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### Relational contexts in adjustment to pregnancy of HIV-positive women: relationships, social support and personal adjustment

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## Relational contexts in adjustment to pregnancy of HIV-positive women: relationships, social support and personal adjustment

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Relational contexts are a central issue in most people's lives, and people usually rely on the support of others in everyday circumstances. Social support, as a relational context, could have a positive influence on personal adjustment, and is particularly relevant in the psychological well-being of HIV patients. Guided by the Convoy Model of social networks, in a sample of 31 HIV-positive pregnant women we try to assess the role of social support and social network in the adjustment to pregnancy. Profile analysis suggests a greater importance of social support provided by the partner and both parents, especially the support provided by the mother. At the same time, it seems to highlight the buffering hypothesis of social support, which could be understood as a protection factor in the adjustment of HIV-infected women to pregnancy.

**Keywords:** social support; HIV infection; pregnancy; adjustment

### Introduction

The importance of interpersonal relationships, conceptualized as social support, has been progressively studied since the epidemiological studies developed by Cassel (1974). This author postulated the benefits of social support, and particularly the presence of significant others as factors that decreased the vulnerability to diseases, predicting the importance of personal resources, and social resources for an adaptive way of coping with different crisis or stressful situations and, extensively, attenuate or diminish the impact of adverse events (physical or psychological).

The correlation between social support and health has been shown in different approaches. First, social support has a direct and positive influence on the individual's health, regardless of factors such as socio-economic status and gender. A second approach postulates that social support is only associated with health in individuals at specific moments of their lives. According to this perspective, social support functions as a "buffer" for the negative aspects of the situation (Gordillo, 1999), thus reducing the vulnerability of these individuals to the adverse effects of stressful situations (Heaney & Israel, 2002).

Empirical studies about social support point out that relationships with others are an important context of influence on the physical well-being as

well as on personal adjustment (Cohen, 1988; Cohen & Wills, 1985; Kalichman, Sikkema, & Somlai, 1996), and are particularly relevant for the psychological well-being of HIV patients (Green, 1997; Hough, Magnan, Templin, & Gadelrab, 2005). The positive effects of social support have been associated with lower mortality and better adjustment of people with chronic diseases (Bisschop, Kriegsman, Beekman, & Deeg, 2004; Pakenham, Dadds, & Terry, 1996), and also with a better adherence to therapeutic regimes (Remor, 2002a,b).

According to Aranda-Naranjo and Davis (2001), HIV-infected women have many significant relationships – with family, particularly their own children, with partner; friends; and health professionals. Each one of these relationships may affect the others and, additionally, can have a profound impact on how women deal with their HIV infection and other comorbidities. These authors also highlighted that HIV in women is clearly a family issue, imposing social, psychological and economic demands on women who care for family members while they are ill.

The relation between the characteristics of social network and perception of social support, psychological well-being and clinical issues has not been studied in HIV population. However, literature suggests that the size of the social network seems to be less important, in terms of implications on health

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and adjustment, than its composition (Hough et al., 2005).

Pregnancy, as a moment of personal, marital, familiar and social reorganization, is an important transition in a woman's life. The birth of a child represents a significant transition for the mother, but also for the closest members of her social network, which are able to influence the quality of her interpersonal relationships, well-being and attitudes toward the baby (Coffman, Levitt, Deets, & Quigley, 1991).

Social support could be associated with different indicators of adjustment in order to improve the use of active strategies to cope with several demands imposed by the situation, or to facilitate the evaluation of the perceived situations of higher controllability, specifically the adjustment to parenthood (Oliveira, Araújo Pedrosa, & Canavarro, 2005). In this sense, the existence of social support during pregnancy and motherhood has been consistently associated with maternal adjustment and quality of care provided by the mother (Chou, Avant, Kuo, & Fetzer, 2007; Glazier, Elgar, Goel, & Holzapfel, 2004).

The Convoy Model represents a conceptual model of social support in the development of an individual (Akiyama, Antonucci, Takahashi, & Langfahl, 2003; Fiori, Antonucci, & Cortina, 2006; Hough et al., 2005; Levitt, 2005; Peek & Lin, 1999). This model offers an integrative approach to the concepts of social support and social network. Kahn and Antonucci (1980) combined the perspectives of social roles and theories of social support, and provided a comprehensive framework of the social support variability in a developmental perspective.

