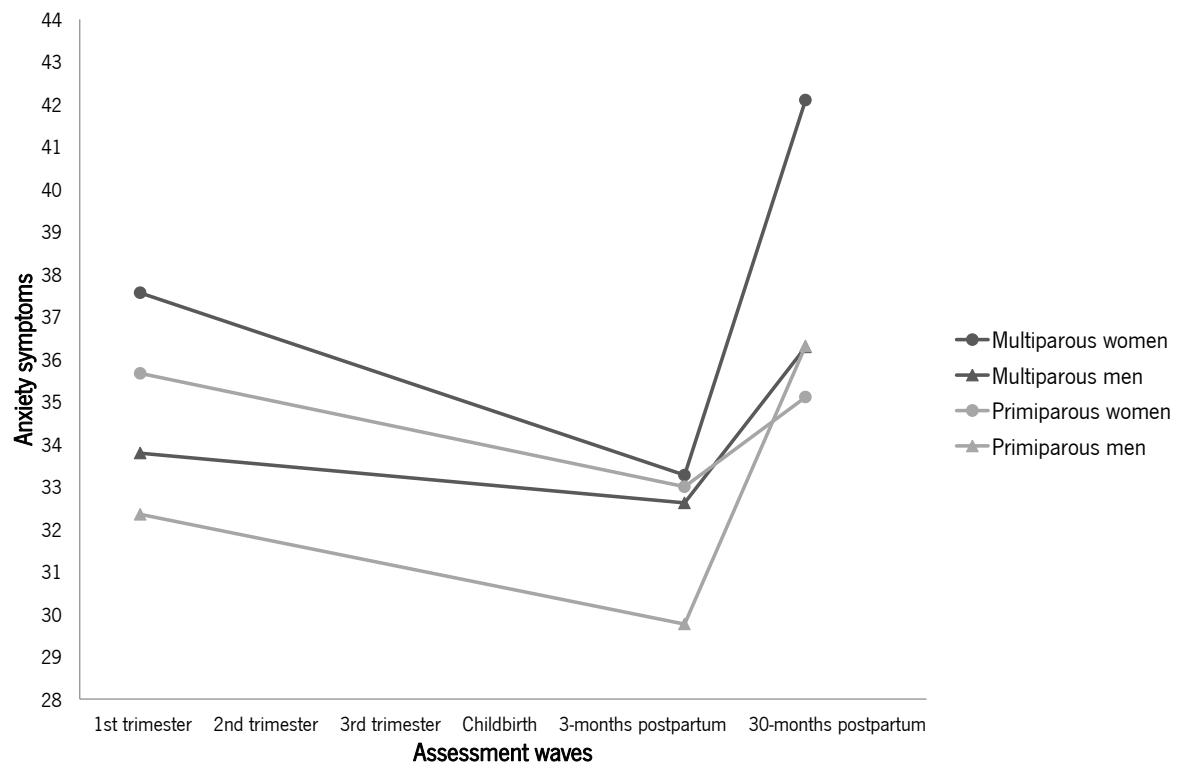


Figure 1.1. *Anxiety Symptoms from Early Pregnancy to Postpartum: Gender and Parity Differences and Effects*

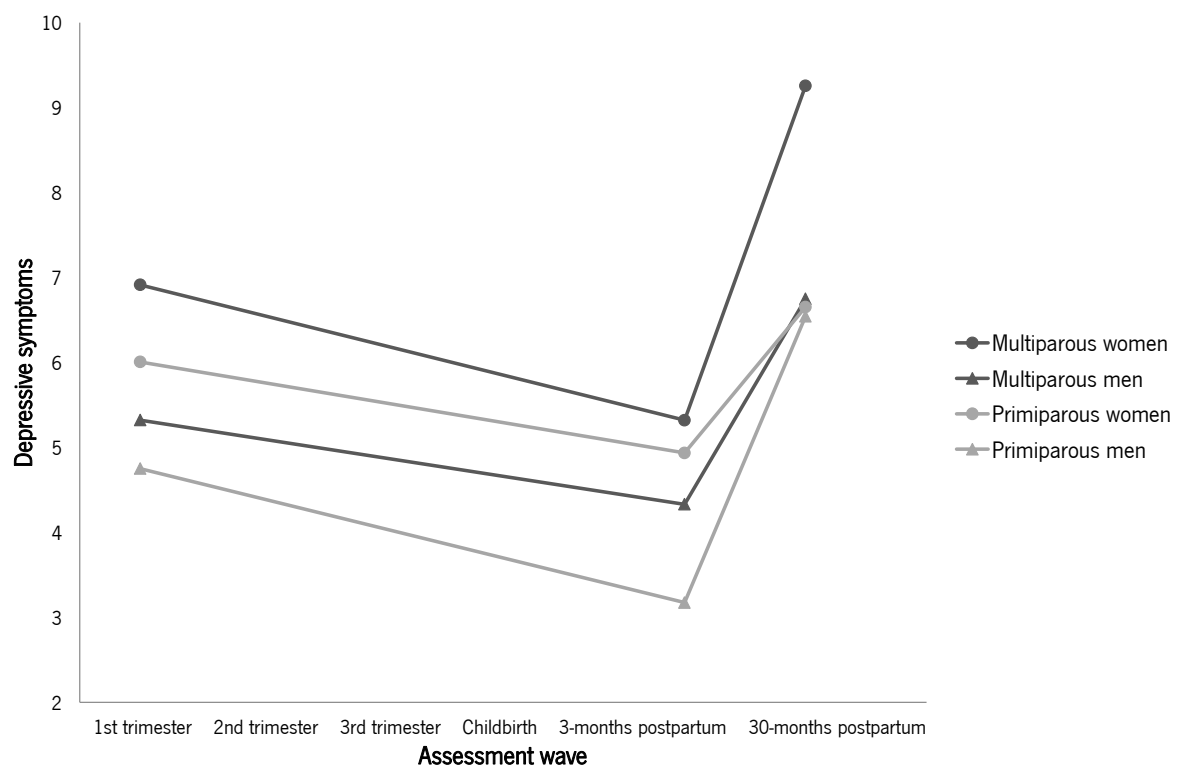


Figure 1.2. *Depressive Symptoms from Early Pregnancy to Postpartum: Gender and Parity Differences and Effects*

Pairwise comparisons revealed that, compared to the other groups' symptoms, multiparous women's had steeper anxiety,  $p = .046$ , effect size  $r = .138$ , and depressive,  $p = .047$ , effect size  $r = .151$ , symptoms increase from 3- to 30-months postpartum.

#### **1.4.4. Anxiety and Depressive Symptoms within Dyad Interdependence**

At baseline, men's and women's anxiety,  $r = .270$ ,  $Z = 2.746$ ,  $p = .006$ , and depressive,  $r = .444$ ,  $Z = 6.171$ ,  $p < .001$ , symptoms were positively correlated. At the first trimester, those with more anxiety or depressive symptoms had partners with similar levels of anxiety or depressive symptoms.

Additionally, the estimated residual correlation was significant for anxiety,  $r = .301$ ,  $Z = 9.802$ ,  $p < .001$ , and depressive,  $r = .224$ ,  $Z = 5.906$ ,  $p < .001$  symptoms, indicating that after controlling for the effects of time, gender and parity, if one partner reported more symptoms in a given time point, the other tended to report similar levels of symptoms.

The depressive symptoms model revealed a significant positive correlation between men's and women's slopes for time from the first trimester to 3-months postpartum,  $r = .512$ ,  $Z = 3.034$ ,  $p = .002$ , indicating that those whose depressive symptoms decreased over that time period tended to have partners whose symptoms decreased as well.

### **1.5. Discussion**

This longitudinal study analyzed individual and dyadic trajectories of anxiety and depressive symptoms from early pregnancy through the postpartum period, assessing time, gender and parity differences and effects and using piecewise dyadic growth curve models. Extending prior research on anxiety and depressive symptoms over pregnancy and the postpartum period, our findings show significant changes in psychological adjustment trajectories over time,

including the following: anxiety and depressive symptoms decreased from the first trimester to 3-months postpartum and increased from 3- to 30-months postpartum. No significant gender or parity effects were found for symptoms over time, with the exception of a steeper anxiety and depressive symptom increase in multiparous women from 3- to 30-months postpartum, whereas primiparous women's symptoms remained stable. Anxiety and depressive symptoms were positively correlated within-dyad over time.

Anxiety and depressive symptoms were found to decline from the first trimester to 3-months postpartum and to increase from 3- to 30-months postpartum. These findings suggest that parents' psychological adjustment is enhanced from early pregnancy to 3-months postpartum, but deteriorates from 3- to 30-months postpartum.

The results of the moderate decreases in anxiety and depressive symptoms from the first trimester to 3-months postpartum are consistent with previous recent findings suggesting that anxiety and depressive symptoms decrease across pregnancy until the postpartum period (e.g., Andersson et al., 2006; Buist et al., 2011; Whisman et al., 2011). However, the findings are inconsistent with previous studies that note the stability of anxiety and depressive symptoms from pregnancy to the postpartum period (e.g., Giardinelli et al., 2012; Heron et al., 2004; Milgrom et al., 2008). The studies that note symptom stability over time mostly included primiparous women, less than four assessment waves and, generally used non-parametric data analytic plans. On the other hand, the present study included six assessment waves and analyzed data with piecewise growth curve models, providing a more detailed characterization of the symptom trajectories across pregnancy and the postpartum period.

Anxiety and depressive symptom declines from early pregnancy to 3-months postpartum may be explained by the distress experienced by women at the beginning of pregnancy, which can

be transient, given the reduction in pregnancy's physical symptoms, the comforting results of routine tests and/or the fear of miscarriage diminishing, among other factors (e.g., Matthey & Ross-Hamid, 2012). Additionally, worries, an important cognitive component of anxiety, are known to decrease across pregnancy (Austin, Tully, & Parker, 2007; Buist et al., 2011). After childbirth and until 3-months postpartum, the symptom declines may be explained by the increase in the sense of personal control and the positive parent-infant interactions, which are known to account for lower psychological distress, lessening anxiety and depressive symptoms (Keeton et al., 2008; Parfitt et al., 2013). Particularly regarding women, the decrease in anxiety and depressive symptoms may also be explained by changes in estrogen and progesterone during pregnancy, the increase of serotonin concentrations over pregnancy and the postpartum period, and the increase of oxytocin and prolactin over the early postpartum period (e.g., Brummelte & Galea, 2010; Sekiyama, Nakatani, Yu, Seki, & Sato-Suzuki, 2013; Stuebe, Grewen, & Meltzer-Brody, 2013). Additionally, the maintenance of breastfeeding was found to be associated with a decrease in depressive symptoms (Figueiredo, Canário, & Field, 2014). This is particularly relevant in the Portuguese context, as 98% of women initiate exclusive breastfeeding immediately after childbirth (Direção-Geral da Saúde, 2013).

The moderate increases in anxiety and depressive symptoms from 3- to 30-months postpartum suggest a greater risk of psychological difficulties over that period. These findings do not corroborate previous studies (e.g., Barker, Jaffee, Uher, & Maughan, 2011; DiPietro et al., 2008; Van Bussel, Spitz, & Demyttenaere, 2009). On the contrary, these results confirm and extend previous findings that show the increase in women's and men's anxiety and depressive symptoms over the first postpartum year (e.g., Matthey et al., 2000; Moss et al., 2009; Paulson & Bazemore, 2010), particularly after 3-months postpartum. This period seems to be more demanding for parents (e.g., Belsky, Gilstrap, & Rovine, 1984). Facing increased environmental

stressors, such as the return to work after the maternal/paternal leave of absence, parents have to address the child's needs and difficulties and tend to experience a deterioration of the couple relationship (e.g., Bretkopf et al., 2006; Perren et al., 2005; Whisman et al., 2011). Such strains may contribute as risk factors for an increase in psychological difficulties, after 3-months postpartum.

Even though women presented more anxiety and depressive symptoms at the first trimester, symptoms declined from the first trimester to 3-months postpartum and increased from 3- to 30-months postpartum in the same way for both men and women. The result of higher symptoms reported for women at the first pregnancy trimester is consistent with prior studies that reveal higher antenatal anxiety and depressive symptoms in women than in men (e.g., Escribà-Aguir & Artacoz, 2011; Escribà-Aguir et al., 2008; Matthey et al., 2000). This study's findings also reinforce previous studies' results that note no gender effects in anxiety and/or depressive symptoms trajectories over pregnancy and/or the postpartum period (e.g., Parfitt et al., 2013; Perren et al., 2005). The present findings extend those results, pointing out the lack of gender effects on anxiety and depressive symptoms over time, from early pregnancy to 30-months postpartum.

Our findings are inconsistent with previous studies that suggest that anxiety symptoms remain stable for women and decrease for men from late pregnancy to 12-months postpartum (Keeton et al., 2008), whereas depressive symptoms increase until 12- (Keeton et al., 2008) or decrease until 24-months postpartum (Rholes et al., 2011) in women, while remaining stable for men. Whereas the studies that reported gender effects started at the third trimester and assessed the linear trajectories of symptoms from that time point to 12- and 24-months postpartum, the present study started at the first trimester and assessed symptom trajectories through a linear piecewise growth curve model, using two time segments, one from the first trimester to 3-months

postpartum, and another from 3- to 30-months postpartum. These differences can contribute to explaining this study's gender results.

Multiparous parents presented more anxiety and depressive symptoms than primiparous parents did at the first pregnancy trimester. This finding corroborates previous studies (e.g., Condon & Esuvaranathan, 1990; Melo et al., 2012; Giardinelli et al., 2012), but is inconsistent with other studies that show pregnancy as a period of crisis for primiparous women (e.g., Giakoumaki et al., 2009).

From the first trimester to 3-months postpartum, similar trajectories of anxiety and depressive symptom decreases were found for primiparous and multiparous men and women. These results corroborate previous findings (e.g., Figueiredo et al., 2007; Heron et al., 2004; Melo et al., 2012), but are inconsistent with other studies that note parity effects in the adaptation to pregnancy and the first postpartum weeks (Giakoumaki et al., 2009; Mori et al., 2011). Our results reveal that psychological adjustment is enhanced for both primiparous and multiparous parents from the first trimester to 3-months postpartum. Particularly after childbirth, this may be potentiated by the positive experiences of caregiving and interaction with the baby, which are common to both primiparous and multiparous parents (Kaitz, Chriki, Bear-Scharf, Nir, & Eidelman, 2000).

From 3- to 30-months postpartum, small to moderate increases in anxiety and depressive symptoms were found for multiparous men and women and for primiparous men, whereas primiparous women's symptoms remained unaltered. Multiparous women presented a steeper increase in symptoms over the postpartum period. These results are consistent with previous studies pointing out parity differences after 3-months postpartum, particularly for higher psychological distress in multiparous than in primiparous women (e.g., Belsky et al., 1984; Sutter-

Dallay et al., 2012). However, these results do not corroborate the lack of differences in maternal anxiety, stress and depression found between primiparous and multiparous women at 24-months postpartum as reported by DiPietro et al. (2008). Results on the anxiety and depressive symptom steeper increases for multiparous women over the postpartum period may be related to more stressful conditions, such as concerns about the inclusion of the new baby in the family dynamics, difficulties in adapting to the more demanding processes of caregiving, managing household labor and work schedules, particularly after the maternity leave of absence, which may increase the risk for psychological difficulties (Hakulinen, Laippala, & Paunonen, 1997).

Anxiety and depressive symptoms were found to be positively correlated within the dyad: if one partner presented more symptoms, the other tended to present more symptoms as well. These results reveal partners' interdependence regarding anxiety and depressive symptoms during pregnancy and the postpartum period and note that one's psychological adjustment affects and is affected by their partner's psychological adjustment. The results regarding the interdependence of depressive symptoms differ from the findings of Rholes et al. (2011), which unexpectedly revealed a negative correlation within-dyad, suggesting that if one partner was more depressed the other tended to be less depressed. Over pregnancy and the postpartum period, the risk for anxiety and depressive symptoms may be the same for both partners within a couple, as they influence each other. Symptoms' interdependence may take place through partner relationship quality, that is, one partner's symptoms affect the partner relationship, and this has consequences for the other partner's symptoms, and vice-versa (Don & Mickelson, 2012). Positive partners' interdependence of anxiety and depressive symptoms has not been previously reported in the literature and therefore constitutes one of the novelties of this study.

### 1.5.1. Limitations

Data were based on self-report measures, and evidence of selective attrition exists. This study had voluntary participation; those who agreed to participate may have been the ones that exhibited less anxiety and depressive symptoms. Participants with more symptoms at the first trimester, and participants who were younger, less educated, unemployed, or from lower socio-economic levels were more likely to dropout throughout the study. Although this is a relatively common circumstance in longitudinal studies (e.g., Austin et al., 2007; Heron et al., 2004; Van Bussel et al., 2009), the potential to bias the results must be acknowledge. Furthermore, the large time period between assessments waves five and six can be a potential limitation. In such a large time span many events that we cannot predict or control can take place, having the potential to bias the results.

Additionally, as significant variability was found in men's and women's intercepts and slopes of anxiety and depressive symptoms (Table 1.4), future research should consider additional variables such as hormonal changes and the partner relationship satisfaction or quality as mediators or moderators of the symptom changes over pregnancy and the postpartum period.

### 1.5.2. Conclusions

According to this study's results, parents' psychological adjustment is enhanced from early pregnancy to 3-months postpartum, but deteriorates from 3- to 30-months postpartum. Reflecting the bio-psychosocial challenges that parents face during the transition to parenthood, anxiety and depressive symptoms trajectories over time were mostly similar among primiparous and multiparous men and women, except for multiparous women who revealed the steeper symptom increases from 3- to 30-months postpartum. Additionally, anxiety and depressive symptoms were positively correlated within-dyad over time. The strengths of this study include the six-wave

longitudinal design, the large sample size, the inclusion of primiparous and multiparous men and women, and the use of piecewise dyadic growth curve analysis through multilevel modeling. Based on the reported findings, we consider that prevention and intervention programs aimed to reduce the risk of psychological symptom over pregnancy and the postpartum period would benefit from (a) including not only women but also their partner, (b) including not only primiparous but also multiparous parents, and (c) devoting particular attention to the period after 3-months postpartum.