The Convoy Model is empirically conceptualized as a hierarchy of three concentric circles that surround the individual (cf. Figure 1). These circles represent different levels of proximity or closeness, intimacy and importance in relation to the individual (Kahn & Antonucci, 1980; Peek & Lin, 1999). All members of the convoy are people that the individual identifies as important sources of support. The closest circle represents the members perceived as main sources of support, that is, it symbolizes those toward whom the focal person feels very close. This position is determined by the quality of the relationships rather than their role, and usually, in this circle members of the nuclear family are represented, such as the partner, parents and children. The relationships in the inner circle are the most stable, while those in the peripheral circles are more likely to change over time (Peek & Lin, 1999).

Most studies are consistent with the basic assumptions of the Convoy Model, which were empirically

demonstrated in different life cycle transitions, including pregnancy and motherhood (Coffman et al., 1991). Hence, this model can be a useful conceptual framework providing a more thorough knowledge of the interpersonal relationships through life span, as well as in different transitions of the life cycle, pregnancy and transition to motherhood.

## Method

### Objectives

The main goal of this study was to characterize and assess the influence of relational dimensions on the (mal)adjustment to pregnancy of HIV-positive women. In a sample of HIV-positive and pregnant women, we assessed the relational dimensions during the second trimester of pregnancy and two to four days after birth. First, we assessed: (1) the social support network; (2) satisfaction with received social support; (3) current and previous experiences with family of origin; and (4) marital relationship. As indicators of personal adjustment we assessed perceived stress, psychological symptom patterns, and emotional reactivity. After birth, in the relational domain, satisfaction with mother-child relationship, satisfaction with marital relationship, and perception of maternal ability and fulfillment were also assessed.

### Participants

Women were eligible for inclusion in the study if they met the following criteria: HIV infected and pregnant. All women were registered at the Dr Daniel de Matos Maternity (Portugal) (convenience sample). Data were provided by 31 HIV-positive pregnant women. The mean age was 29.00 (range: 16–39 years) and standard deviation (SD) was 6.19 years. Women were predominantly married/cohabiting (77.4%), of low socio-economic status (81%), and Caucasian (58.2%). Nineteen (61.3%) women reported HIV infection through heterosexual contact, while 19.4% were infected through IV drug use. Seventeen (54.8%) women were diagnosed with HIV during the current pregnancy.

This study was approved by the Ethic Commission of the University of Coimbra Hospitals. All participants were informed about the study and provided written informed consent.

### Measures

The protocol of the study included a semi-structured interview regarding socio-demographic data; family and relational context; medical and psychopathological history; life style; medical history and life style