## 1.6. References

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## 2. Partner Relationship from Early Pregnancy to 30-Months Postpartum:

### Gender and Parity Effects

#### 2.1. Abstract

The purpose of this study was to analyze individual and dyadic trajectories of change for positive and negative partner relationship from early pregnancy to 30-months postpartum, considering time, gender and parity. 260 couples ( $N=520$ ) recruited in an Obstetrics Outpatient Unit (Portugal), completed a self-report measure of partner relationship at the first, second and third pregnancy trimester, childbirth, 3- and 30-months postpartum. Using multilevel modeling, piecewise dyadic growth curve models were performed to predict positive and negative partner relationship through time, gender and parity. From the first trimester to 3-months postpartum positive and negative partner relationship decreased and from 3- to 30-months postpartum positive partner relationship decreased steeper and negative partner relationship increased, in all parents. Positive and negative partner relationship was correlated within-dyad. Women, but not men, presented a decrease in positive partner relationship from the first trimester to 3-months postpartum. First-time, but not second-time parents, reported a decrease in negative partner relationship, and second-time, but not first-time parents, reported a decrease in positive partner relationship from the first trimester to 3-months postpartum. First-time parents reported a steeper decrease in positive partner relationship than second-time parents from 3- to 30-months postpartum. Otherwise, changes over time were the same for women's and men's and for first- and second-time parents' positive and negative partner relationship. Results point out similar trajectories of partner relationship deterioration over pregnancy and the postpartum period for all

parents, but somewhat different according to gender and parity. Results additionally demonstrated the positive and negative partner relationship interdependence within-dyads.

*Keywords:* positive and negative partner relationship; pregnancy and postpartum; first- and second-time parents; transition to parenthood; dyadic growth curve analyses

## **2.2. Background**

Transition periods are defined as long-term processes that result in the qualitative reorganization of both inner lives and external behavior (e.g., Cowan, 1991). The transition to parenthood refers to normative changes, expected in men and women during pregnancy and the postpartum period, which would benefit adequate parenting (e.g., Cowan, Cowan, Heming, & Miller, 1991).

Focus of attention by researchers and clinicians over the past seven decades, the transition to parenthood has been characterized as a period of joy and fulfillment, but also as a period of crises, introducing significant challenges for men and women and their relationship as a couple (e.g., Cowan et al., 1991; Heinecke, 2002). This may not be limited to the transition of the first child. Having additional children also promote a transition (e.g., Volling, 2012). Incorporating the new member into the preexisting family system causes strain, stimulating new individual and family changes (e.g., Cowan et al., 1991; Krieg, 2007). It is yet, however, to this point unclear the impact of the birth of a first or later-born child on men's and women's relationship as a couple.

Significant unfavorable changes have been noted in partner relationship (Figueiredo et al., 2008), in marital quality (Belsky, Lang, & Rovine, 1985; Belsky & Rovine, 1990), as well as in marital satisfaction (Lawrence, Nylen, & Cobb, 2007; Lawrence, Rothman, Cobb, Rothman, &

Bradbury, 2008) over pregnancy and the postpartum period. Compared to childless couples, a more pronounced decline in marital satisfaction was found for childbearing couples, suggesting that the transition to parenthood accelerates the decline of marital satisfaction over time (Lawrence et al., 2008; Nomaguchi & Milkie, 2003; Twenge, Campbell, & Foster, 2003). This decline is identified as a consequence of both linear decreases in feelings of love and maintenance behaviors and emotional responsiveness (Belsky & Rovine, 1990; Kluwer, 2010) and linear increases of ambivalence and conflict (Belsky & Rovine, 1990; Kluwer & Johnson, 2007).

Could pregnancy be a time when relationship satisfaction is particularly high for couples and where no negative relational outcomes are expressed? Several studies focused on pregnancy and childbirth identify these periods as associated with an improvement in couples' positive feelings, such as happiness, joy, gratification, and fulfillment (Hirschberger, Srivastava, Marsh, Cowan, & Cowan, 2009; Kluwer, 2010; Schwerdtfeger, Todd, Oliver, & Hubler, 2013; Twenge et al., 2003). These feelings may contribute to a honeymoon period, characterized in the literature as an experience of cooperation and togetherness, with the partners being more focused on each other's needs and having an idealized vision of the child contributing to their relationship, particularly during late pregnancy (Cowan & Cowan, 1992; Feeney, Hohaus, Noller, & Alexander, 2001; Houts, Barnett-Walker, Paley, & Cox, 2008).

However, longitudinal studies have shown declines in couple relationship from pregnancy to the postpartum period (e.g., Belsky & Rovine, 1990; Cowan & Cowan, 1992; Doss, Rhoades, Stanley, & Markman, 2009). This may occur because the postpartum period is accompanied by conditions such as lack of time, fluctuations in moods, urgent child-care tasks, financial challenges, changing relationships with friends and family members, and a shift of attention and energy from the self and partner to the baby, all of which have the potential to adversely affect partner relationship (Belsky & Pensky, 1988; Kluwer, 2010; Lawrence, Rothman, Cobb, &

Bradbury, 2010). Moreover, a sharp decline in the couple relationship was found in the postpartum period (Lawrence et al., 2007), specially one year after childbirth (Mitnick, Heyman, & Smith Slep, 2009; Shapiro, Gottman, & Carrère, 2000), and persisting for several years after (Hirscheberger et al., 2009; Kluwer & Johnson, 2007; Schulz, Cowan, & Cowan, 2006). This decline in marital quality/satisfaction has been found until 2-years postpartum (Kohn et al., 2012), 3- or 4-years postpartum (Belsky & Rovine, 1990; Kluwer & Johnson, 2007) and 14.5-years postpartum (Hirschberger et al., 2009).

Most studies of partner relationship began their assessments during late pregnancy or during the postpartum period. Few longitudinal studies have included several time points before and after the birth of the child. Also, very few studies provided information on the positive and negative aspects of partner relationship. The present study addresses these concerns. Because it starts in the first trimester and includes six assessment waves until 30-months postpartum, including two time points after birth, this study may provide a better understanding of the positive and negative partner relationship trajectories along the transition to parenthood, from early pregnancy to the first postpartum years.

Several studies have assessed gender differences on marital quality/satisfaction over the transition to parenthood, but the results are somewhat controversial. Some studies reveal that both men and women become less satisfied with their marital relationship (Hirschberger et al., 2009; Mitnick et al., 2009). Other studies identified a more pronounced relationship decline for women than for men (Belsky & Rovine, 1990; Doss et al., 2009; Kluwer, 2010; Lawrence et al., 2007; Shapiro et al., 2000; Twenge et al., 2003), that was explained after birth by an increase in problems to solve and poorer conflict management skills reported in women (Doss et al., 2009). Interestingly, Lawrence et al. (2007) identified that the level of marital satisfaction from the

beginning of marriage until the third trimester of pregnancy remained stable for men but declined for women, suggesting that this decline begins prior to the third trimester of pregnancy only for women.

Interdependence regarding relationship satisfaction has been previously identified in the literature (Butzer & Campbell, 2008; Chi, Fang, Epstein, Lam, & Li, 2013; Pruchno, Wilson-Genderson, & Cartwright, 2009). In a dyad, as in a couple, members are interdependent: they affect one another and influence individual level of change (Kenny, Kashy, & Cook, 2006; O'Brien, 2005). However, to the best of our knowledge, only one study has to date considered partners' interdependence on relationship satisfaction over the transition to parenthood (Keizer & Schenk, 2012). Attending to several recommendations (Hirschberger et al., 2009; Kenny et al., 2006; Mortensen, Torsheim, Melkevik, & Thuen, 2012), the present study considers both the partners and the interdependence between them, assessing gender differences and effects as well as the rates of change within-dyad. Because this study looks not only at the individual but also at the dyadic trends of positive and negative partner relationship over time, strengths rests on the potential to reinforce the conclusions on how partner relationship evolves for men and women individually and as a couple from early pregnancy to later postpartum.

A small number of studies have addressed the impact of a later-born child on the couple relationship. Furthermore, the existent results are controversial. While some studies suggest similar patterns of marital relationship decline for first- and second-time mothers over the transition to parenthood (Krieg, 2007), other studies suggest that this decline continues after the transition to parenthood, is enhanced with additional children, and that the number of children is related to higher marital discord and lower marital satisfaction (Belsky, Spanier, & Rovine, 1983; Mortensen

et al., 2012; Twenge et al., 2003). Because there are few and inconsistent results on this issue, authors suggest that research comparing first- and second-time parents is needed to better understand partner relationship throughout pregnancy and the postpartum period (Doss et al., 2009; Kluwer, 2010; Mortensen et al., 2012). This study addresses this recommendation by assessing the impact of first and later-born children on positive and negative partner relationship over time, from early pregnancy to 30-months postpartum.

The purpose of this study was to analyze the individual and dyadic trajectories of change for positive and negative partner relationship, using dyadic growth curve models: a) from early pregnancy to 30-months postpartum, b) examining and controlling the interdependence between partners, and c) assessing gender and parity differences and effects.

The following hypotheses, stated according to specific difficulties in the resolution of the transition to parenthood developmental tasks, namely attending to gender and parity, were tested: 1) partner relationship deteriorates from early pregnancy to 30-months postpartum, through a decrease in positive and an increase in negative partner relationship particularly after childbirth; 2) positive and negative partner relationship are interdependent within dyad over time; 3) trajectories of positive and negative partner relationship over time are different, worse for women than for men; and 4) trajectories of positive and negative partner relationship over time are different, worse for first- than for second-time parents.

## 2.3. Method

### 2.3.1 Participants

This study used data from a longitudinal sample of 260 couples ( $N = 520$ ), followed over the transition to parenthood in an Obstetrics Outpatient Unit in Oporto, Portugal (for further detail on the study see Figueiredo & Conde, 2011). Most of the participants were Portuguese (91.4%), aged between 20 and 39 years old (86%), came from low or medium-low socio-economic levels (57.4%), had nine or more years of education (67.2%), were employed (80.4%), married or cohabiting (88.4%), and first-time parents (54.1% of the women and 56.1% of the men).

As described elsewhere (e.g., Figueiredo & Conde, 2011) the previous study had five assessment waves, at the first, second and third trimester of pregnancy, childbirth and 3-months postpartum, that were completed by 91.4% of the women and 82.8% of the men. The present study added one assessment wave to the previous, between 24 and 36-months postpartum. All 260 couples were contacted by telephone in order to understand if they were willing to participate in this assessment wave, 71 couples ( $n = 142$ , 27.3%) were no longer interested in participating, 37 couples ( $n = 74$ , 14.2%) could not be contacted, and 152 couples ( $n = 304$ , 58.5%) agreed to participate. Questionnaires were sent by letter or by email (using an electronic form), and 129 couples ( $n = 258$ , 84.9%) filled in the questionnaires. All participants gave their informed consent for participation.

Most of the couples who participated at the last assessment wave didn't had significant changes in their families ( $n = 218$ , 84.4%) since the previous assessment wave, at 3-months postpartum, however 8 couples separated or divorced ( $n = 16$ , 6.20%) and 6 ( $n=12$ , 4.66%) had another child. The participants who completed all six assessment waves were not different of those who did not regarding parity,  $\chi^2(1) = 1.515$ ,  $p = .214$ , and marital status,  $\chi^2(5) = 4.610$ ,  $p = .465$ .

However, participants who completed all six assessment waves were more likely to be older,  $\chi^2(3) = 33.048$ ,  $p < .001$ , employed,  $\chi^2(6) = 16.322$ ,  $p = .012$ , belong to medium or high socioeconomic levels,  $\chi^2(2) = 26.450$ ,  $p = .000$ , and have more years of education,  $\chi^2(2) = 29.017$ ,  $p = .000$ .

Participants who completed all assessment waves were no different than those who did not on positive and negative partner relationship at the first pregnancy trimester,  $t(501) = -1.40$ ,  $p = .162$ ,  $t(501) = 1.647$ ,  $p = .052$ , nor at 3-months postpartum,  $t(406) = -.980$ ,  $p = .328$ ,  $t(406) = 1.604$ ,  $p = .072$ .

Table 2.1

*Participants' Socio-demographic Characterization at Baseline*

|                      | Men            | Women          | 1 <sup>st</sup> time<br>parents | 2 <sup>nd</sup> time<br>parents | Total          |
|----------------------|----------------|----------------|---------------------------------|---------------------------------|----------------|
|                      | <i>n</i> = 260 | <i>n</i> = 260 | <i>n</i> = 320                  | <i>n</i> = 200                  | <i>N</i> = 520 |
|                      | %              | %              | %                               | %                               | %              |
| Age (years)          |                |                |                                 |                                 |                |
| ≤19                  | 4.2            | 11.5           | 12.4                            | 2.6                             | 7.9            |
| 20-29                | 38.9           | 47.0           | 51.6                            | 33.3                            | 42.9           |
| 30-39                | 46.9           | 39.2           | 33.9                            | 55.4                            | 43.1           |
| ≥40                  | 10.0           | 2.3            | 2.1                             | 8.7                             | 6.1            |
| Matrimonial status   |                |                |                                 |                                 |                |
| Cohabiting           | 32.5           | 32.6           | 35.8                            | 28.5                            | 32.5           |
| Married              | 55.7           | 55.8           | 49.7                            | 63.2                            | 55.8           |
| Single               | 10.2           | 11.2           | 14.5                            | 6.1                             | 10.7           |
| Divorced             | 1.6            | 0.4            | 0                               | 2.2                             | 1.0            |
| Socio-economic level |                |                |                                 |                                 |                |
| High                 | 9.3            | 16.4           | 15.6                            | 8.9                             | 12.5           |
| Medium-high          | 14.0           | 7.4            | 9.4                             | 13.0                            | 11.1           |
| Medium               | 18.6           | 19.6           | 16.5                            | 21.9                            | 19.0           |
| Medium-low           | 30.3           | 26.4           | 30.4                            | 26.5                            | 28.6           |
| Low                  | 27.8           | 30.2           | 28.1                            | 27.7                            | 28.8           |
| Occupational status  |                |                |                                 |                                 |                |
| Employed             | 89.0           | 71.8           | 77.7                            | 83.5                            | 80.4           |
| Unemployed           | 9.0            | 21.6           | 20.0                            | 13.4                            | 15.4           |
| Household/Student    | 2.0            | 6.6            | 5.3                             | 3.1                             | 4.2            |
| Years of education   |                |                |                                 |                                 |                |
| < 9                  | 38.6           | 26.9           | 29.3                            | 37.8                            | 32.8           |
| 9 – 12               | 47.9           | 54.3           | 53.0                            | 50.0                            | 51.0           |
| > 12                 | 13.5           | 18.8           | 17.7                            | 12.2                            | 16.2           |

## 2.3.2. Measures

### 2.3.2.1. Socio-demographic Questionnaire

Information about the participants (e.g., age, matrimonial status, socio-economic level, occupational status and years of education) was collected using a socio-demographic questionnaire (Figueiredo, Teixeira, Conde, Pinto, & Sarmento, 2009).

### 2.3.2.2. Relationship Questionnaire

The Relationship Questionnaire (RQ; Figueiredo et al., 2008) is a brief self-report questionnaire, comprised of 12 items rated on a 4-point Likert scale that assesses the positive (8 items) and negative (4 items) dimensions of the partner relationship. The questionnaire was designed to be completed in a short time (less than 2 minutes), is behaviorally focused and appropriate for men and women. The positive partner relationship dimension includes aspects such as sense of support and care, affection, closeness and joint interests and activities (examples of the positive subscale items are “Do you share activities that are of interest for both, you and your partner?” and “When you need help does your partner help you, as you would like him to?”). The negative partner relationship dimension includes aspects as irritability, arguments and criticisms (examples of the negative subscale items are “Do you and your partner get irritable with each other?” and “Does your partner usually criticize you?”). A higher score on each dimension means that the positive or negative aspects of the relationship are more present. The questionnaire has showed good internal consistency (with a Cronbach alpha of .79 for the total scale, .90 for the positive subscale and .72 for the negative subscale), as well as test-retest reliability ( $r = .74$ ) for the total scale (Figueiredo et al., 2008). In the present sample, coefficient alphas ranged from .70 to .92 for men and women in the positive and negative subscales.

### 2.3.3. Procedure

This research received previous approval from the institution Ethical Commission. Participants were recruited in an Obstetrics Outpatients Unit at their first appointment. The aims and the procedures of the study were explained. After signing an informed consent, the socio-demographic questionnaire was separately administered to the pregnant woman and partner, and the RQ was given to them (between weeks 8 and 14). The RQ was administrated again during the second (between weeks 20 and 24) and third pregnancy trimesters (between weeks 30-34), as well as at childbirth (between days 1 and 3), at 3-months (between weeks 10 and 14) and 30-months (between months 24 and 36) postpartum. The socio-demographic questionnaire was administered again at 3- and 30-months postpartum.

### 2.3.4. Data Structure and Analytic Model

Chi-square association tests and independent samples *t*-tests were used to respectively compare socio-demographic characteristics, and to assess differences on the outcome variables at the first trimester and 3-months postpartum, among participants who complete and participants who did not complete all assessments. Pearson correlations were performed to assess the correlation between men and women, within-men and within-women on positive and negative partner relationship.

Dyadic growth curve models were tested using multilevel modeling (MLM; Duncan, Duncan, & Strycker, 2006; Kenny et al., 2006; Kurdek, 2003) with IBM SPSS Statistics for Windows, version 19.0, to estimate the trajectories of change for positive and negative partner relationship over time. Analyses were performed in a pairwise person-period dataset, in which each person had a record for each time point. The data consisted of 3120 potential observations: 260 couples by 6 time points by 2 people (men and women). Two-level models were estimated for

positive and negative partner relationship (outcome variables), in which level 1 referred to the participants' scores at each time point, and level 2 to the dyad. Individual differences for men and women were modeled at the dyad level. Within-dyad interdependence was modeled as similarity on the average outcome and the specific time points, including correlations between the partners' intercept, slopes and time-specific residuals.