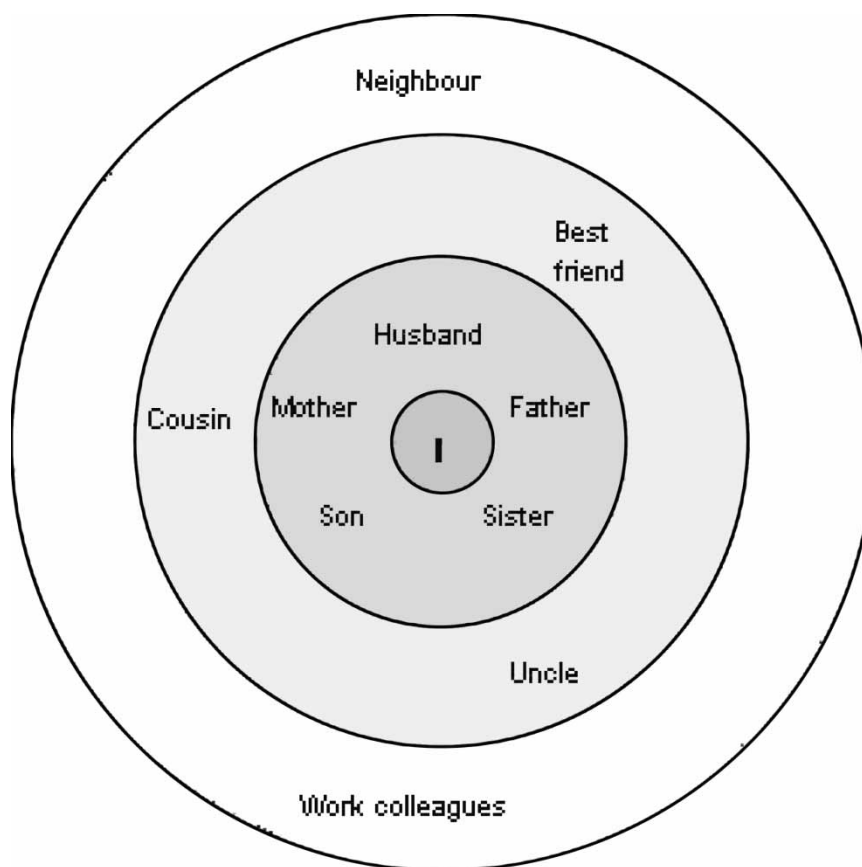


Figure 1. Hypothetical example of a Convoy diagram.

of partner; current relationships and family history (Part 1). Part 2 includes questions regarding psychological data about HIV, personal history and psychological and emotional experience of pregnancy. The social and medical grids about pregnancy and HIV comprise information about obstetric history and current pregnancy; antiretroviral treatment and adherence; mode of transmission; moment of diagnosis; HIV status of partner; and knowledge of HIV infection in previous pregnancies.

The assessment protocol also included the following instruments: (1) *Convoy Model* (Kahn & Antonucci, 1980) – designed to assess the social support and the social network of individuals; (2) *Perceived Stress Scale* (PSS; Cohen, Kamarck & Mermelstein, 1983) – a 10-item self-reported inventory designed to measure to which degree situations are considered stressful; (3) *Brief Symptom Inventory* (BSI), developed by Derogatis (1993). The BSI is a 53-item self-reported inventory associated with psychological distress. It assesses nine symptom dimensions including somatization, obsessions–compulsions, interpersonal sensitivity, depression, anxiety, hostility, phobic

anxiety, paranoid ideation and psychoticism; and three global indices. The Global Severity Index (GSI) is the most widely used measure of psychological distress; and (4) *Emotional Assessment Scale* (EAS; Carlson et al., 1989) – a 24-item questionnaire developed to assess the emotional reactivity. The EAS consists of 24 emotion descriptors divided into seven fundamental emotion categories: fear, happiness, sadness, anxiety, anger, surprise, and guilt. In EAS, subjects rate the intensity of each emotion on a visual analogue scale, ranging from 0 to 100 mm.

### Statistical analysis

Data analyses were performed using *Statistical Package for Social Sciences* (SPSS; Version 14.0). Statistical analyses carried out include: descriptive statistics (frequencies, means, SDs); Wilcoxon tests for non-parametric and paired variables; and correlations. Primary analyses about Convoy Model include statistics on the social networks of pregnant women and relationship satisfaction with the main identified figures.

## Results

### Characterization of the relational context

#### Relationship with partner/baby's father

Twenty-five partners were enrolled in this study. The mean age was 35.88 (range: 22–67 years) and SD of 9.27. The majority was married/cohabiting (96%) and of lower socio-economic status. Thirteen (52%) were HIV-positive.

The mean duration of the relationship was 3.84 years ( $SD = 2.63$ ) and is larger than five years in 32% of couples. The mean satisfaction with the current marital relationship, in a scale of 1 (Extremely Bad) to 7 (Extremely Good) was 5.92 ( $SD = 1.28$ ). The mean satisfaction with the relationship before the knowledge of HIV infection was 5.79 ( $SD = 1.23$ ). This difference was not statistically significant (Wilcoxon's test;  $Z = -0.378$ ;  $p = 0.705$ ).

#### Family history and life events

Most women lived their infancy and adolescence with parents and siblings (71%). Currently, all women have contact with their family of origin or at least with one of the parents. Twenty (64.5%) women reported at least one significant event during infancy and adolescence. The most referred ones were: separations (55%), mainly associated with emigration; financial difficulties (20%); and alcoholism (20%).