An important issue in modeling growth curves is the scaling of time (Biesanz, Deeb-Sousa, Papadakis, Bollen, & Curran, 2004). Time 0 was defined as the date of the first assessment at the first trimester (baseline) and the time variable was scored in months since the baseline until the child's age of 30 months. Therefore, the intercept in the growth curve model refers to the outcome variables at the baseline, and the slopes for time represents the degree to which the outcome variables change each month.

Mean scores at each assessment wave were examined for men and women, first- and second-time parents, and the scores determined that change over time was different before and after 3-months postpartum. Thus, piecewise linear growth curve models (Duncan et al., 2006) were performed to assess the changes on the outcome variables at baseline as well as from the first trimester to 3-months postpartum, and from 3 to 30-months postpartum.

Fixed effects for gender (coded as -1 for women and 1 for men) and parity (coded as -1 for first-time parents and 1 for second-time parents) were also included in the models, as well as all possible interactions, resulting in two three-way interactions, one among time from the first trimester to 3-months postpartum, gender and parity, and another among time from 3 to 30-months postpartum, gender and parity.

Deviance difference tests were performed between unconditional models and models with predictors to assess model fit improvements. Results were reported at a  $p < .05$  significance level.

The effect size  $r$  (Rosenthal, Rosnow, & Rubin, 2000) was estimated to all significant effects and interpreted according to Cohen's guidelines (1988).

## 2.4. Results

### 2.4.1. Preliminary Analyses

Descriptive statistics (mean and standard deviation) for men's and women's, first- and second-time parents' positive and negative partner relationship at each assessment wave are presented at Table 2.2.

Correlations among partner relationship for all assessment waves were statistically significant,  $ps < .001$ , as presented at Table 2.3. The correlations between men and women at each assessment wave for the outcome variables reveal that their scores on positive and negative partner relationship covary. Also, within-men and within women correlations of the outcome variables point out that men's scores and women's scores on positive and negative partner relationship are related at the different assessment waves.

The deviance difference tests revealed that the positive partner relationship model,  $\chi^2(29) = 79.072$ ,  $p < .001$ , and the negative partner relationship model,  $\chi^2(29) = 508.262$ ,  $p < .001$ , provided good fit to the data, indicating that in each model the predictors explained variance.

Two different multilevel models were performed to respectively predict the positive and the negative partner relationship. Each model included time from the first trimester to 3-months postpartum, time from 3- to 30-months postpartum, gender and parity, as well as all possible interactions as predictors of the outcome variable (Table 2.4). The fixed and random effects for each model are presented at Table 2.4.

Table 2.2

*Means for Positive and Negative Partner Relationship for Men and Women, First- and Second-Time Parents*

| Partner relationship      | Men      |           | Women    |           | 1 <sup>st</sup> time |           | 2 <sup>nd</sup> time |           |
|---------------------------|----------|-----------|----------|-----------|----------------------|-----------|----------------------|-----------|
|                           |          |           |          |           | parents              |           | parents              |           |
|                           | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i>             | <i>SD</i> | <i>M</i>             | <i>SD</i> |
| Positive                  |          |           |          |           |                      |           |                      |           |
| 1 <sup>st</sup> trimester | 3.635    | 0.388     | 3.673    | 0.351     | 3.682                | 0.335     | 3.620                | 0.407     |
| 2 <sup>nd</sup> trimester | 3.645    | 0.426     | 3.608    | 0.441     | 3.694                | 0.370     | 3.543                | 0.489     |
| 3 <sup>rd</sup> trimester | 3.651    | 0.403     | 3.625    | 0.417     | 3.679                | 0.352     | 3.587                | 0.467     |
| Childbirth                | 3.656    | 0.388     | 3.611    | 0.413     | 3.690                | 0.371     | 3.563                | 0.425     |
| 3-months                  | 3.655    | 0.385     | 3.571    | 0.458     | 3.672                | 0.366     | 3.538                | 0.479     |
| postpartum                |          |           |          |           |                      |           |                      |           |
| 30-months                 | 3.438    | 0.589     | 3.339    | 0.669     | 3.403                | 0.630     | 3.362                | 0.640     |
| postpartum                |          |           |          |           |                      |           |                      |           |
| Negative                  |          |           |          |           |                      |           |                      |           |
| 1 <sup>st</sup> trimester | 2.191    | 0.574     | 2.119    | 0.521     | 2.152                | 0.550     | 2.166                | 0.541     |
| 2 <sup>nd</sup> trimester | 2.110    | 0.538     | 2.065    | 0.488     | 2.08                 | 0.525     | 2.123                | 0.497     |
| 3 <sup>rd</sup> trimester | 2.084    | 0.527     | 2.061    | 0.531     | 2.044                | 0.525     | 2.107                | 0.533     |
| Childbirth                | 2.056    | 0.484     | 2.053    | 0.528     | 2.004                | 0.473     | 2.116                | 0.539     |
| 3-months                  | 2.079    | 0.495     | 2.042    | 0.491     | 2.019                | 0.485     | 2.111                | 0.499     |
| postpartum                |          |           |          |           |                      |           |                      |           |
| 30-months                 | 2.133    | 0.513     | 2.133    | 0.517     | 2.072                | 0.491     | 2.222                | 0.537     |
| postpartum                |          |           |          |           |                      |           |                      |           |

Table 2.3

*Correlations among Positive and Negative Partner Relationship for Men and Women*

|                               | 1 <sup>st</sup><br>trimester | 2 <sup>nd</sup><br>trimester | 3 <sup>rd</sup><br>trimester | Childbirth  | 3-months<br>postpartum | 30-months<br>postpartum |
|-------------------------------|------------------------------|------------------------------|------------------------------|-------------|------------------------|-------------------------|
| Positive partner relationship |                              |                              |                              |             |                        |                         |
| 1 <sup>st</sup> trimester     | <b>.447</b>                  | .618                         | .635                         | .640        | .636                   | .435                    |
| 2 <sup>nd</sup> trimester     | .576                         | <b>.528</b>                  | .721                         | .531        | .587                   | .348                    |
| 3 <sup>rd</sup> trimester     | .633                         | .702                         | <b>.600</b>                  | .618        | .570                   | .470                    |
| Childbirth                    | .511                         | .604                         | .588                         | <b>.549</b> | .706                   | .474                    |
| 3-months postpartum           | .539                         | .590                         | .722                         | .680        | <b>.605</b>            | .578                    |
| 30-months postpartum          | .483                         | .449                         | .395                         | .435        | .426                   | <b>.721</b>             |
| Negative partner relationship |                              |                              |                              |             |                        |                         |
| 1 <sup>st</sup> trimester     | <b>.245</b>                  | .410                         | .375                         | .329        | .406                   | .499                    |
| 2 <sup>nd</sup> trimester     | .574                         | <b>.448</b>                  | .533                         | .306        | .338                   | .448                    |
| 3 <sup>rd</sup> trimester     | .556                         | .622                         | <b>.403</b>                  | .408        | .422                   | .261                    |
| Childbirth                    | .508                         | .528                         | .629                         | <b>.407</b> | .490                   | .303                    |
| 3-months postpartum           | .496                         | .536                         | .579                         | .559        | <b>.530</b>            | .302                    |
| 30-months postpartum          | .457                         | .495                         | .474                         | .523        | .358                   | <b>.452</b>             |

*Note.* Values on the diagonal (in bold) represent correlations between men and women, values above the diagonal represent within-men correlations, and values below the diagonal represent within-women correlations. All correlations were significant at a  $p < .001$  level.

#### 2.4.2. Positive and Negative Partner Relationship from Early Pregnancy to 30-Months Postpartum (Hypothesis 1)

In both positive and negative partner relationship models, main effects for time from the first trimester to 3-months postpartum, and for time from 3- to 30-months postpartum, were found (Table 2.4). From the first trimester to 3-months postpartum, positive and negative partner relationship were found to decrease (the average person's positive partner relationship decreased 0.004 units per month, effect size  $r = .142$ , and the average person's negative partner relationship decreased 0.008 units per month, effect size  $r = .186$ ). From 3- to 30-months postpartum, positive partner relationship was found to decrease (the average person's levels decreased 0.010 units per month, effect size  $r = .478$ ), whereas the negative partner relationship was found to increase (the average person's levels increased 0.005 units per month, effect size  $r = .304$ ).

Table 2.4

*Positive and Negative Partner Relationship from Early Pregnancy to 30-Months Postpartum: Gender and Parity Differences and Effects*

| Fixed effects                                                      | Partner relationship |           |                     |          |           |                    |
|--------------------------------------------------------------------|----------------------|-----------|---------------------|----------|-----------|--------------------|
|                                                                    | Positive             |           |                     | Negative |           |                    |
|                                                                    | <i>b</i>             | <i>SE</i> | <i>95% CI</i>       | <i>b</i> | <i>SE</i> | <i>95% CI</i>      |
| Intercept                                                          | 3.641                | 0.020     | [3.602, 3.681]***   | 2.136    | 0.026     | [2.086, 2.187]***  |
| Time from first trimester to 3-months postpartum                   | -0.004               | 0.002     | [-0.008, -0.0003]*  | -0.008   | 0.003     | [-0.014, -0.003]** |
| Time from 3 to 30-months postpartum                                | -0.010               | 0.002     | [-0.013, -0.007]*** | 0.005    | 0.001     | [0.002, 0.007]**   |
| Gender                                                             | -0.019               | 0.011     | [-0.041, 0.004]     | 0.028    | 0.018     | [-0.006, 0.063]    |
| Parity                                                             | -0.036               | 0.017     | [-0.070, -0.002]*   | 0.007    | 0.024     | [-0.040, 0.054]    |
| Gender x Parity                                                    | -0.021               | 0.011     | [-0.044, 0.002]†    | -0.003   | 0.018     | [-0.038, 0.032]    |
| Gender x Time from first trimester to 3-months postpartum          | 0.006                | 0.002     | [0.003, 0.010]***   | -0.002   | 0.003     | [-0.007, 0.003]    |
| Gender x Time from 3 to 30-months postpartum                       | 0.0001               | 0.001     | [-0.002, 0.002]     | -0.0003  | 0.001     | [-0.003, 0.002]    |
| Parity x Time from first trimester to 3-months postpartum          | -0.003               | 0.002     | [-0.007, 0.0004]†   | 0.005    | 0.003     | [-0.001, 0.011]†   |
| Parity x Time from 3 to 30-months postpartum                       | 0.002                | 0.001     | [-0.0004, 0.005]†   | 0.0002   | 0.001     | [-0.002, 0.003]    |
| Gender x Parity x Time from first trimester to 3-months postpartum | 0.003                | 0.002     | [-0.001, 0.006]     | 0.001    | 0.003     | [-0.004, 0.006]    |
| Gender x Parity x Time from 3 to 30-months postpartum              | 0.0001               | 0.001     | [-0.002, 0.002]     | -0.0004  | 0.001     | [-0.003, 0.002]    |
| Random effects                                                     | Men                  |           | Women               | Men      |           | Women              |
| Intercept                                                          | 0.108***             |           | 0.084***            | 0.161*** |           | 0.161***           |
| Slope for time from first trimester to 3-months postpartum         | 0.0001               |           | 0.001**             | 0.001**  |           | 0.001*             |
| Slope for time from 3- to 30-months postpartum                     | 0.0002***            |           | 0.0004***           | 0.0002** |           | 0.0002**           |
| Residuals                                                          | 0.057***             |           | 0.053***            | 0.145*** |           | 0.108***           |

*Note.* Gender: -1 female, 1 male; Parity: -1 first time parents, 1 second time parents; †  $p < .10$  \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

#### 2.4.3. Positive and Negative Partner Relationship within Dyad Interdependence (Hypothesis2)

At baseline, women's and men's positive partner relationship were correlated,  $r = .602$ ,  $Z = 6.030$ ,  $p < .001$ , as were women's and men's negative partner relationship,  $r = .501$ ,  $Z = 4.830$ ,  $p < .001$ . At the first trimester those with more positive or negative partner relationship had partners with similar levels of positive or negative partner relationship.

The estimated residual correlation was significant for the positive,  $r = .308$ ,  $Z = 8.228$ ,  $p < .001$ , and the negative partner relationship,  $r = .136$ ,  $Z = 3.594$ ,  $p < .001$ , indicating that after controlling for the effects of time, gender and parity, if one partner reported more positive or negative partner relationship at a particular time point, the other tended to report similar levels of positive or negative partner relationship at that time.

Also, the positive partner relationship model revealed a significant positive correlation between men's and women's slopes for time from 3- to 30-months postpartum,  $r = .728$ ,  $Z = 4.445$ ,  $p < .001$ , indicating that those whose positive partner relationship presented steeper declines over postpartum tended to have partners whose positive partner relationship declined as well.

#### 2.4.4. Gender Differences and Effects on the Trajectories of Positive and Negative Partner Relationship from Early Pregnancy to 30-Months Postpartum (Hypothesis 3)

No main effects were found for gender, as presented in Table 2.4. Likewise, no significant interactions were found between gender and time from first trimester to 3-months postpartum, or time from 3- to 30-months postpartum, except in the positive partner relationship model. Gender was found to moderate positive partner relationship from the first trimester to 3-months postpartum, effect size  $r = .239$ . Women experienced a decrease of 0.013 units per month,  $p < .001$ , effect size  $r = .318$ , and men a non-significant increase of 0.001 units per month,  $p = .559$  (Figure 2.1).

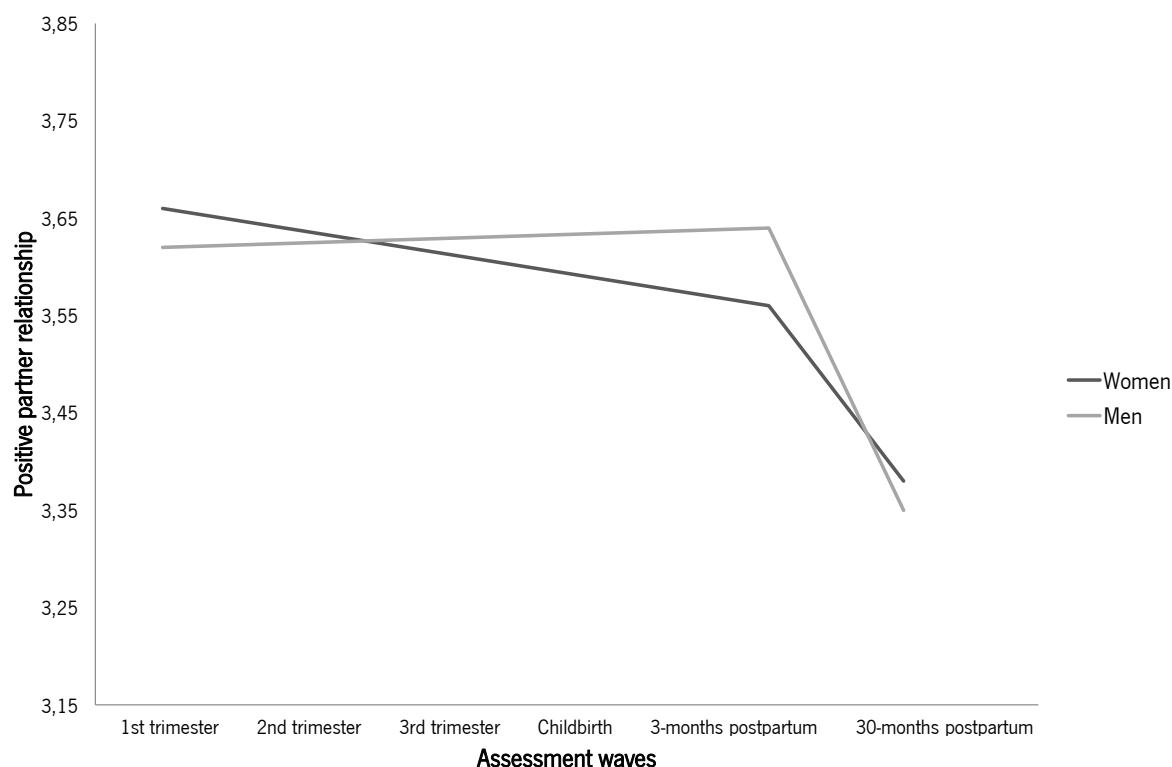


Figure 2.1. *Positive Partner Relationship from Early Pregnancy to 30-Months Postpartum: Gender Differences and Effects*

#### 2.4.5. Parity Differences and Effects on the Trajectories of Positive and Negative Partner Relationship from Early Pregnancy to 30-Months Postpartum (Hypothesis 4)

Main effects for parity were found regarding the positive but not the negative partner relationship, as presented in Table 2.4. At baseline first-time parents had higher positive couple relationship than second-time parents (mean difference of 0.072, effect size  $r = .100$ ).

Marginally significant interactions were found between parity and time from the first trimester to 3-months postpartum, regarding the positive and negative partner relationship (Table 2.4). Parity was found to moderate positive and negative partner relationship from the first trimester to 3-months postpartum, effect size  $r = .100$  and effect size  $r = .104$ , respectively. From the first trimester to 3-months postpartum, regarding positive partner relationship, second-time parents experienced a

decrease of 0.007 units per month,  $p = .013$ , effect size  $r = .153$ , and first-time parents a non-significant decrease of .0002 units per month,  $p = .933$  (Figure 2.2). Over the same period, concerning negative partner relationship, first-time parents experienced a significant decrease of 0.009 units per month,  $p = .011$ , effect size  $r = .172$ , and second-time parents a non-significant decrease of 0.001 units per month,  $p = .740$  (Figure 2.3).