#### Relationship with parents

The results regarding satisfaction regarding the relationship with both parents (during infancy and adolescence and currently), and according to the mentioned scale of 1 (Extremely Bad) to 7 (Extremely Good), are shown in Table 1.

These results reported a better satisfaction with the relationship with the mother at the current time (Wilcoxon's test;  $Z = -3.274$ ;  $p = 0.001$ ). There were no statistically significant differences in the satisfaction regarding the relationship with the father.

### Convoy Model

#### Number of support figures in each circle

HIV-positive women indicated an average 7.32 persons in their networks, with 3.95 ( $SD = 2.09$ ; range: 1–8) in the innermost circle, and 3.37 in the middle circle ( $SD = 3.22$ ; range: 0–14). Data of the outer circle are not shown because of a high frequency of nonanswers. The most common network relations in the inner circle included partner (81%), mother (71.4%), siblings and children (both 47.6%), and father (38.1%). In the middle circle, the most common network relations included siblings (33.3%), friends (23.8%), mother and father (19%), grandparents and parents-in-law (both 14.3%).

#### Satisfaction with received social support

Concerning the most commonly reported network relationships, we only present data about the satisfaction with the relationship with the main figures (partner, mother and father) and about the global satisfaction with social support received from all members included in each circle. Table 2 shows that when asked to indicate the global satisfaction with received social support, women reported better satisfaction with support of their partners, followed by support of their mothers.

As predicted, the global satisfaction with social support received from all members included in the inner circle was higher than in the middle circle (Mean = 4.65;  $SD = 0.52$  vs. Mean = 3.84;  $SD = 0.83$ ).

### Personal adjustment

The personal adjustment was assessed regarding perceived stress, psychopathology and emotional reactivity. HIV-positive women reported higher scores of perceived stress (Mean: 20.95;  $SD: 4.43$ ) than the general population (Mean: 17.91;  $SD: 7.68$ ). The difference was statistically significant ( $t = 3145$ ,  $p = 0.005$ ).

Regarding psychopathological symptoms no statistically significant differences were found between HIV-positive women and the general population,

Table 1. Satisfaction with the relationship with mother and father (during infancy and adolescence and currently).

	Infancy and adolescence		Currently	
	Mean	SD	Mean	SD
Relationship with mother	5.37	1.299	6.21	0.995
Relationship with father	4.96	1.428	4.90	1.609

Table 2. Satisfaction with social support received from partner, mother and father.

	Mean	SD	Minimum–Maximum
Satisfaction with social support – partner	4.78	0.428	4–5
Satisfaction with social support – mother	4.61	0.850	2–5
Satisfaction with social support – father	3.64	1.502	0–5

except in *Obsession–Compulsion* dimension, in which HIV-infected women showed lower scores ( $t = 2218$ ,  $p = 0.038$ ).

The results concerning emotional reactivity are shown in Table 3. The data regarding the general population were provided by the Portuguese study of EAS validation. HIV-infected women reported higher scores in all emotions, both positive and negative. *Happiness*, *Anxiety* and *Sadness* were the emotions with the highest scores in HIV sample, which reflects the emotionally divergent nature of both contexts involved: pregnancy and HIV infection.

#### *Social support, experiences with family of origin and personal adjustment*

The correlations between social support, experiences with family of origin (mother and father), and personal adjustment showed significant associations between *perceived stress* and satisfaction with social support provided by the mother ( $r = 0.59$ ,  $p < 0.05$ ); positive correlations between the satisfaction with social support received from the father and *Sadness* ( $r = 0.65$ ,  $p < 0.05$ ) and *Fear* ( $r = 0.60$ ,  $p < 0.05$ ), and significant negative correlations between the satisfaction with the marital relationship prior to knowledge of HIV infection and *Anger* ( $r = -0.66$ ,  $p < 0.05$ ) and *Guilty* ( $r = -0.65$ ,  $p < 0.05$ ).

#### *Social support, experiences with origin family and mother–child relationship*

The correlations between social support, previous and current experiences with family of origin, and mother–child relationship can be found in Table 4.

The results only showed positive correlations between mother–child relationship and satisfaction with social support received from father and from members of the inner circle, and with the current relationship with father.

#### *Couple HIV status, personal adjustment, and social support*

Concerning the couples' HIV status, no significant differences were found in the personal adjustment of HIV-positive women. However, serodiscordant couples reported higher scores in *perceived stress*; higher scores in six of nine dimensions of BSI and in two indices (GSI and *Total of Positive Symptoms*); and higher scores in the emotions *Fear*, *Anxiety*, *Anger*, *Surprise*, and *Happiness*. In terms of satisfaction with social support provided by the partner, the highest scores were found amongst the serodiscordant couples. Seroconcordant couples reported, however, better satisfaction with the marital relationship. These differences were not statistically significant.

### Discussion

This paper provides a description of the relational dimensions, social networks, social support, and satisfaction with the relationship with partner, mother and father, in the adjustment to pregnancy of a group of HIV-infected women. This study is a preliminary step to increase our understanding of the interpersonal context on these highly vulnerable women.

Regarding the relational dimension, results suggest a good satisfaction with marital relationship,

Table 3. Comparison of emotional reactivity between the general population and the sample of HIV pregnant women.

	General population		HIV-positive women		<i>t</i>	<i>p</i>
	Mean	SD	Mean	SD		
Happiness	43.38	19.24	51.92	32.43	1.207	n.s.
Anxiety	26.91	17.38	46.80	23.69	3.848	0.001
Sadness	12.64	10.60	42.52	33.76	4.056	0.001
Anger	12.60	12.10	27.94	27.99	2.509	0.021
Fear	11.99	12.34	36.46	29.00	3.867	0.001
Surprise	14.63	12.66	33.86	27.86	3.163	0.005
Guilt	10.64	9.68	26.97	22.71	3.295	0.004

Table 4. Correlations between social support, experiences with family of origin and mother-child relationship.

Variables	Mother-child relationship	Maternal fulfilment	Maternal ability
Satisfaction with social support – father	0.87*	n.s.	n.s.
Satisfaction with social support – inner circle	0.66*	n.s.	n.s.
Current relationship with father	0.59*	n.s.	n.s.

\* $p < 0.05$ .

even after HIV diagnosis, as well as with previous and current experiences with mother and father.

The size and composition of the social support network includes several figures of support and some are consistently mentioned: partner, mother, father, and children. The remaining members include friends, siblings, and other relatives. The innermost circle was more densely populated than the middle circle or the outer circle, where the majority of women did not identify any source of support. As predicted, the satisfaction with global support from the network members of the innermost circle was higher than that from the middle circle. Specifically, these data suggest that positively assessed relational contexts (consistent with the buffering hypothesis of social support) could be understood as a protective factor in the adjustment to pregnancy of HIV-positive women.

The hierarchy of importance of social relationships and emotional closeness are consistent with the results found by Kahn and Antonucci (1980) and confirmed by other empirical studies that used the Convoy Model approach (Levitt, 2005; Peek & Lin, 1999). We consider that the middle and outer circles might affect the individual's mental health. However, the membership in the first convoy circle should have the strongest effects. Peek and Lin (1999), though, pointed out that there is only marginal evidence supporting this hypothesis.

The prevention of HIV infection among women in reproductive age is an essential component of prevention policies. This implies knowing the specific vulnerabilities of women and, inevitably, understanding the interactions between biological, psychological and environmental factors. Additionally, the risk of HIV among women cannot be dissociated from the existing inequalities and from the contexts in which they live (Amaro, 1993). That is why prevention of HIV among women is intimately associated with the need for social and cultural change and to the promotion of women's empowerment. Because of biological, psychological and cultural constraints, women are often identified as transmission vectors because of the centrality of *being women* which underlies this process. This reductive and inaccurate vision has a crucial risk: the denial of the equivalent responsibility of men in HIV prevention.

In discourses about HIV and reproductive responsibilities, the attention given to the role of the father in this process has been almost inexistent. We address the importance of fathers (HIV-positive or not) in this process, because it is expectable that HIV infection of their female partners implies increasing demands on their roles as husbands/partners and, additionally, reveals their responsibilities in reproductive decisions. Furthermore, it is crucial that reproductive choices should be discussed during family planning routine, specifically among serodiscordant couples. This joint approach is essential for couples to understand the personal, familiar and social implications of their decision, and should take into account three fundamental aspects: the meaning of having a child (for the couple and for each other individually); expectations about consequences (personal, relational, familiar, and social) of a HIV-infected child; and the possibility of not having any children.