A marginally significant interaction was also found between parity and time from 3- to 30-months postpartum, regarding the positive, but not the negative partner relationship (Table 2.4). Parity was found to moderate positive partner relationship from 3- to 30-months postpartum, effect size  $r = .120$ . From 3- to 30-months postpartum, first-time parents experienced a steeper decrease on positive partner relationship, 0.013 units per month,  $p < .001$ , effect size  $r = .495$ , than second-time parents, 0.008 units per month,  $p < .001$ , effect size  $r = .292$  (Figure 2.2).

As presented in Table 2.4, no statistically significant interaction was found among time from first trimester to 3-months postpartum, gender and parity, or among time from 3- to 30-months postpartum, gender and parity, regarding the positive or negative partner relationship.

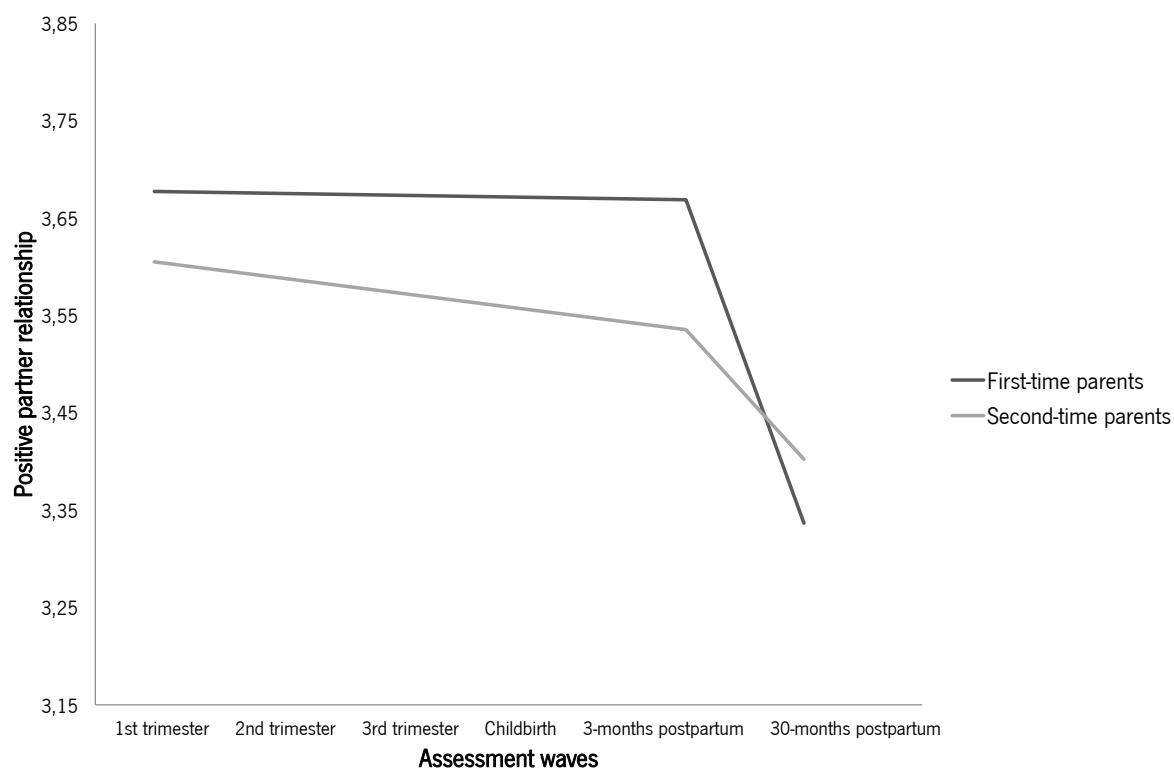


Figure 2.2. *Positive Partner Relationship from Early Pregnancy to 30-Months Postpartum: Parity Differences and Effects*

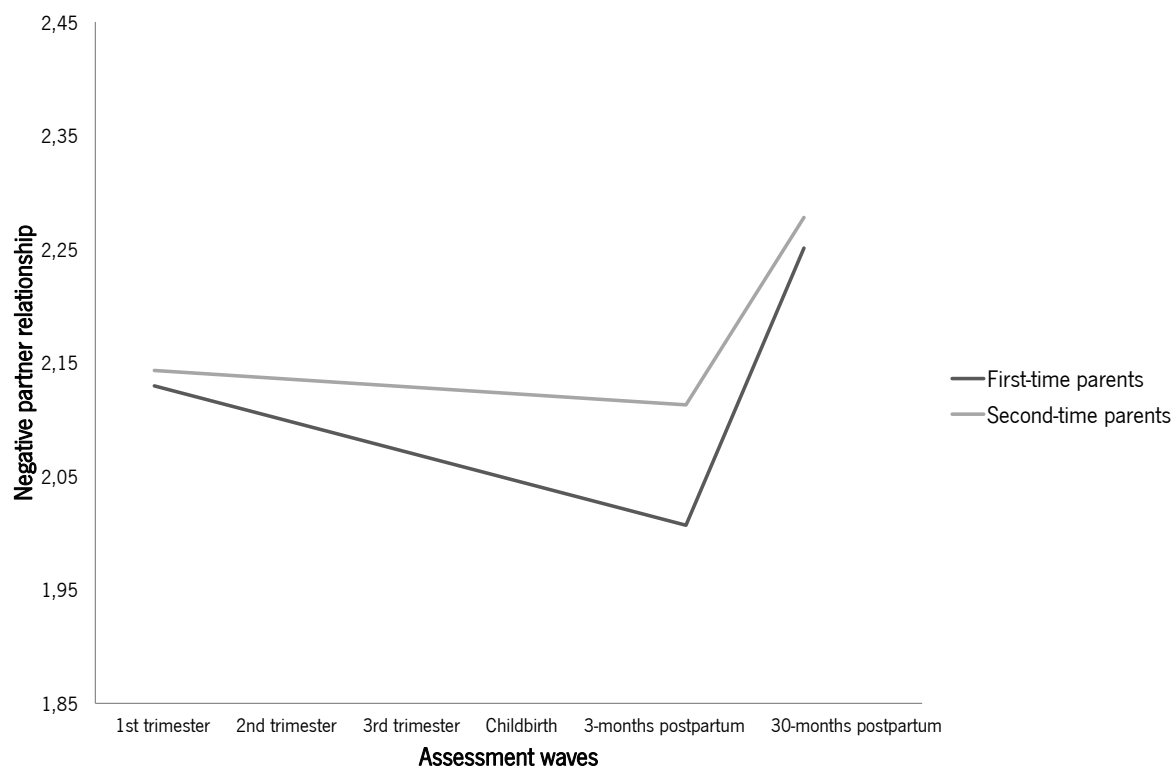


Figure 2.3. *Negative Partner Relationship from Early Pregnancy to 30-Months Postpartum: Parity Differences and Effects*

## 2.5. Discussion

Individual and dyadic trajectories of positive and negative partner relationship from early pregnancy to 30-months postpartum, assessing time, gender and parity differences and effects, were analyzed using dyadic growth curve models. From the first trimester to 3-months postpartum positive and negative partner relationship decreased and from 3- to 30-months postpartum positive partner relationship decreased steeper and negative partner relationship increased, in all parents. Positive partner relationship and negative partner relationship were correlated within dyad. Women, but not men, presented a decrease in positive partner relationship from the first trimester to 3-months postpartum. First-time (but not second-time) parents reported a decrease in negative partner relationship, and second-time (but not first-time) parents a decrease in positive partner relationship from the first trimester to 3-months postpartum. First-time parents reported a steeper decrease in positive partner relationship than second-time parents from 3- to 30-months postpartum. Otherwise, changes over time were the same for women's and men's and for first- and second-time parents' positive and negative partner relationship. Consistent with and extending prior research on partner relationship over the transition to parenthood, but also providing new data, results point out similar trajectories of partner relationship deterioration over pregnancy and the postpartum period for all parents, also somewhat different according to gender and parity. Results additionally demonstrated the positive and negative partner relationship interdependence within-dyads.

*Hypothesis 1: Partner relationship deteriorates from early pregnancy to 30-months postpartum, through decrease in positive and increase in negative partner relationship particularly after childbirth*

Partially corroborating the stated hypothesis, decreases were found in positive and negative partner relationship from the first trimester to 3-months postpartum, with a steeper decrease in positive partner relationship and an increase in negative partner relationship from 3- to 30-months postpartum.

The findings regarding the small decrease of the positive partner relationship from the first trimester to 3-months postpartum and the moderate decrease from 3- to 30-months postpartum are consistent with the stated hypothesis and previous studies indicating the deterioration of the relationship from pregnancy to postpartum and for several years after childbirth (Doss et al., 2009; Hirscheberger et al., 2009; Lawrence et al., 2007; Mitnick et al., 2009; Schulz et al., 2006). Research suggests that the levels of partner support and intimacy decline from pregnancy to the postpartum period (e.g., Rholes, Simpson, Campbell, & Grich, 2001). Particularly after childbirth, parents' attention tends to shift from the partner and the self to the baby and their urgent child-care tasks (e.g., Kluwer, 2010). It is plausible that this could adversely affect the positive partner relationship because when parents pay less attention to the partner and their relationship, they are more likely to experience a decline in sense of support and care, affection, closeness, joint interests and activities.

The finding on the small decrease of the negative partner relationship from the first trimester to 3-months postpartum does not corroborate our hypothesis, and has not been previously reported in the literature. The decrease in aspects assessed by the negative partner relationship dimension of the questionnaire – such as irritability, arguments and criticisms – from early pregnancy until 3-months postpartum may result from the honeymoon period described in parents during pregnancy, and be partially explained by some hormonal changes that take place in both men and women during this period. A decrease in the testosterone levels from late pregnancy to early postpartum has been reported in parents (Henry & Sherwin, 2012; Storey, Walsh, Quinton, & Wynne-Edwards, 2000). And, lower testosterone levels are related with the partner's more adaptive problem-solving behaviors and social support, less conflicts, lower aggression or jealousy and more nurturing behavior (Cohan, Booth, & Granger, 2003; Gray, Kahlenberg, Barrett, Lipson, & Ellison, 2002; Van Anders, Goldey, & Kuo, 2011). Thus, the decrease in testosterone levels reported during pregnancy and childbirth could result

in the partners experiencing fewer disagreements, conflicts or criticisms and may help to explain the decrease found in the negative partner relationship during this period.

The moderate increase of negative partner relationship identified from 3- to 30-months postpartum partially corroborates our hypothesis and previous studies. An increase on the negative partner relationship was observed not immediately after childbirth as other studies did (e.g., Doss et al., 2009) and we supposed, but only after 3-months postpartum. Over the postpartum period, but only after maternity and/or paternity leave of absence (4 months at the study's time in Portugal), partners may experience more difficulties. Negotiating work schedules, increased financial challenges, dealing with infant's temperament difficulties, a lack of support from a family social network, the division of new household labor, and the adjustment to the co-parenting experience (Belsky, 1985; Möller, Hwang, & Wickberg, 2006; Van Egeren, 2004) can have a detrimental effect on the relationship after 3-months postpartum. Leading to more frequent conflicts and negative behaviors, intensifying partner's problems (Kohn et al., 2012; Kluwer, 2010; Kluwer & Johnson, 2007), and thus contributing to the increase in the negative partner relationship until 30-months postpartum. Over this period parents can also experience difficulties in parental engagement, which is known to foster conflict and increase marital dissatisfaction (Cowan & Cowan, 1992; Nomaguchi & Milkie, 2003). Likewise, over the postpartum period differences between parents can emerge, leading partners to feel distant, have more conflicts and the increased conflicts affects partner's feelings about their overall relationship (Cowan et al., 1991). Corroborating previous findings pointing out the increase in the negative partner relationship functioning for several years over the postpartum period (e.g., Cowan & Cowan, 1992; Doss et al., 2009; Mortensen et al., 2012), the increase of the negative partner relationship until 30-months postpartum was found.

*Hypothesis 2: Positive and negative partner relationship are interdependent within dyad over time*

Positive within-dyad correlations were found for both positive and negative partner relationship over time, revealing partners' reciprocity and interdependence on the outcome variables, and corroborating the hypothesis. The results note that over time, whenever one partner presents a higher or lower positive or negative partner relationship dimension the other tends to present a similar score on the positive or negative partner relationship dimension.

Although some recent studies have identified partners' interdependence on relationship satisfaction (e.g., Butzer & Campbell, 2008; Keizer & Schenk, 2012; Pruchno et al., 2009), the present study identified the partners' interdependence on the positive and negative partner relationship during the transition to parenthood, from early pregnancy to 30-months postpartum, which has not yet been described in the literature.

The changes on partner relationship are interdependent because how a partner feels about their relationship leads to actions and behaviors that will affect how the other partner feels about their relationship, leading him/her to act and behave accordingly to the feelings. The fact that the partner relationship scores within dyad are not perfectly correlated reveals that other factors, besides the interdependence, can affect how the partners feel about their relationship.

*Hypothesis 3: The trajectories of positive and negative partner relationship over time are different, worse for women than for men.*

A moderate decrease was identified on women's positive partner relationship from the first trimester to 3-months postpartum while men's positive partner relationship remained unaltered, partially corroborating the hypothesis.

These results corroborate previous findings of more pronounced declines in marital quality/satisfaction for women than for men over the transition to parenthood (e.g., Belsky & Rovine,

1990; Doss et al., 2009; Shapiro et al., 2000). Similarly to our results Lawrence et al. (2007) found a decline on the marital satisfaction over time exclusively in women, whereas men's marital satisfaction stability was observed only until the third pregnancy trimester. The unfavorable changes on positive partner relationship identified by women from the first trimester to 3-months postpartum may be due to the physical changes of pregnancy, the greater violation of previous expectations, and, after birth, to a higher number of problems to solve, more family work and childcare tasks performed (Colman & Colman, 1991; Doss et al., 2009; Lawrence et al., 2007). Men may do less family work after the birth of the baby than they did before (Cowan & Cowan, 2003), and may also perform less childcare tasks in the first postpartum months at least until women return to work. Moreover, men's lower vulnerability to the positive partner relationship decline may be associated with the presence of less anxiety and depressive symptoms from the first trimester to 3-months postpartum (e.g., Figueiredo & Conde, 2011).

For both men and women, a decrease in the positive partner relationship and an increase in the negative partner relationship were found from 3- to 30-months postpartum, not corroborating the stated hypothesis.

Although most studies observed more negative changes for women than men over the transition to parenthood (e.g., Doss et al., 2009; Lawrence et al., 2007; Shapiro et al., 2000), our study provides relevant information, as it suggests that these differences for women occur from the first trimester to 3-months postpartum, while there are similar detrimental trajectories for men's and women's partner relationship from 3- to 30-months postpartum.

*Hypothesis 4: The trajectories of positive and negative partner relationship over time are different, worse for first- than for second-time parents.*

First-time parents' positive partner relationship remained unaltered, and a small decrease was found for negative partner relationship from the first trimester to 3-months postpartum, whereas for second-time parents' positive partner relationship presented a small decrease and the negative partner relationship remained unaltered. Thus, the period from the first trimester to 3-months postpartum seems to be more deteriorating for second-time parents than for first-time parents' partner relationship, contrary to our hypothesis.

From early pregnancy to 3-months postpartum, the novelty of pregnancy, the baby, and new roles and identities (Colman & Colman, 1991) may foresee opportunities for first time-parents to experience affection, closeness and joint activities, thus maintaining their levels of positive partner relationship. The positive feelings experienced by couples during pregnancy and the first postpartum months are known to contribute to a honeymoon period, with couples being more focused on each other's and the baby's needs (Cowan & Cowan, 1992; Feeney et al., 2001; Houts et al., 2008). These circumstances, which may be more characteristic of first-time rather than second-time transition to parenthood, may lead first-time parents to experience fewer arguments and/or conflicts, and thus diminishing negative partner relationship during pregnancy and the early postpartum. The results on the decrease of the positive partner relationship and the stability of the negative partner relationship for second-time parents from the first-trimester to 3-months postpartum are consistent with previous findings that identify the deterioration of partner relationship in second-time parents (e.g. Belsky et al., 1983; Mortensen et al., 2012). Moreover, second-time parents report worse family functioning over the first months postpartum than first-time parents do, namely for the dimensions such as communication, flexibility and stability (Hakulinen, Laippala, & Paunonen, 1998).

Moderate and small decreases were respectively found for first- and second-time parents' positive partner relationships from 3- to 30-months postpartum, partially corroborating the hypothesis.

The decrease of the positive partner relationship was steeper for first- than for second-time parents from 3- to 30-months postpartum. In line with the findings of Mortensen et al. (2012), these results suggest that first-time parents are at greater risk for relationship deterioration over the postpartum period. This can be explained by difficulties experienced by first-time parents on the adjustment to the new family dynamics, including the division of the workload, the increased chores, the baby's needs and difficult temperament, as well as the adaptation to the co-parenting experience (Belsy et al., 1985; Colman & Colman, 1991; Kluwer, 2010; Möller, Hwang, & Wickberg, 2008; Van Egeren, 2004). These difficulties represent new challenges for first-time parents and therefore can lead to a greater decline in the positive partner relationship, with less time and commitment between partners for their relationship as a couple. Because these challenges are not new to second-time parents, we hypothesize that they handle them better than first-time parents, and thus the decline in positive partner relationship is less pronounced. However, second-time parents' positive partner relationship also decreases as they are more likely to have a higher amount of work in the children routine of care and can even experience conflicts between work and family, as well as marital discord (Nomaguchi, 2009; Twenge et al., 2003), which can represent lack of time for leisure as a couple, joint activities and interests.

This study represents an important contribution to the literature on partner relationship during couples' transition to parenthood. Consistent with and extending prior research on partner relationship over the transition to parenthood, but also providing new data, results point out similar trajectories of partner relationship deterioration over pregnancy and the postpartum period for all parents, also somewhat different according to gender and parity. Time, gender and parity differences and effects on

the positive and negative partner relationship from early pregnancy to 30-months postpartum were reported. Additionally, positive and negative partner relationship interdependence within-dyads was demonstrated. The strengths of this study regard the inclusion of both positive and negative aspects of the partner relationship, the six wave longitudinal design, with three assessments in pregnancy and three in the postpartum period, the large sample size, with couples parents of first- and later-born children, and the use of dyadic growth curve model through multilevel modeling.

However, our conclusions are limited to men's and women's self-reports of their positive and negative partner relationship dimensions. Attrition bias should also be considered. Although the participants who completed all assessment waves were older, more educated and from higher socioeconomic levels than those who missed one or more assessment waves, they showed no difference for positive and negative partner relationship at the first trimester or at 3-months postpartum.

Significant variability was found in men's and women's trajectories of partner relationship (Table 2.4). Thus, future research should consider additional variables, such as hormonal changes or psychological morbidity, as mediators or moderators of the positive and negative partner relationship throughout pregnancy and postpartum.

The transition to parenthood regarding a first- or later-born child had important implications in partner relationship for the couples that took part in this study, both men and women and first- and second-time parents, according to gender and parity specific difficulties in the resolution of the transition to parenthood developmental tasks. According to the results, women and second-time parents are at greater risk for partner relationship deterioration from the first trimester to 3-months postpartum, whereas first-time parents are at greater risk for partner relationship deterioration from 3- to 30-months postpartum. These findings may have clinical relevance, namely regarding the development of prevention and intervention programs to prevent and reduce the deterioration of partner relationship over pregnancy and postpartum. In particular, these programs should attend to the

specific challenges that these time periods pose to men and women and first- and second-time parents, as presented in this study.

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### 3. The Moderation Effect of Partner Relationship Quality on Couple's Anxiety and Depressive Symptoms from Early Pregnancy to 30-Months Postpartum

#### 3.1. Abstract

The purpose of this study was to analyze the association between partner relationship quality, anxiety and depressive symptoms' trajectories over the transition to parenthood. A total of 260 couples ( $N = 520$ ) completed self-report measures of anxiety, depression, and partner relationship quality at each pregnancy trimester, childbirth, 3- and 30-months postpartum. Piecewise dyadic growth curve models revealed the moderation effect of positive and negative partner relationship on anxiety and depressive symptoms trajectories from 3- to 30-months postpartum, but not from the first trimester to 3-months postpartum. Over this later period, men's anxiety symptoms showed a steeper increase when they had low positive partner relationship, and both women's and men's depressive symptoms presented a steeper increase when they reported high negative partner relationship. Intervention programs targeting women's and men's anxiety and depressive symptoms during the transition to parenthood would benefit from enhancing the quality of the couple's relationship.

*Keywords:* positive and negative partner relationship, anxiety and depressive symptoms, pregnancy and postpartum, transition to parenthood, men and women, dyadic growth curve models, moderation effect.

### 3.2. Background

The transition to parenthood is one of the most demanding and stressful life transitions (e.g., Cigoli & Scabini, 2006; Cowan, 1991; Cowan & Cowan, 1992). It requires a qualitative reorganization of a person's inner experience and external behavior, comprising the reorganization of roles and relationships (Cowan, 1991). The transition to parenthood increases the stress in parents' lives, amplifies differences between partners, increases their levels of marital dissatisfaction (Cowan, Cowan, Heming, & Miller, 1991), and has the potential to place couples at risk for psychological difficulties (e.g., Le Strat, Dubertret, & Le Foll, 2011; Matthey, Barnett, Ungerer, & Waters, 2000; Perren, Von Wyl, Burg, Simoni, & Klitzing, 2005).

The transition to parenthood implies the performance of multiple developmental tasks for each individual and for the couple. There are several interacting domains of parents' lives during the transition to parenthood that account to the understanding of what leads to family distress and adaptation (Cowan et al, 1991; Cowan & Cowan, 2003). The psychological characteristics of both members of the couple, including their well-being, depressive symptoms and emotional distress, and the quality of the relationship within the couple are of these domains (Cowan et al, 1991; Cowan & Cowan, 2003). The importance of these domains and their interaction is acknowledged in the literature (e.g., Figueiredo et al., 2008; Røsand, Slinning, Eberhard-Gran, Røysamb, & Tambs, 2011, 2012; Whisman, Davila, & Goodman, 2011); however, the nature and direction of the interaction between both dimensions remains to this point relatively unclear.

Some studies point out the influence of anxiety and depressive symptoms on relationship quality over the transition to parenthood, suggesting that higher anxiety and depressive symptoms are associated with couple's relationship deterioration (e.g., Bower, Jia, Schoppe-Sullivan, Mangelsdorf, & Brown, 2012; Cox, Paley, Burchinal, & Payne, 1999; Parfitt & Ayres, 2009). However, studies have

also consistently demonstrated the influence of interpersonal factors, such as partner relationship, relationship satisfaction, and relationship adjustment, in generating emotional distress and/or anxiety and depressive symptoms during the transition to parenthood (e.g., Figueiredo et al., 2008; Gawlik et al., 2014; Røsand et al., 2012; Sockol, Epperson, & Barber, 2014; Stapleton et al., 2012). During pregnancy, partner relationship dissatisfaction was found to be strongly associated with emotional distress, whereas partner relationship satisfaction was found to protect men and women from the adverse effects of various types of emotional strain (e.g., Røsand et al., 2012). Likewise, poor interactions and support as well as conflict with the partner were associated with more postpartum depressive symptoms in men and women, whereas good interactions with the partner and partner support were associated with less postpartum depressive symptoms (e.g., Don & Mickelson, 2012; Page & Wilhelm, 2007). Moreover, some studies point out that poor prenatal relationship quality and satisfaction influences postnatal anxiety and depressive symptoms in women and men (Don, Chong, Biehle, & Mickelson, 2014; Gawlik et al., 2014; Stapleton et al., 2012). In line with these findings, other studies point out that an adjusted and supportive partner relationship, with high positive and low negative partner relationship, contributes to the decrease in women's and men's anxiety and depressive symptoms from pregnancy to the postpartum period (Figueiredo et al., 2008; Gawlick et al., 2014; Parfitt & Ayres, 2014; Whisman et al., 2011).

Prior studies have several limitations. First, most of them assessed the effect of partner relationship quality or relationship adjustment on depressive symptoms over pregnancy and/or the postpartum period, and little is known about the role of partner relationship quality in the etiology and maintenance of women's and men's anxiety symptoms during this period (e.g., Don et al., 2014; Whisman et al., 2011).

Second, only two studies considered the effects of partner relationship quality on depressive or anxiety symptoms over the transition to parenthood. One study assessed the effect of partner

relationship on maternal depressive symptoms trajectories, from the third trimester to 6-months postpartum (Parade, Blankson, Leerkes, Crockenberg, & Faldowsky, 2014), and another study assessed the impact of prenatal relationship satisfaction on the trajectories of anxiety symptoms from the third trimester to 9-months postpartum (Don et al., 2014).

Third, very few studies included both men and women when assessing the association between partner relationship quality with anxiety and/or depressive symptoms during pregnancy or the transition to parenthood and in these studies no gender differences were found (Don et al., 2014; Figueiredo et al., 2008; Røsand et al., 2012). No data are available in the literature regarding the interaction effect between gender and partner relationship quality on anxiety and depressive symptoms' trajectories over the transition to parenthood. In fact, recent research (Parade et al., 2014) points out the need to examine not only women's, but also men's psychological symptoms' trajectories over the transition to parenthood considering the relevance of partner relationship quality. Moreover, other studies developed in different periods than the transition to parenthood, didn't find significant gender effects regarding the association between partner relationship quality and anxiety and/depressive symptoms (e.g., Knobloch-Fedders et al., 2014; Mackenzie, Smith, Uchino, White, & Light, 2014; Regan et al., 2014).

Fourth, interdependence between partners' psychological symptoms has not been frequently considered in previous studies (Don et al., 2014). Interdependence between partners in the outcome variable was considered in this study, as it has important implications in the statistical procedure for data analyses (Kenny, Kashy, & Cook, 2006). Interdependence is relevant in the present study since both members of the dyad are studied over the transition to parenthood, but also because previous results (Canário & Figueiredo, 2014a, 2014b) identified mutual influence within-dyad for positive and negative partner relationship, anxiety and depressive symptoms in this study indicating that individuals

with higher (lower) scores on these variables at a given time-point had partners with similarly high (low) scores.

Additionally, parity has been pointed out as a relevant factor contributing to the psychological morbidity, as well as the deterioration of partner relationship quality over the transition to parenthood in both men and women (e.g., DiFlorio et al., 2014; Figueiredo & Conde, 2011a; Melo et al., 2012; Mortensen, Torsheim, Melkevik, & Thuen, 2012; Sutter-Dallay, Cosnefroy, Glatigny-Dallay, Verdoux, & Rasclé, 2012; Twenge, Campbell, & Foster, 2003). Thus, as parity has the potential to significantly affect partner relationship quality, anxiety and depressive symptoms over the transition to parenthood; it was included in the statistical models as a covariate.

Attending to these limitations, the main purpose of this study was to analyze the association between men's and women's positive and negative partner relationship quality, anxiety and depressive symptoms trajectories from early pregnancy to 30-months postpartum, using dyadic growth curve models. Specifically, the focus is to analyze the moderation effect of the positive and negative partner relationship on anxiety and depressive symptoms, from the first trimester to 30-months postpartum, assessing gender effects, while controlling for parity.

According to previous findings reported in the literature, the following hypotheses were formulated and tested: 1) Partner relationship quality moderates anxiety and depressive symptoms over time; and 2) Positive and negative partner relationship moderation effects on anxiety and depressive symptoms over time are similar for men and women.

### 3.3. Method

#### 3.3.1. Participants

The present study extends previous work that followed a sample of 260 couples ( $N = 520$ ) over the transition the parenthood in an obstetrics out-patient unit in Oporto, Portugal (for further detail on the study see Figueiredo & Conde, 2011a, 2011b). As presented in Table 3.1, most of the participants were Portuguese (91.4%), aged between 20 and 30 years old (85.9%), came from low or medium-low socio-economic levels (57.4%), had nine or more years of education (67.2%), were employed (80.4%), married or cohabiting (88.4%), and first-time parents (54.1% of the women and 56.1% of the men).

This study had six assessment waves, at the first, second and third pregnancy trimesters, at childbirth, and at 3- and 30-months postpartum. All 260 couples were contacted by telephone to understand whether they were willing to participate, 71 couples ( $n = 142$ , 27.3%) were not interested in participating, 37 couples ( $n = 74$ , 14.2%) could not be contacted, and 152 couples ( $n = 304$ , 58.5%) agreed to participate. Questionnaires were sent by letter or by email (using an electronic form), and 129 couples ( $n = 258$ , 84.9%) filled in the questionnaires. All participants gave their informed consent for participation.

The majority of couples who participated at the last assessment wave did not have significant changes in their families ( $n = 218$ , 84.4%) from 3 to 30-months postpartum, however 8 couples separated/divorced ( $n = 16$ , 6.20%) and 6 ( $n = 12$ , 4.66%) had another child. Participants who completed all six assessments were not different from those who did not regarding parity,  $\chi^2(1) = 1.515$ ,  $p = .214$ , and marital status,  $\chi^2(5) = 4.610$ ,  $p = .465$ . However, were more likely to be older,  $\chi^2(3) = 33.048$ ,  $p < .001$ , employed,  $\chi^2(6) = 16.322$ ,  $p = .012$ , belong to medium or high socio-economic levels,  $\chi^2(2) = 26.450$ ,  $p < .001$ , and have more years of education,  $\chi^2(2) = 29.017$ ,  $p < .001$ . Also, at baseline they reported less anxiety,  $t(503) = 2.186$ ,  $p = .029$ , and depressive symptoms,

$t(503) = 4.051, p < .001$ , but no differences on positive,  $t(501) = -1.40, p = .162$ , and negative partner relationship quality,  $t(501) = 1.647, p = .052$ . At 3-months postpartum, participants who completed all assessments were no different from those who did not on anxiety  $t(407) = 0.652, p = .515$ , and depressive symptoms,  $t(407) = 1.841, p = .066$ , neither on the positive,  $t(406) = -0.980, p = .328$ , and negative partner relationship quality,  $t(406) = 1.604, p = .072$ .

Table 3.1

*Participants' Socio-demographic Characterization at Baseline*

|                      | Men            | Women          | Total          |
|----------------------|----------------|----------------|----------------|
|                      | <i>n</i> = 260 | <i>n</i> = 260 | <i>N</i> = 520 |
|                      | %              | %              | %              |
| Age (years)          |                |                |                |
| ≤19                  | 4.2            | 11.5           | 7.9            |
| 20-29                | 38.9           | 47.0           | 42.9           |
| 30-39                | 46.9           | 39.2           | 43.1           |
| ≥40                  | 10.0           | 2.3            | 6.1            |
| Matrimonial status   |                |                |                |
| Cohabiting           | 32.5           | 32.6           | 32.5           |
| Married              | 55.7           | 55.8           | 55.8           |
| Single               | 10.2           | 11.2           | 10.7           |
| Divorced             | 1.6            | 0.4            | 1.0            |
| Socio-economic level |                |                |                |
| High                 | 9.3            | 16.4           | 12.5           |
| Medium-high          | 14.0           | 7.4            | 11.1           |
| Medium               | 18.6           | 19.6           | 19.0           |
| Medium-low           | 30.3           | 26.4           | 28.6           |
| Low                  | 27.8           | 30.2           | 28.8           |
| Occupational status  |                |                |                |
| Employed             | 89.0           | 71.8           | 80.4           |
| Unemployed           | 9.0            | 21.6           | 15.4           |
| Household/Student    | 2.0            | 6.6            | 4.2            |
| Years of education   |                |                |                |
| < 9                  | 38.6           | 26.9           | 32.8           |
| 9 – 12               | 47.9           | 54.3           | 51.0           |
| > 12                 | 13.5           | 18.8           | 16.2           |

### 3.3.2. Measures

#### 3.3.2.1. Socio-demographic Questionnaire

Information about the participants (e.g., age, matrimonial status, socio-economic level, occupational status and years of education) was collected using a socio-demographic questionnaire (Figueiredo, Teixeira, Conde, Pinto, & Sarmento, 2009).

#### 3.3.2.2. Relationship Questionnaire

The Relationship Questionnaire (RQ; Figueiredo et al., 2008) is a brief self-report questionnaire, comprised of 12 items rated on a 4-point Likert scale that assesses the positive (8 items) and negative (4 items) dimensions of the partner relationship. The questionnaire was designed to be completed in a short time (less than 2 minutes), is behaviorally focused and appropriate for men and women. The positive partner relationship dimension includes aspects such as sense of support and care, affection, closeness and joint interests and activities (examples of the positive subscale items are “Do you share activities that are of interest for both, you and your partner?” and “When you need help does your partner help you, as you would like him to?”). The negative partner relationship dimension includes aspects as irritability, arguments and criticisms (examples of the negative subscale items are “Do you and your partner get irritable with each other?” and “Does your partner usually criticize you?”). A higher score on each dimension means that the positive or negative aspects of the relationship are more present. The questionnaire has showed good internal consistency (with a coefficient  $\alpha$  of .79 for the total scale, .90 for the positive subscale and .72 for the negative subscale), as well as test-retest reliability ( $r = .74$ ) for the total scale (Figueiredo et al., 2008). In the present sample, coefficient  $\alpha$  ranged from .70 to .92 for men and women in the positive and negative subscales.

### 3.3.2.3. State-Trait Anxiety Inventory

The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacob, 1983) is a self-report questionnaire that consists of two subscales, the state anxiety and the trait anxiety, each containing 20 items. The state anxiety subscale (STAI-S), which measures anxiety at the point of scoring, was used in this study.

The STAI-S has been used in several studies implemented during pregnancy and postpartum, with men and/or women (DiPietro, Costigan, & Sispma, 2008; Figueiredo & Conde, 2011a; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009). The Portuguese version of the measure showed good internal consistency ( $\alpha$ 's ranged from .87 to .93; Biaggio, Natalicio, & Spielberger, 1976). Also, STAI-S has been identified as a screening tool of reasonable validity for anxiety in women during pregnancy and postpartum (Tendais, Costa, Conde, & Figueiredo, 2014). In the present sample, coefficient  $\alpha$ 's ranged from .88 to .94 for men and women.

### 3.3.2.4. Edinburgh Postnatal Depression Scale

The Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987) is a self-report questionnaire composed of 10 item Likert scale of four points (0–3) to assess depressive symptoms within the previous seven days. This questionnaire has been used in studies of men and women over pregnancy and postpartum (Figueiredo & Conde, 2011a; Perren et al., 2005; Teixeira et al., 2009). The EPDS Portuguese version showed good internal consistency ( $\alpha = .85$ ) (Figueiredo, Pacheco, & Costa, 2007), and, also demonstrated reasonable validity as a screening tool for depression in women over pregnancy and postpartum (Tendais et al., 2014). EPDS  $\alpha$ 's in the present sample ranged from .78 to .88 for men and women.

### 3.3.3. Procedure

This research received previous approval from the institution Ethical Commission. Participants were recruited in an Obstetrics Out-patients Unit at their first appointment. The aims and the procedures of the study were explained. After signing an informed consent, the socio-demographic questionnaire was separately administered to the pregnant woman and partner, and the measures RQ, STAI and EPDS were given to them (between weeks 8 and 14). The RQ, STAI and EPDS were administered again during the second (between weeks 20 and 24) and third pregnancy trimesters (between weeks 30 and 34), as well as at childbirth (between days 1 and 3), at 3-months (between weeks 10 and 14) and 30-months (between months 24 and 36) postpartum. The socio-demographic questionnaire was administered again at the 3- and 30-months postpartum.

### 3.3.4. Data Structure and Analytic Model

Dyadic growth curve models were estimated using multilevel modeling (MLM; Kenny et al., 2006; Kurdek, 2003; Rhoades et al., 2011) with IBM SPSS Statistics for Windows, version 19.0, to assess women's and men's trajectories of change for anxiety and depressive symptoms over time, and the moderating effects of the positive and negative partner relationship. Analyses were performed in a pairwise person-period dataset, in which each person had a record for each time point. The resulting data consisted of 3120 potential observations: 260 couples by 6 time points by 2 people (men and women).