In the specific context of pregnancy and HIV, some strategies for the prevention of vertical transmission include: HIV screening for all women in reproductive age (with informed consent and as soon as possible; for pregnant women, this screening should be systematic); and psychosocial assessment of social support networks. As previously mentioned, and in accordance with the literature (Leserman et al., 1999; Remor, 2002b), the availability of social support is an important buffer of the psychological impact of HIV, and is a relevant external personal resource, which might facilitate the adjustment to HIV and other specific transitions. The enlargement of the social support network and training of interpersonal competences or social skills could be significant strategies to improve social support in individuals with deficits in this resource.

These findings emphasize the importance of examining the effects of relational factors, such as social network and overall satisfaction with the level of social support that women are receiving from main figures while adjustment to pregnancy. The Convoy Model is a conceptual structure useful for investigating the role of social relations within specific contexts, such as pregnancy and HIV infection. Social network research is a central part of the study of relationships

and, therefore, may continue to contribute to the increasing knowledge of social relations, HIV, and pregnancy.

As the availability of social support in itself does not ensure benefits for people, considering the contingencies of social support and considering the specificities of social support in HIV, which are quite different from other chronic diseases, some clinical implications should be retained, in order to improve the planning of interventions that will have beneficial impact in women's adjustment.

Professionals who work with HIV-positive women during the childbirth transition might employ these findings in both preventive and treatment programs. HIV-infected women are increasingly vulnerable to interpersonal difficulties after a HIV diagnosis. The psychological intervention should include more emphasis on women's relationships with their husbands or other close relationship figures, mainly because of women's difficulties to disclose their HIV status. The mental health providers must be able to discuss with HIV-positive women the decision about whom to tell and when to tell and, concurrently, anticipate the reaction of others and deal with conflicts concerning disclosure, rejection or fear of rejection or abandonment. In other words, the intervention in this moment of the life cycle may help to prevent subsequent family disruption. It is important, however, to examine the conditions in which the network structure and perceived social support have effects on a better adjustment of HIV-infected women. And it is also important that social support interventions should be coordinated with other services that address other needs of HIV-positive and pregnant women, couples or families to function more successfully in socially supportive relationships.

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### References

Akiyama, H., Antonucci, T., Takahashi, K., & Langfahl, E.S. (2003). Negative interactions in close relationships across the life span. *Journal of Gerontology*, 58B(2), 70–79.

Amaro, H. (1993). Reproductive Choice in Age of AIDS: Policy and Counselling Issues. In C. Squire (Ed.), *Women and AIDS: Psychological perspectives* (pp. 20–41). London: Sage Publications.

Aranda-Naranjo, B., & Davis, R. (2001). Psychosocial and cultural considerations. In J.R. Anderson (Ed.), *A guide to the clinical care of women with HIV* (pp. 275–287). Rockville, MD: Health Resources and Services Administrators, HIV/AIDS Bureau.

Bisschop, M.J., Kriegsman, D.M., Beekman, A.T., & Deeg, D.J. (2004). Chronic diseases and depression: The modifying role of psychosocial resources. *Social Science & Medicine*, 59, 721–733.

Carlson, C.R., Collins, F.L., Stewart, J.F., Porzelius, J., Nitz, J.A., & Lind, C.O. (1989). The assessment of emotional reactivity: A scale development and validation study. *Journal of Psychopathology and Behavioral Assessment*, 11(4), 313–325.

Cassel, J. (1974). Psychosocial processes and stress: Theoretical formulations. *International Journal of Health Services*, 4, 471–482.

Chou, F.-H. Avant, K.C. Kuo, S.-H. & Fetzer, S.J. (2007) Relationships between nausea and vomiting, perceived stress, social support, pregnancy planning, and psychosocial adaptation in a sample of mothers: A questionnaire survey. *International Journal of Nursing Studies*, doi:10.1016/j.ijnurstu.2007.08.004.