Two-level models were estimated for the outcome variables in which level 1 referred to the participants' scores at each time point and level 2 to the dyad. Individual differences for men and women were modeled at the dyad level. Within-dyad interdependence was modeled as similarity on the average outcome and the specific time points, including correlations between the partners' intercept, slopes and time-specific residuals.

An important issue in modeling growth curves is the scaling of time (Biesanz, Deeb-Sousa, Papadakis, Bollen, & Curran, 2004). Time 0 was defined as the date of the first assessment at the first trimester (baseline) and the time variable was scored in months since the baseline until the child's age of 30 months. Therefore, the intercept in the growth curve model refers to the outcome variables at the baseline and the slopes for time represents the extent to which the outcome variables change each month.

Scale scores for anxiety and depressive symptoms, and positive and negative partner relationship at each assessment wave were examined for men and women, and the scores determined that change over time was different before and after 3-months postpartum. Thus, piecewise linear growth curve models (Duncan, Duncan, & Strycker, 2006) assessed the changes on the outcome variables at baseline (first pregnancy trimester), from baseline to 3-months postpartum, and from 3- to 30-months postpartum. Fixed effects for gender (coded as -1 for women and 1 for men) and the anxiety and depressive symptoms and positive and negative partner relationship (time-varying moderators centered on their grand means) were also included in the models, as well as all possible interactions, resulting in two three-way interactions, one between time from first trimester to 3-months postpartum, gender and the moderator variable, and another between time from 3 to 30-months postpartum, gender and the moderator variable. Parity (coded as -1 for first-time parents and 1 for second-time parents) was also included in the models as a covariate. Different models were performed for each outcome variable in the interest of parsimony. The significant interactions with continuous predictors were interpreted and graphed using one standard deviation above and below the grand mean of the predictor variables as high and low values for those variables.

Deviance difference tests were performed between unconditional models and models with predictors to assess model fit improvements.

### 3.4. Results

#### 3.4.1. Preliminary Analyses

Descriptive statistics, mean and standard deviation, of men's and women's scores for anxiety and depressive symptoms, and the positive and negative partner relationship at each assessment wave are presented at Table 3.2.

As presented in Table 3.3, significant small to large size correlations were found among the outcome between men and women at the first trimester, revealing that these scores covary. Also, correlations computed separately for men and women at the first trimester on the outcome variables indicate that men's and women's symptoms and partner relationship quality are related.

Table 3.3

*Correlations for Study Variables for Men and Women at the First Trimester*

|                                  | 1            | 2              | 3              | 4              |
|----------------------------------|--------------|----------------|----------------|----------------|
| 1. Anxiety symptoms              | <b>.158*</b> | .631***        | -.191***       | .283***        |
| 2. Depression symptoms           | .641***      | <b>.309***</b> | -.307***       | .357***        |
| 3. Positive partner relationship | -.340***     | -.324***       | <b>.447***</b> | -.292***       |
| 4. Negative partner relationship | .377***      | .394***        | -.248***       | <b>.245***</b> |

*Note.* Values on the diagonal (in bold) represent correlations between men and women, values above the diagonal represent within-women correlations, and values below the diagonal represent within-men correlations. \*  $p < .05$  \*\*\*  $p < .001$

Table 3.2

*Means and Standard Deviation of Study Variables across Time for Men and Women*

| Variables                     | Pregnancy trimesters |           |          |           |          |           |            |           | Postpartum |           |           |           |
|-------------------------------|----------------------|-----------|----------|-----------|----------|-----------|------------|-----------|------------|-----------|-----------|-----------|
|                               | First                |           | Second   |           | Third    |           | Childbirth |           | 3-months   |           | 30-months |           |
|                               | <i>M</i>             | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i>   | <i>SD</i> | <i>M</i>   | <i>SD</i> | <i>M</i>  | <i>SD</i> |
|                               |                      |           |          |           |          |           |            |           |            |           |           |           |
| Men                           |                      |           |          |           |          |           |            |           |            |           |           |           |
| Anxiety symptoms              | 33.10                | 8.82      | 31.17    | 8.07      | 32.61    | 7.95      | 32.72      | 9.13      | 29.37      | 7.99      | 33.77     | 9.44      |
| Depressive symptoms           | 5.24                 | 3.96      | 4.18     | 3.31      | 4.08     | 3.26      | 4.06       | 3.73      | 3.51       | 3.46      | 4.80      | 4.21      |
| Positive partner relationship | 3.64                 | 0.39      | 3.65     | 0.43      | 3.65     | 0.40      | 3.66       | 0.39      | 3.66       | 0.39      | 3.44      | 0.59      |
| Negative partner relationship | 2.19                 | 0.57      | 2.11     | 0.54      | 2.08     | 0.53      | 2.06       | 0.48      | 2.08       | 0.50      | 2.13      | 0.51      |
| Women                         |                      |           |          |           |          |           |            |           |            |           |           |           |
| Anxiety symptoms              | 36.04                | 8.88      | 34.68    | 9.37      | 36.24    | 9.03      | 35.76      | 10.25     | 30.84      | 8.36      | 34.45     | 9.48      |
| Depressive symptoms           | 6.42                 | 4.19      | 6.00     | 4.32      | 5.49     | 4.25      | 5.87       | 4.67      | 4.72       | 4.21      | 6.11      | 4.36      |
| Positive partner relationship | 3.67                 | 0.35      | 3.61     | 0.44      | 3.63     | 0.42      | 3.61       | 0.41      | 3.57       | 0.49      | 3.34      | 0.67      |
| Negative partner relationship | 2.12                 | 0.52      | 2.07     | 0.49      | 2.06     | 0.53      | 2.05       | 0.53      | 2.04       | 0.49      | 2.13      | 0.52      |

Different models were performed to analyze the association between women's and men's positive and negative partner relationship, anxiety and depressive symptoms trajectories from early pregnancy to 30-months postpartum. Regarding each outcome variable, models included time from the first trimester to 3-months postpartum, time from 3- to 30-months postpartum, gender and the moderator variable, as well as all possible interactions and parity as a covariate. The deviance difference tests revealed that the predictors explained variance.

Demonstrating interdependence between partners' scores, significant random effects were found in the models predicting anxiety and depressive symptoms, as well as in the models predicting positive and negative partner relationship. In all models, men's and women's anxiety and depressive symptoms and positive and negative partner relationship at baseline were positively correlated ( $r$  ranged from .235 to .586,  $ps < .05$ ), and also, the estimated residual correlation was significant ( $r$  ranged from .124 to .297,  $ps < .001$ ), indicating that symptoms and partner relationship quality are similar within the two members of dyad at each time.

As preliminary analyses, four different models were performed to respectively assess the moderation effects of anxiety and depressive symptoms on the positive and negative partner relationship trajectories. Positive partner relationship was found to decrease from the first trimester to 3-months postpartum in the models assessing the moderation effect of anxiety,  $b = -0.006$ ,  $SE = 0.002$ ,  $p = .004$ , and depressive,  $b = -0.007$ ,  $SE = 0.002$ ,  $p < .001$ , symptoms. And again, from 3- to 30-months postpartum in the models assessing the moderation effect of anxiety,  $b = -0.009$ ,  $SE = 0.002$ ,  $p < .001$ , and depressive,  $b = -0.009$ ,  $SE = 0.002$ ,  $p < .001$ , symptoms. However, revealing no moderation effects of anxiety and depressive symptoms on positive partner relationship over time, no significant two-way interactions with time were found between anxiety,  $b = -0.0002$ ,  $SE = 0.0003$ ,  $p = .432$ , and depressive,  $b = -0.0008$ ,  $SE = 0.0006$ ,  $p = .181$ ,

symptoms from the first trimester to 3-months postpartum, or anxiety,  $b = -0.0002$ ,  $SE = 0.0002$ ,  $p = .153$ , and depressive,  $b = -0.0001$ ,  $SE = 0.0003$ ,  $p = .710$ , symptoms over postpartum, from 3- to 30-months.

Negative partner relationship was found to decrease from the first trimester to 3-months postpartum,  $b = -0.007$ ,  $SE = 0.003$ ,  $p = .022$ , in the model assessing the moderation effect of anxiety symptoms, and to remain stable over that same period,  $b = -0.005$ ,  $SE = 0.003$ ,  $p = .097$ , in the model assessing the moderation effect of depressive symptoms. However, it was found to increase from 3- to 30-months postpartum, in the model assessing the moderation effect of anxiety symptoms,  $b = 0.003$ ,  $SE = 0.001$ ,  $p = .038$ , and to remain stable in the model assessing the moderation effect of depressive symptoms,  $b = 0.003$ ,  $SE = 0.001$ ,  $p = .079$ . Like in the previous models, revealing no moderation effects of anxiety and depressive symptoms on negative partner relationship over time, no significant two-way interactions with time were found between anxiety,  $b = 0.0004$ ,  $SE = 0.0001$ ,  $p = .227$ , or depressive,  $b = 0.002$ ,  $SE = 0.001$ ,  $p = .060$ , symptoms from the first trimester to 3-months postpartum, or anxiety,  $b = 0.0001$ ,  $SE = 0.0001$ ,  $p = .602$ , and depressive,  $b = 0.0004$ ,  $SE = 0.0004$ ,  $p = .238$ , symptoms from 3- to 30-months postpartum.

#### **3.4.2. Positive/Negative Partner Relationship Moderation Effects on Anxiety and Depressive Symptoms over Time (Hypothesis 1)**

Four different models were performed to respectively assess the moderation effects of the positive and negative partner relationship on anxiety and depressive symptoms trajectories. First discussed are anxiety symptoms which were found to decrease from the first trimester to 3-months postpartum (the average person respectively decreased 0.312 and 0.279 units per month, in the models assessing the moderation effect of positive and negative partner relationship). Moreover,

anxiety symptoms were found to remain stable or to increase 0.069 units per month from 3- to 30-months postpartum in the models assessing the moderation effect of positive and negative partner relationship, respectively (Table 3.4).

Main effects were found for positive and negative partner relationship at baseline. Participants with lower positive and higher negative partner relationship reported more anxiety symptoms at the first trimester. However, no significant two-way interactions were found between positive or negative partner relationship, and time from the first trimester to 3-months postpartum or time from 3- to 30-months postpartum.

Depressive symptoms were found to decrease from the first trimester to 3-months postpartum (the average person respectively decreased between 0.154 and 0.133 units per month, in the models assessing the moderation effect of positive and negative partner relationship), as presented in Table 3.5. Also, the symptoms were found to increase from 3- to 30-months postpartum (the average person respectively increased 0.034 and 0.045 units per month, in the models assessing the moderation effect of positive and negative partner relationship).

Main effects were found for positive and negative partner relationship at baseline. Participants with lower positive and higher negative partner relationship presented more depressive symptoms at the first trimester. Except for one two-way interaction found between negative partner relationship and time from 3- to 30-months postpartum, no significant two-way interactions were found between positive or negative partner relationship and time. Men and women with high negative partner relationship experienced a steeper increase in depressive symptoms from during the postpartum period, than those with low negative partner relationship, as seen in Figure 3.1.

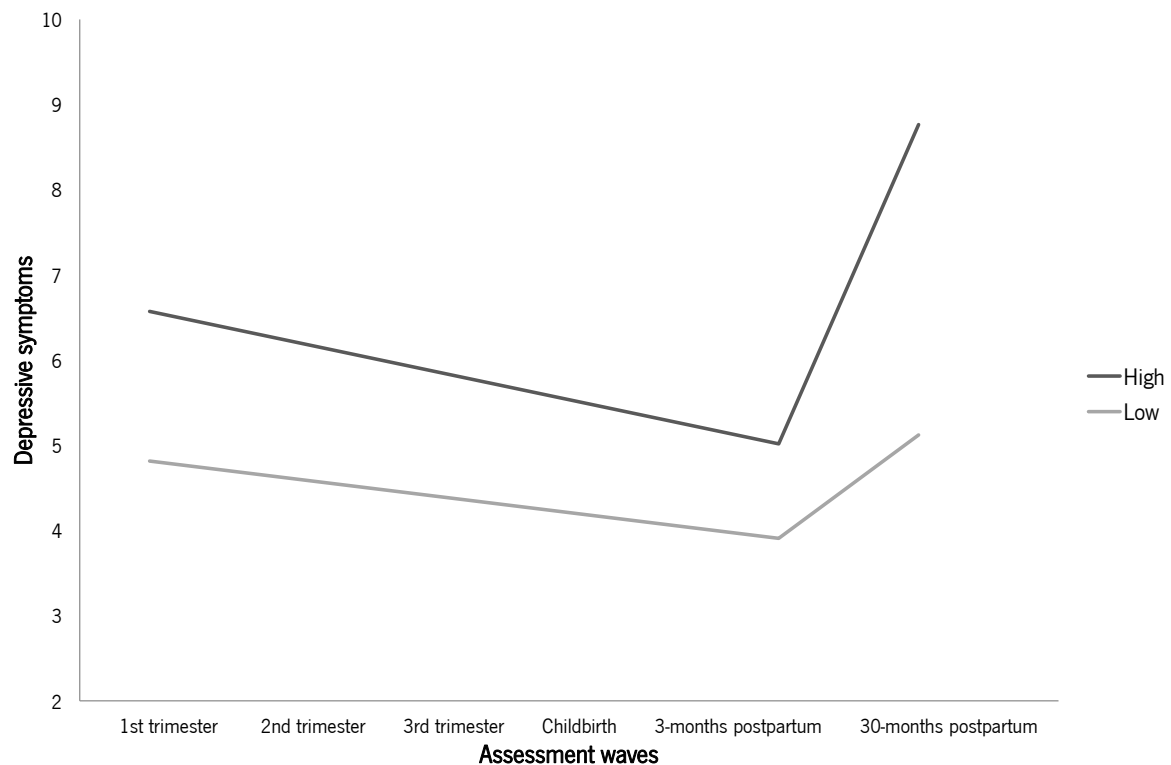


Figure 3.1. *Linear Changes in Depressive Symptoms from Early Pregnancy to Postpartum by Negative Partner Relationship*

### 3.4.3. Gender and Positive/Negative Partner Relationship Moderation Effects on Anxiety and Depressive Symptoms over Time (Hypothesis 2)

Except for one significant three-way interaction found among gender, positive partner relationship, and time from 3- to 30-months postpartum, for anxiety symptoms (Table 3.4), no other significant three-way interactions were found among gender, positive or negative partner relationship and time, regarding anxiety (Table 3.4) or depressive (Table 3.5) symptoms.

The positive partner relationship was found to moderate men's anxiety symptoms slope from 3- to 30-months postpartum,  $b = 0.105$ ,  $SE = .047$ ,  $p = .025$ , but not women's,  $b = -0.030$ ,  $SE = .045$ ,  $p = .510$ . As shown in Figure 3.2, men with low positive partner relationship from 3- to 30-months postpartum experienced a steeper increase in anxiety symptoms,  $b = 0.092$ ,  $SE =$

.040,  $p = .021$ , whereas the anxiety symptoms of men with high positive partner relationship from 3- to 30-months postpartum remained unaltered,  $b = 0.046$ ,  $SE = .035$ ,  $p = .190$ .