Coffman, S., Levitt, M.J., Deets, C., & Quigley, K.L. (1991). Close relationships in mothers of distressed and normal newborns: Support, expectancy confirmation, and maternal well-being. *Journal of Family Psychology*, 5(1), 93–107.

Cohen, S. (1988). Review: Psychosocial models of the role of social support in the etiology of physical disease. *Health Psychology*, 7, 269–297.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385–396.

Cohen, S., & Wills, T.A. (1985). Stress, social support and the buffering hypothesis. *Psychological Bulletin*, 98, 310–357.

Derogatis, L.R. (1993). *BSI: Brief Symptom Inventory: Administration, scoring and procedures manual*. Minneapolis, MN: National Computers System.

Fiori, K.L., Antonucci, T., & Cortina, K.S. (2006). Social network typologies and mental health among older adults. *Journal of Gerontology*, 61B(1), 25–32.

Glazier, R.H., Elgar, F.J., Goel, V., & Holzapfel, S. (2004). Stress, social support, and emotional distress in a community sample of pregnant women. *Journal of Psychosomatic Obstetrics & Gynecology*, 25, 247–255.

Gordillo, V. (1999). Trastornos Psicológicos y Aspectos Psicossociales. In V. Soriano & J. González-Lahoz (Eds.), *AIDS Manual* (3<sup>a</sup> edición, pp. 605–620). Madrid: IDEPSA.

Green, G. (1997). Stigma and social relationships of people with HIV: Does gender make a difference. In L. Sherr, C. Hankins, & L. Bennett (Eds.), *AIDS as a gender issue* (pp. 46–63). Washington, DC: Taylor & Francis.

Heaney, C.A., & Israel, B.A. (2002). Social networks and social support. In K. Glanz, B.K. Rimer, & F.M. Lewis (Eds.), *Health behavioral and health education: Theory, research and practice* (3rd ed) (pp. 185–209). San Francisco, CA: Jossey-Bass.



- Hough, E.S., Magnan, M.A., Templin, T., & Gadelrab, H.F. (2005). Social network structure and social support in HIV-positive inner city mothers. *Journal of the Association of Nurses in AIDS Care*, 16(4), 14–24.
- Kahn, R.L., & Antonucci, T.C. (1980). Convoys over the life course: Attachment roles and social support. In P.B. Baltes, & O.G. Grim (Eds.), *Life span development and behavior* (Vol. 3 (pp. 253–286). New York: Academic Press.
- Kalichman, S.C., Sikkema, K.J., & Somlai, A. (1996). People living with HIV infection who attend and do not attend support groups: A pilot study of needs, characteristics and experiences. *AIDS Care*, 8, 589–599.
- Leserman, J., Jackson, E.D., Petitto, J.M., Golden, R.N., Silva, S.G., & Perkins, D.O. (1999). Progression to AIDS: The effects of stress, depressive symptoms and social support. *Psychosomatic Medicine*, 61, 397–406.
- Levitt, M.J. (2005). Social relations in childhood and adolescence: The Convoy Model perspective. *Human Development*, 48, 28–47.
- Oliveira, C., Araújo Pedrosa, A., & Canavarro, M.C. (2005). Gravidez, Parentalidade e Mudança. Stress e Adaptação nos Processos de Transição para a Parentalidade. In A. Marques Pinto & A. L. Silva (Coords.), *Stress and well-being* (pp. 59–83). Lisboa, Portugal: Climepsi.
- Pakenham, K.I., Dadds, M.R., & Terry, D.J. (1996). Adaptive demands along the HIV disease continuum. *Social Science and Medicine*, 42(2), 245–256.
- Peek, M.K., & Lin, N. (1999). Age differences in the effects of network composition on psychological distress. *Social Science & Medicine*, 49, 621–636.
- Remor, E.A. (2002a). Valoración de la adhesión al tratamiento antirretroviral en pacientes VIH+. *Psicothema*, 14(2), 262–267.
- Remor, E.A. (2002b). Aspectos psicossociais na era dos novos tratamentos da AIDS. *Psicologia: Teoria e Pesquisa*, 18(3), 283–287.