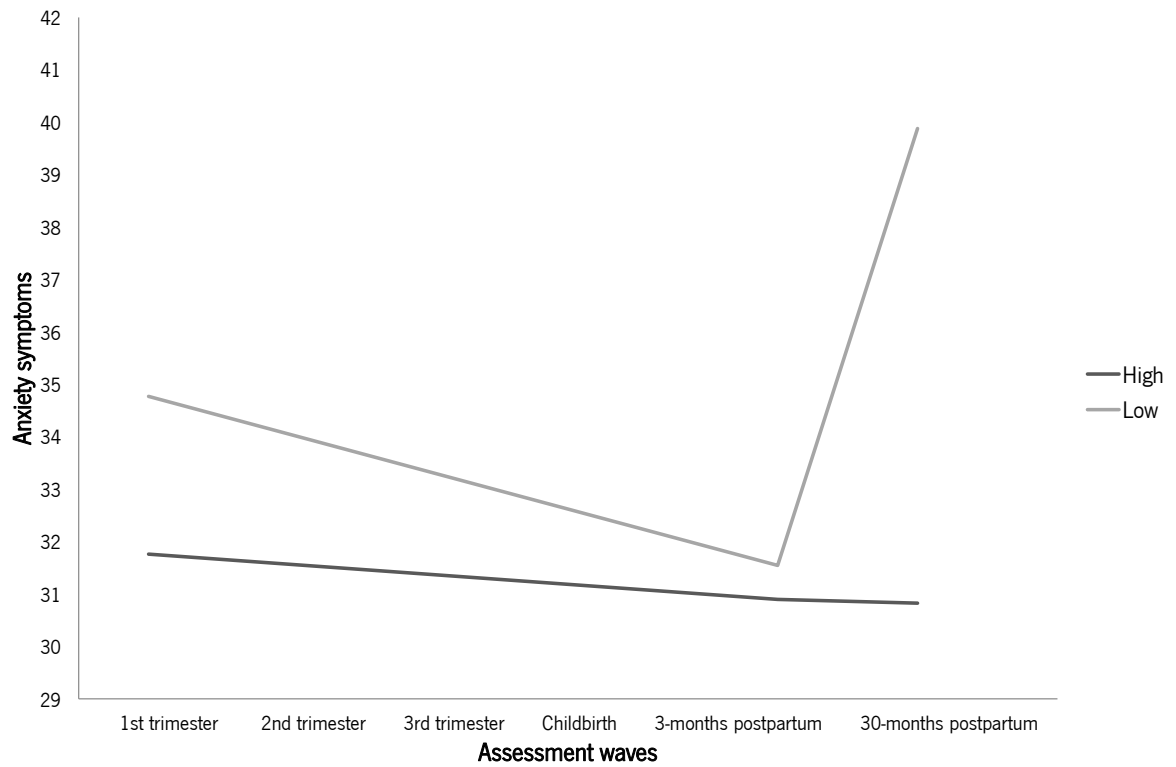


Figure 3.2. *Linear Changes in Father's Anxiety Symptoms from Early Pregnancy to Postpartum by Positive Partner Relationship*

Table 3.4

*Anxiety Symptoms from Early Pregnancy to 30-Months Postpartum Moderated by either Positive or Negative Partner Relationship*

| Fixed effects                                                         | Moderator                     |           |                     |                               |           |                     |
|-----------------------------------------------------------------------|-------------------------------|-----------|---------------------|-------------------------------|-----------|---------------------|
|                                                                       | Positive partner relationship |           |                     | Negative partner relationship |           |                     |
|                                                                       | <i>b</i>                      | <i>SE</i> | <i>95% CI</i>       | <i>b</i>                      | <i>SE</i> | <i>95% CI</i>       |
| Intercept                                                             | 35.000                        | 0.404     | [34.204, 35.796]*** | 34.761                        | 0.394     | [33.984, 35.538]*** |
| Time from first trimester to 3-months postpartum                      | -0.312                        | 0.049     | [-0.408, -0.216]*** | -0.279                        | 0.049     | [-0.376, -0.183]*** |
| Time from 3 to 30-months postpartum                                   | 0.037                         | 0.024     | [-0.011, 0.085]     | 0.069                         | 0.024     | [0.021, 0.117]**    |
| Gender                                                                | -1.732                        | 0.312     | [-2.347, -1.118]*** | -1.808                        | 0.306     | [-2.411, -1.205]*** |
| Moderator                                                             | -3.377                        | 0.747     | [-4.842, -1.912]*** | 2.686                         | 0.517     | [1.671, 3.701]***   |
| Gender x Moderator                                                    | -1.419                        | 0.693     | [-2.780, -.058]     | -0.082                        | 0.500     | [-1.064, 0.898]     |
| Gender x Time from first trimester to 3-months postpartum             | 0.090                         | 0.045     | [0.001, 0.179]*     | 0.074                         | 0.044     | [-0.013, 0.161]     |
| Gender x Time from 3 to 30-months postpartum                          | 0.038                         | 0.019     | [-0.001, 0.076]     | 0.030                         | 0.019     | [-0.007, 0.068]     |
| Moderator x Time from first trimester to 3-months postpartum          | -0.137                        | 0.119     | [-0.371, 0.096]     | 0.067                         | 0.091     | [-0.112, 0.245]     |
| Moderator x Time from 3 to 30-months postpartum                       | -0.004                        | 0.040     | [-0.082, 0.074]     | 0.023                         | 0.043     | [-0.061, 0.107]     |
| Gender x Moderator x Time from first trimester to 3-months postpartum | 0.052                         | 0.113     | [-0.169, 0.273]     | -0.026                        | 0.087     | [-0.196, 0.144]     |
| Gender x Moderator x Time from 3 to 30-months postpartum              | 0.076                         | 0.035     | [0.008, 0.144]*     | -0.017                        | 0.038     | [-0.091, -0.058]    |
| Random effects                                                        | Men                           |           | Women               | Men                           |           | Women               |
| Intercept                                                             | 37.221***                     |           | 45.340***           | 35.496***                     |           | 40.951***           |
| Slope for time from first trimester to 3-months postpartum            | 0.197*                        |           | 0.285**             | 0.178*                        |           | 0.267*              |
| Slope for time from 3- to 30-months postpartum                        | 0.055***                      |           | 0.036*              | 0.065*                        |           | 0.034*              |
| Intercept                                                             | 37.221***                     |           | 45.340***           | 35.496***                     |           | 40.951***           |

*Note.* The models are adjusted to parity; Gender: -1 female, 1 male; \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

Table 3.5

*Depressive Symptoms from Early Pregnancy to 30-Months Postpartum Moderated by either Positive or Negative Partner Relationship*

| Fixed effects                                                         | Moderator                     |           |                     |                               |           |                     |
|-----------------------------------------------------------------------|-------------------------------|-----------|---------------------|-------------------------------|-----------|---------------------|
|                                                                       | Positive partner relationship |           |                     | Negative partner relationship |           |                     |
|                                                                       | <i>b</i>                      | <i>SE</i> | <i>95% CI</i>       | <i>b</i>                      | <i>SE</i> | <i>95% CI</i>       |
| Intercept                                                             | 5.828                         | 0.187     | [5.460, 6.196]***   | 5.695                         | 0.181     | [5.337, 6.052]***   |
| Time from first trimester to 3-months postpartum                      | -0.154                        | 0.022     | [-0.197, -0.111]*** | -0.133                        | 0.022     | [-0.178, -0.090]*** |
| Time from 3 to 30-months postpartum                                   | 0.034                         | 0.009     | [0.015, 0.052]**    | 0.045                         | 0.009     | [0.027, 0.062]***   |
| Gender                                                                | -0.729                        | 0.129     | [-0.984, -0.474]*** | -0.729                        | 0.127     | [-0.979, -0.479]*** |
| Moderator                                                             | -1.864                        | 0.303     | [-2.459, -1.269]*** | 1.685                         | 0.207     | [1.279, 2.091]***   |
| Gender x Moderator                                                    | 0.093                         | 0.272     | [-0.441, 0.628]     | -0.366                        | 0.195     | [-0.749, 0.016]     |
| Gender x Time from first trimester to 3-months postpartum             | 0.010                         | 0.017     | [-0.022, 0.043]     | -0.002                        | 0.016     | [-0.034, 0.030]     |
| Gender x Time from 3 to 30-months postpartum                          | 0.007                         | 0.008     | [-0.008, 0.022]     | 0.004                         | 0.007     | [-0.010, 0.018]     |
| Moderator x Time from first trimester to 3-months postpartum          | -0.032                        | 0.049     | [-0.128, 0.063]     | -0.040                        | 0.037     | [-0.113, 0.033]     |
| Moderator x Time from 3 to 30-months postpartum                       | 0.006                         | 0.016     | [-0.025, 0.037]     | 0.039                         | 0.017     | [0.006, 0.071]*     |
| Gender x Moderator x Time from first trimester to 3-months postpartum | -0.024                        | 0.042     | [-0.107, 0.060]     | 0.002                         | 0.033     | [-0.062, 0.066]     |
| Gender x Moderator x Time from 3 to 30-months postpartum              | 0.014                         | 0.014     | [-0.013, 0.041]     | 0.014                         | 0.015     | [-0.016, 0.043]     |
| Random effects                                                        | Men                           |           | Women               | Men                           |           | Women               |
| Intercept                                                             | 9.085***                      |           | 9.945***            | 8.516***                      |           | 9.228***            |
| Slope for time from first trimester to 3-months postpartum            | 0.047***                      |           | 0.076**             | 0.049***                      |           | 0.077***            |
| Slope for time from 3- to 30-months postpartum                        | 0.009***                      |           | 0.005*              | 0.008***                      |           | 0.004*              |
| Intercept                                                             | 3.990***                      |           | 6.595***            | 4.059***                      |           | 6.498***            |

*Note.* The models are adjusted to parity; Gender: -1 female, 1 male; \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

### 3.5. Discussion

The purpose of this study was to analyze the association between partner relationship quality, anxiety and depressive symptoms' trajectories over the transition to parenthood. Different statistical models were performed to analyze the moderation effects of psychological symptoms on the trajectories of partner relationship quality, as well as the moderation effect of partner relationship quality on the trajectories of psychological symptoms over the transition to parenthood. Piecewise dyadic growth curve models did not reveal the significant moderation effects of anxiety neither of depressive symptoms on positive and negative partner relationship trajectories. However, piecewise dyadic growth curve models revealed the moderation effect of positive and negative partner relationship on anxiety and depressive symptoms trajectories from 3- to 30-months postpartum, but not from the first trimester to 3-months postpartum. From 3- to 30-months postpartum anxiety symptoms showed a steeper increase when men had low positive partner relationship, and depressive symptoms presented a steeper increase when women and men reported high negative partner relationship. Extending prior research regarding the role of interpersonal factors such as partner relationship quality in the development of psychological symptoms over pregnancy and the postpartum period, this study pointed out the moderation effects of positive and negative partner relationship on women's and men's anxiety depressive symptoms, not over the transition to parenthood, but only in the postpartum period.

*Hypothesis 1: Partner relationship quality moderates anxiety and depressive symptoms over time.*

Anxiety and depressive symptoms were found to decrease from the first trimester to 3-months postpartum, and to then increase from 3- to 30-months postpartum. These findings are discussed elsewhere (see Canário & Figueiredo, 2014b).

Positive and negative partner relationship dimensions were found to predict men's and women's anxiety and depressive symptoms at the first trimester. However, positive partner relationship was not found to moderate anxiety or depressive symptoms from the first trimester to 3-months postpartum, neither from 3- to 30 months postpartum. The negative partner relationship revealed to moderate depressive, but not anxiety, symptoms, only from 3- to 30-months postpartum, partially corroborating the hypothesis.

Results on the positive and negative partner relationship as predictors of the symptoms at the first trimester show that those who presented lower (higher) positive and higher (lower) negative partner relationship had more (less) anxiety and depressive symptoms. These results are consistent with previous studies that have shown that the effect of relationship satisfaction or partner relationship on men's and women's emotional distress or anxiety and depressive symptoms during pregnancy (Figueiredo et al., 2008; Røsand et al., 2011, 2012). At the first trimester, men and women may experience difficulties dealing with the developmental task of pregnancy acceptance, frequently characterized by affective ambivalence (Slade, Cohen, Sadler, & Miller, 2009). Thus, high quality partner relationship quality may act as a buffer effect, allowing couples to cope positively with this task.

The findings regarding no moderation effects of positive or negative partner relationship on anxiety and depressive symptoms from the first trimester to 3-months postpartum do not corroborate previous findings that pointed out the significant role of relationship in anxiety and depressive symptoms from pregnancy to the early postpartum period (Don et al., 2014; Stapelton et al., 2012; Whisman et al., 2011). These results point out that the decrease in anxiety and depressive symptoms from the first trimester to 3-months postpartum can be explained by factors other than positive and negative partner relationship. Moreover, the discrepancy between these

and other studies' results may be given by the fact that previous studies assessed the effect of prenatal partner relationship on anxiety and depressive symptoms over the transition to parenthood, or used time-lagged analyses (in which partner relationship at time  $t$  was assessed as a predictor of anxiety and depressive symptoms at time  $t + 1$ ), whereas the present study used piecewise dyadic growth curve analyses with concurrent scores of partner relationship quality and anxiety and depressive symptoms.

The results about the moderation effect of the negative partner relationship on depressive symptoms from 3- to 30-months postpartum revealed that both men and women with high negative partner relationship experienced a steeper increase in depressive symptoms over the postpartum period. These results corroborate and extend previous findings that identified an association between partner relationship dissatisfaction and depressive symptoms increase over the transition to parenthood or the postpartum period (e.g., Bower et al., 2012; Feeney, Alexander, Noller, & Hohaus, 2003; Parfitt & Ayres, 2014).

Adjusting to the demands of parenting may deteriorate the spousal relationship between the parents (Don & Mickelson, 2012). Especially after the maternity and/or paternity leave of absence, parents may experience difficulties such as negotiating work schedules, increased financial challenges, the infant's difficult temperament, the division of household labor and the adjustment to the co-parenting experience (Belsky, 1985; Möller, Hwang, & Wickberg, 2006; Van Egeren, 2004). These factors can contribute to more irritability, arguments, criticisms and conflicts between partners, leading to an increase of negative interactions which are known to be related to the increase of depressive symptoms (Don & Mickelson, 2012; Rholes et al., 2011; Stapleton et al., 2012).

*Hypothesis 2: Positive and negative partner relationship moderation effects on anxiety and depressive symptoms over time are similar for men and women.*

The moderation effect of negative partner relationship on depressive symptoms from 3- to 30-months postpartum was found to be similar for men and women, which allows to partially confirm the hypothesis. These results are consistent with other studies that point out no gender differences regarding the association between the partner relationship dissatisfaction and depressive symptoms over the postpartum period (e.g., Bower et al., 2012; Feeney et al., 2003; Parfitt & Ayres, 2014). However, these previous findings refer to the postpartum period, until 5-, 6- and 13-months postpartum, whereas our findings regard the period between 3- and 30-months postpartum.

The moderation effect of positive partner relationship on anxiety symptoms from 3- to 30-months postpartum was not found, except when in interaction with gender. The results regarding the moderation effect of positive partner relationship on men's anxiety symptoms from 3- to 30-months postpartum revealed that men, but not women, with low positive partner relationship presented a steeper increase in anxiety symptoms over that time period. This finding has not been previously reported in the literature and points out to gender differences on the association between positive partner relationship and anxiety symptoms over the postpartum period, from 3- to 30-months.

It is acknowledged that after childbirth, parents' attention tends to shift from the self and the partner to the baby and its needs (Kluwer, 2010). That can lead parents to experience deterioration in positive partner relationship, particularly through a decline in sense of support and care, affection, closeness, joint interests and activities. These changes can be a risk factor for men's psychological adjustment, which tend to have in their partners their main source of social

support, and are likely to experience fears, worries and emotions as they deal with the reality of the child, increasing their anxiety symptoms (Biehle & Mickelson, 2011; Bielawska-Batorowicz & Kossakowska-Petryca, 2006; Don & Mickelson, 2012).

These study's findings reveal the effects of positive and negative partner relationship on men's and women's anxiety and depressive symptoms, not only at early pregnancy, but also throughout the postpartum period, from 3- to 30-months. However, the results should be interpreted with caution, as the findings are correlational. Despite the over-time aspect of the models, a causal relationship cannot be established. Also, because significant variability was found in the trajectories of men's and women's anxiety and depressive symptoms (Tables 3.4 and 3.5), future research should consider additional variables such as interpersonal factors as spousal and family support, hormonal and other physiological changes, and child behavior and adjustment.

The strengths of this study include the six-wave longitudinal design, the large sample size, and the use of multilevel modeling through a data analytic approach that assesses both partners as the unit of analysis. Its limitations include the use of self-report measures, the voluntary participation, and the large time span between the fifth and the sixth assessment wave. Furthermore, younger, less educated, unemployed, or from low socio-economic level participants, as well as those with more anxiety and/or depressive symptoms at the first trimester were more likely dropout throughout the study.

Positive and negative partner relationship had a significant effect on women's and men's anxiety symptoms at the first trimester and were also found to moderate the symptoms from 3- to 30-months postpartum. Thus, positive and negative partner relationship were found to be relevant variables for both men's and women's psychological adjustment to early pregnancy and also over postpartum, from 3- to 30-months. Thereby, these study's conclusions have important implications

for screening and clinical practice. Screening for positive and negative partner relationship in both men and women at early pregnancy and over the postpartum period may be as relevant as screening for anxiety and depressive symptoms in order to identify couples at risk for psychological difficulties.

Also, because positive and negative partner relationship were associated with the depressive symptoms, couple based interventions may be effective in reducing the symptoms over pregnancy and the postpartum period. Through the promotion of positive partner relationship, partner support is enhanced, and partners engage in activities to meet the needs of another, reducing anxiety and depressive symptoms. Moreover, these programs should promote the positive partner relationship, particularly partner's sense of support and care, affection, closeness, and joint activities and interests, and prevent the negative partner relationship, namely irritability, arguments, criticisms, and conflicts, which are known to influence the person's and the couple's psychological adjustment over the transition to parenthood.

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## CONCLUSÃO

A transição para a parentalidade é frequentemente conceptualizada como uma transição normativa na vida dos indivíduos adultos (e.g., Baltes, Reese, & Lipsitt, 1980; Cowan, 1991; Cowan & Cowan, 2003), implicando um período de ajustamento individual, conjugal e familiar. É também identificada como uma das mais exigentes e desafiantes transições do ciclo de vida (e.g., Cowan, 1991; Cowan & Cowan, 1992, 2003; Demick, 2002).

Durante este período, tarefas desenvolvimentais específicas são levadas a cabo, permitindo o alcance de níveis de organização mais complexos e diferenciados que preparam os indivíduos para o exercício da parentalidade (e.g., Brazelton & Cramer, 1993; Figueiredo, 2000; Canavarro, 2006). Neste âmbito, o ajustamento psicológico individual e a qualidade do relacionamento conjugal são dimensões identificadas como relevantes na adaptação ao longo da gravidez e pós-parto (Cowan & Cowan, 1992, 2003; Cowan, Cowan, Heming, & Miller, 1991).

Na última década, diferentes estudos têm identificado a transição para a parentalidade como um período de risco de morbilidade psicológica, nomeadamente através do aumento da sintomatologia ansiosa e depressiva (e.g., Le Strat, Dubertret, & Le Foll, 2011; Moss, Skouteris, Wertheim, Paxton, & Milgrom, 2008; Perren, Von Wyl, Bürgin, Simoni, & Von Klitzing, 2005), e de deterioração da qualidade da relação conjugal (e.g., Doss, Rhoades, Stanley, & Markman, 2009; Lawrence, Nylén, & Cobb, 2007; Kluwer, 2010). Na procura da complexa caracterização e compreensão do processo de transição para a parentalidade, que se sabe ser multideterminado e marcado por complexas interações (Canavarro & Pedrosa, 2005), estudos demonstraram a importância da associação entre fatores interpessoais, como a qualidade da relação conjugal, e os

sintomas psicológicos evidenciados ao longo deste período de transição (e.g., Figueiredo et al., 2008; Stapleton et al., 2012; Whisman, Davila, & Goodman, 2011). No entanto, são escassos os estudos prospectivos realizados no âmbito da sintomatologia ansiosa e depressiva, da qualidade da relação conjugal, ou da associação entre estas dimensões que apresentam vários momentos de avaliação, prévios e posteriores ao nascimento (e.g., DiPietro, Costigan, & Sispma, 2008; Schulz, Cowan, & Cowan, 2006; Whisman et al., 2011). Igualmente, poucos estudos incluíram homens e mulheres primíparos e múltiparos como participantes (e.g., Figueiredo & Conde, 2011), ou avaliaram a interdependência dos sintomas de ansiedade e de depressão ou da relação conjugal entre os elementos do casal (e.g., Keizer & Schenk, 2012; Rholes et al., 2011).

Na sequência das limitações identificadas em estudos anteriores, e tomando por referência a perspectiva desenvolvimental da transição para a parentalidade (Cowan, 1991; Cowan & Cowan, 1992, 1995, 2003; Cowan et al., 1991) e a teoria da interdependência (Kelley et al., 2003; Wickman & Knee, 2012), esta dissertação teve como finalidade avaliar, através de três estudos empíricos: 1) as trajetórias dos sintomas de ansiedade e depressão, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, analisando efeitos de género e de paridade, bem como a interdependência entre os sintomas dos elementos do casal; 2) as trajetórias das dimensões positiva e negativa da relação com o companheiro, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, analisando efeitos de género e de paridade, bem como a interdependência entre as dimensões da relação dos elementos do casal; e 3) a associação entre as trajetórias das dimensões positiva e negativa da relação com o companheiro e as trajetórias de sintomas de ansiedade e depressão, em mulheres e homens, desde o primeiro trimestre de gravidez até aos 30 meses pós-parto, considerando a interdependência entre os sintomas e as dimensões da relação conjugal dos elementos do casal, analisando efeitos de género e controlando o efeito da paridade.

## 1. Ajustamento psicológico na gravidez e pós-parto

Os resultados do estudo empírico *“Anxiety and Depressive Symptoms in Women and Men: From Early Pregnancy to 30-Months Postpartum”* (Canário & Figueiredo, 2014a) identificam a diminuição dos sintomas de ansiedade e de depressão desde o primeiro trimestre de gravidez até aos três meses pós-parto, e o seu aumento dos três até aos 30 meses pós-parto. As trajetórias de sintomas identificadas não diferem em função do género ou da paridade, exceto no período pós-parto, entre os três e os 30 meses, onde se verifica um aumento acentuado dos sintomas de ansiedade e de depressão das mulheres multiparas, comparativamente aos grupos de homens multiparos e mulheres e homens primíparos. Os resultados demonstram ainda que os sintomas de ansiedade e de depressão estão positivamente correlacionados ao nível da diáde.

A diminuição da sintomatologia ao longo da gravidez pode ser explicada pela diminuição das preocupações e dos sintomas físicos da gravidez, bem como pelos resultados positivos dos exames pré-natais (Austin, Tully, & Parker, 2007; Buist, Gotman, & Yonkers, 2011; Matthey & Ross-Hamid, 2012). Depois do parto e até aos 3 meses pós-parto, a diminuição da sintomatologia pode também ser consequência do estabelecimento de uma interação positiva com o bebé, assim como do aumento da sensação de controlo por parte dos pais (Keeton, Perry-Jenkins, & Sayer, 2008; Parfitt, Pike, & Ayers, 2013). Particularmente no caso das mulheres, a diminuição da sintomatologia até aos três meses pós-parto pode ainda ser explicada pelos processos hormonais, nomeadamente pelo aumento da ocitocina e da prolactina, e pela manutenção da amamentação exclusiva (Brummelte & Galtea, 2010; Figueiredo, Canário, & Field, 2014; Stuebe, Grewen, & Meltzer-Brody, 2013).

O aumento da sintomatologia após os três meses pós-parto, um período que é reconhecido na literatura como sendo mais exigente para os pais (Belsky, Gilstrap, & Rovine, 1984), pode dever-se a circunstâncias como o regresso ao trabalho após a licença de

maternidade e/ou paternidade, a exigente prestação de cuidados adequados às necessidades da criança, ou a deterioração da qualidade da relação conjugal (e.g., Breiktopf et al., 2006; Perren et al., 2005; Whisman et al., 2011). Concretamente, os resultados que indicam o aumento mais pronunciado da sintomatologia nas mulheres múltiparas após os três meses pós-parto podem ser explicados pelo aumento de problemas experienciado por este grupo, onde se incluem preocupações sobre a integração do bebé na dinâmica familiar, dificuldades na adaptação ao exigente processo de prestação de cuidados a mais do que uma criança, e a conciliação das tarefas domésticas com o horário e responsabilidades de trabalho, particularmente após a licença de maternidade (Hakulinen, Laippala, & Paunonen, 1998).

## 2. Relacionamento conjugal na gravidez e pós-parto

Os resultados do estudo empírico *“Partner Relationship from Early Pregnancy to 30-Months Postpartum: Gender and Parity Effects”* (Canário & Figueiredo, 2014b) identificam a diminuição das dimensões positiva e negativa da relação com o companheiro entre o primeiro trimestre de gravidez e os três meses pós-parto, e a diminuição da dimensão positiva e o aumento da dimensão negativa da relação com o companheiro entre os três e os 30 meses pós-parto. Entre o primeiro trimestre de gravidez e os três meses pós-parto verifica-se a diminuição da dimensão positiva da relação com o companheiro para as mulheres e para os participantes múltiparos, assim como a diminuição da dimensão negativa da relação com o companheiro para os participantes primíparos. Entre os três e os 30 meses pós-parto verifica-se uma diminuição mais acentuada da dimensão positiva para os participantes primíparos do que para os participantes múltiparos. Adicionalmente, os resultados demonstram que as dimensões positiva e negativa da relação com o companheiro estão positivamente correlacionadas ao nível da diáde.

O resultado que revela a diminuição da dimensão positiva da relação com o companheiro ao longo da gravidez e pós-parto pode ser explicado pela diminuição nos níveis de intimidade e apoio prestado pelo companheiro nestes períodos (e.g., Rhoades et al., 2001). Particularmente após o parto, a atenção dos pais tende a ser redirecionada do companheiro para o bebê e para a tarefa de prestação de cuidados (Kluwer, 2010). Tal pode comprometer a dimensão positiva da relação com o companheiro diminuindo o suporte prestado, o afeto, a proximidade, a partilha de interesses e a realização de atividades em conjunto pelo casal.

Entre o primeiro trimestre de gravidez e os três meses pós-parto, os resultados indicam que as mulheres e os participantes multiparos são mais propensos à diminuição da dimensão positiva da relação com o companheiro. No caso das mulheres isto pode dever-se às mudanças físicas da gravidez, à violação das expectativas prévias, e, após o parto, a um maior número de problemas para resolver, e a mais trabalho desempenhado no agregado familiar, nomeadamente um maior número de tarefas relacionadas com a prestação de cuidados ao bebê (Colman & Colman, 1991; Doss et al., 2009; Lawrence et al., 2007). No que concerne aos participantes multiparos, pode ser explicado pelos dados reportados em estudos prévios que indicam um maior número de dificuldades no funcionamento familiar de indivíduos multiparos, nomeadamente nas dimensões de comunicação, estabilidade e flexibilidade (Hakulinen et al., 1998).

Entre os três e os 30 meses pós-parto, o resultado que aponta os participantes primíparos como mais propensos à diminuição da dimensão positiva da relação com o companheiro, pode ser justificado pelas dificuldades sentidas por este grupo no ajustamento à nova dinâmica familiar (Belsky, Lang, & Rovine 1985; Colman & Colman, 1991; Kluwer, 2010).

A diminuição da dimensão negativa da relação com o companheiro entre o primeiro trimestre de gravidez e os três meses pós-parto consiste num dado relevante, não tendo sido previamente reportado na literatura. Pode eventualmente ser explicado pela hipótese de lua-de-

mel, que considera a gravidez, nomeadamente a fase final, como um período de sentimentos positivos para o casal (Cowan & Cowan, 1992; Feeney, Hohaus, Noller, & Alexander, 2001; Houts, Barnett-Walker, Paley, & Cox, 2008). Este dado pode ainda ser parcialmente explicado pelas alterações hormonais que ocorrem no período perinatal, nomeadamente pela diminuição da testosterona, contribuindo para menor agressividade e conflitualidade entre os membros do casal (Cohan, Booth, & Granger, 2003; Gray, Kahlenberg, Barrett, Lipson, & Ellison, 2002; Van Anders, Goldey, & Kuo, 2011). De acordo com os resultados, os participantes primíparos são mais propensos à diminuição da dimensão negativa da relação com o companheiro neste período. Tal permite questionar se a hipótese de lua-de-mel possa ser mais característica dos indivíduos primíparos, contribuindo para um maior número de sentimentos positivos e menor frequência de conflitos entre o casal.

O aumento da dimensão negativa da relação com o companheiro entre os três e os 30 meses pós-parto pode estar relacionado com o maior número de problemas que os casais experienciam após a licença de maternidade, tais como a negociação dos horários de trabalho e a divisão das tarefas domésticas, a falta de suporte social, ou dificuldades no ajustamento à experiência da coparentalidade (Belsky, 1985; Möller, Hwang, Wickberg, 2006; Van Egeren, 2004). Estas situações podem levar a um maior número de conflitos e comportamentos negativos, intensificando os problemas entre o casal (Kluwer, 2010; Kohn et al., 2012).

### **3. Associação entre o relacionamento conjugal e o ajustamento psicológico na gravidez e pós-parto**

Os resultados do estudo empírico *“The Moderation Effect of Partner Relationship Quality on Couple’s Anxiety and Depressive Symptoms from Early Pregnancy to 30-Months Postpartum”* (Canário, Figueiredo, Tendais, & Kenny, 2014) não indicam o efeito moderador dos sintomas de

ansiedade ou de depressão nas trajetórias das dimensões positiva e negativa da relação com o companheiro ao longo da gravidez e pós-parto. Identificam, por outro lado, o efeito moderador das dimensões positiva e negativa da relação com o companheiro nas trajetórias de sintomas de ansiedade e de depressão, apenas entre os três e os 30-meses pós-parto. Mais concretamente, neste período verifica-se que os homens com baixa dimensão positiva da relação com a companheira apresentam um aumento mais acentuado na sintomatologia ansiosa do que os homens com elevada dimensão positiva da relação com a companheira. De igual modo, as mulheres e homens com elevada dimensão negativa da relação com o(a) companheiro(a) apresentam um aumento mais acentuado na sintomatologia depressiva do que aqueles com baixa dimensão negativa da relação com o(a) companheiro(a).

O resultado referente ao efeito moderador da dimensão positiva da relação com a companheira na trajetória de sintomatologia ansiosa de homens demonstra a relevância desta dimensão do relacionamento conjugal enquanto fator de risco ou de proteção da sintomatologia ansiosa de homens após os três meses pós-parto. Após o parto, a atenção dos pais, em particular a atenção da mãe, tende a ser redirecionada do companheiro para o bebé e para a tarefa de prestação de cuidados (Kluwer, 2010), diminuindo o suporte prestado ao companheiro, assim como a partilha de interesses e a realização de atividades em conjunto pelo casal. Esta alteração pode ser um fator de risco para o ajustamento psicológico dos homens, que muitas vezes têm na sua companheira a principal fonte de suporte, e que ao longo do pós-parto tendem a experienciar medos e preocupações enquanto lidam com a realidade do filho, aumentando a sua sintomatologia ansiosa (Biehle & Mickelson, 2011; Bielawska-Batorowicz & Kossakowska-Petryca, 2006; Don & Mickelson, 2012).

No mesmo sentido, o resultado que concerne ao efeito moderador da dimensão negativa da relação com o companheiro na trajetória de sintomatologia depressiva de mulheres e homens

demonstra a relevância desta dimensão do relacionamento conjugal enquanto fator de risco ou de proteção da sintomatologia depressiva após os três meses pós-parto. O ajustamento às exigências da parentalidade, nomeadamente no que concerne à prestação de cuidados, à experiência de coparentalidade, e à conciliação destas dimensões com as diferentes áreas de funcionamento individual, pode comprometer a qualidade da relação conjugal (Belsky, 1985; Don & Mickelson, 2012; Van Egeren, 2004). Por sua vez, as dificuldades experienciadas neste processo podem contribuir para um aumento da irritabilidade, críticas e conflitos entre os elementos do casal, proporcionando o aumento das interações negativas e, consequentemente, o aumento da sintomatologia depressiva (Don & Mickelson, 2012; Rholes et al., 2011; Stapleton et al., 2012).

#### **4. Implicações conceptuais, para a intervenção e investigação futura**

Os resultados deste trabalho científico constituem contribuições relevantes para o estado da arte existente sobre o domínio em estudo, permitindo caraterizar o processo de transição para a parentalidade em duas fases distintas. Assim, uma primeira fase, compreendida entre o primeiro trimestre de gravidez e os três meses pós-parto, está inerente ao ajustamento psicológico, caraterizado pela diminuição da sintomatologia ansiosa e depressiva, e pela diminuição das dimensões positiva e negativa da relação com o companheiro. Nesta fase, as mulheres e os participantes múltiparos são mais vulneráveis à diminuição da dimensão positiva da relação com o companheiro, enquanto nos participantes primíparos se verifica a diminuição da dimensão negativa da relação com o companheiro.

Pelo contrário, a segunda fase, compreendida entre os três e os 30 meses pós-parto, está inerente ao risco de morbilidade psicológica e de deterioração do relacionamento conjugal, pelo aumento da sintomatologia ansiosa e depressiva, e da dimensão negativa da relação com o companheiro, e da diminuição da dimensão positiva da relação com o companheiro. Nesta fase,

constituem-se grupos mais vulneráveis à diminuição da dimensão positiva da relação com o companheiro os participantes primíparos, e grupos mais vulneráveis ao aumento da sintomatologia mulheres multiparas, homens com baixa dimensão positiva da relação conjugal, e mulheres e homens com elevada dimensão negativa da relação conjugal.

Adicionalmente, os resultados demonstram a interdependência do ajustamento psicológico e da qualidade do relacionamento conjugal ao nível do casal, revelando que os elementos da díade se influenciam mutuamente nestas dimensões.

Os resultados deste trabalho científico representam também relevantes contribuições para a intervenção. Saliencia-se a pertinência de, ao longo da transição para a parentalidade, avaliar a qualidade da relação conjugal, assim como a sintomatologia ansiosa e depressiva, para identificar mulheres e homens em risco psicológico.

A literatura indica que os programas de intervenção psicológica no âmbito da transição para a parentalidade são mais eficazes se contemplarem várias sessões (num mínimo de cinco), realizadas ao longo da gravidez e pós-parto (Pinquart & Teubert, 2010). Tais programas devem igualmente ser fundamentados pelo conhecimento existente sobre o processo de transição para a parentalidade e conceptualizados de modo a intervir em problemáticas específicas, diferenciadas em função dos diferentes riscos individuais e conjugais (Cowan & Cowan, 1995; Roy, Schumm, & Britt, 2014). De acordo com os resultados desta dissertação, os programas de prevenção e intervenção no âmbito do risco psicológico e da deterioração da relação conjugal ao longo da gravidez e pós-parto, beneficiaram: da inclusão não só de mulheres grávidas, mas também dos seus companheiros, primíparos e múltiparos, atendendo aos desafios particulares da transição de acordo com o género e a paridade, assim como da dedicação de particular atenção ao período após os três meses pós-parto.

Igualmente, dado que os resultados demonstraram a associação da qualidade da relação conjugal com os sintomas de ansiedade e de depressão no período pós-parto, intervenções focadas no casal podem ser eficazes na redução dos sintomas no mesmo período. Particularmente, estas intervenções devem promover os aspetos da dimensão positiva da relação com o companheiro, nomeadamente o suporte e cuidado, afeto, atividade e interesses conjuntos, e prevenir os aspetos da dimensão negativa, nomeadamente, a irritabilidade, discussões, críticas e conflitos, que se sabem influenciar o ajustamento psicológico na transição para a parentalidade.

Os principais pontos fortes deste trabalho científico dizem respeito ao *design* longitudinal com seis momentos de avaliação desde o início da gravidez até aos 30 meses pós-parto, o elevado número de participantes, mulheres e homens multíparos e primíparos, e a utilização de curvas de crescimento diádicas como estratégia de análise de dados através de modelos multinível.

Não obstante, este trabalho científico apresenta também limitações, nomeadamente, a voluntariedade da participação, a utilização de medidas de autorrelato, e o extenso período de tempo compreendido entre os dois últimos momentos de avaliação, onde podem ter lugar acontecimentos imprevisíveis, suscetíveis de influenciar os resultados enquanto variáveis parasitas. Mais ainda, deve ser apontado que participantes mais novos, com menores habilitações académicas, provenientes de um baixo nível socioeconómico, desempregados, e com mais sintomas de ansiedade e de depressão no primeiro trimestre de gravidez, apresentaram maior probabilidade de não participar em pelo menos um momento de avaliação do estudo. Embora estas características sejam reconhecidas na literatura como relativamente comuns (Austin et al., 2007; Heron O'Connor, Evans, Golding, & Glover, 2004; Van Bussel, Spitz, & Demyttenaere, 2009), reconhece-se o seu potencial para enviesar os resultados reportados.

Estudos futuros devem considerar a importância da qualidade da relação conjugal no ajustamento psicológico ao longo do período pós-parto. No entanto, devem também procurar compreender os processos que contribuem para a diminuição dos sintomas de ansiedade e de depressão, bem como para a diminuição das dimensões positiva e negativa da relação com o companheiro, entre o primeiro trimestre de gravidez e os três meses pós-parto. Por exemplo, avaliando o papel dos processos hormonais e outras variáveis psicofisiológicas, ou o grau de sucesso com que mulheres e homens cumprem as tarefas de desenvolvimento características da transição.

Por outro lado, será também importante que a investigação futura incida no papel das características de temperamento, desenvolvimento e comportamento da criança, relativamente ao risco psicológico e de deterioração da qualidade da relação conjugal no período pós-parto, a par de outros processos de relacionamento interpessoal, como o suporte conjugal, familiar e social.

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