

Self-Regulation and Wisdom
in Relationship Satisfaction

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Abstract

This thesis describes a program of research which aimed to explore the role of relationship self-regulation (or relationship “effort”) and wisdom in relationship satisfaction. Three separate studies were conducted to examine the association between self-regulation and satisfaction, and the mechanisms for this association. Study 1 examined self-regulation, wisdom and satisfaction, using a sample of 61 couples in long-term relationships, and found that while wisdom shared little association with satisfaction, self-regulation was a significant correlate of satisfaction for men and women. Study 2 examined whether the association between self-regulation and satisfaction was mediated by communication skills in a sample of 101 couples in the early stages of their relationship. Results replicated the self-regulation/satisfaction association found in Study 1, but provided no evidence for mediation by communication. Study 3 tested for mediation of the self-regulation/satisfaction association by attributions in a sample of 73 newly-wed couples. The association between self-regulation and satisfaction was partially mediated by attributions, but self-regulation also had a direct relationship with satisfaction. It was concluded that self-regulation is an important correlate of satisfaction in relationships, and that this association cannot be fully explained by communication or attributions. Several directions for future research were provided, including the need to examine self-regulation and its predictors longitudinally, ways in which a behavioural measure of self-regulation could be developed, and the implications of self-regulation for couple therapy.

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Statement of Originality

This work has not been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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CHAPTER ONE

The Importance of Satisfying Couple Relationships

“The supreme happiness of life is the conviction that we are loved.” (Victor Hugo)

"There is no more lovely, friendly, and charming relationship, communion, or company than a good marriage." (David Ben-Gurion)

“Keep love in your heart... The consciousness of loving and being loved brings a warmth and richness to life that nothing else can bring.” (Oscar Wilde)

Most people will marry or form long-term committed relationships sometime in their lives, and for many, these partnerships are considered to be the closest and most enduring personal relationships that life has to offer. The effects of a happy intimate relationship spill over into other parts of people’s lives, such as their health and general well-being. However, there is tremendous variability in relationship satisfaction - not all couples remain happy throughout their relationship, and some couples may even choose to terminate their relationship due to acute dissatisfaction.

The current program of research investigates the association of relationship satisfaction with two constructs: wisdom and relationship self-regulation. This thesis consists of seven chapters. The first three chapters review the existing literature on relationship satisfaction, wisdom, and self-regulation. The next three chapters each present a study conducted on the association of relationship satisfaction with wisdom or self-regulation. The final chapter integrates and discusses the empirical findings, and presents final conclusions.

This chapter aims to review the literature on couple relationships. First, the importance of satisfying relationships for well-being and physical health will be discussed. Those factors which have been shown to influence relationship satisfaction will be reviewed. Following this review, it will be concluded that there are some weaknesses in the existing couple relationship literature. The concepts of relationship wisdom and relationship self-regulation will be introduced, as ways of understanding how people might deal with relationship events (relationship wisdom) and how partners might invest effort in their relationship to maintain satisfaction (relationship self-regulation). The potential usefulness of wisdom and self-regulation for understanding couple relationship processes will be discussed, and the research program conducted to better understand how these concepts may expand our understanding of couple relationships, will be overviewed.

Satisfying Relationships and Life Satisfaction

It is well established that marriage is associated with greater subjective well-being and life satisfaction (for a review, see Diener, Suh, Lucas, & Smith, 1999), and this finding holds across different cultures and nations (e.g., Gove & Shin, 1989; Mastekaasa, 1995; White, 1992). Married people are generally happier than those who have never been married, or who are divorced, separated or widowed. The correlation between marital status and happiness remains even after controlling for other variables such as age and income (Glenn & Weaver, 1979), and marital status remains a better predictor of psychological functioning than race, education, social status, or childhood variables (Gove, Hughes, & Style, 1983).

Although the association between marital status and life satisfaction is robust, the causal direction of the association is unclear. Evidence supporting a bidirectional

association has been found, suggesting not only that happier people are more likely to marry, and stay married (Mastekaasa, 1992) but also that the state of marriage is likely to produce benefits such as support and an increase in overall well-being (e.g., Coombs, 1991; Gove, Style, & Hughes, 1990). Marriage tends to be associated with greater resistance to the negative effects of unfavourable life events (Gore, 1978; Waltz, Badura, Pfaff, & Schott, 1988).

There may also be gender and cultural differences which affect the association between marriage and happiness. For example, research suggests that marital status per se may benefit men more than women, with respect to generating more positive emotion (Acitelli & Antonucci, 1994; Diener, Sapyta, & Suh, 1998). However, it appears that marital quality is a better predictor of psychological well-being than marital status for men and women, and that this is particularly true for women (Depner & Ingersoll-Dayton, 1985). If a marriage is distressed, women tend to report more psychological problems than do husbands. Furthermore, women may be more sensitive to, and consequently more affected by, their husbands' perceptions of their relationship and their husbands' well-being (Quirouette & Pushkar-Gold, 1992).

Newer social trends (e.g., living together, a history of multiple marriages) and cultural differences (e.g., individualist versus collectivist cultures) may also influence the association between life satisfaction and marital status. As reviewed by Diener, et al (1999), living together tends to be associated with high life satisfaction in individualist cultures, but less so in collectivist cultures where more traditional customs apply. Furthermore, as people increasingly remarry and consequently have a history of multiple marriages and divorces, the happiness gap between married and never-married people may be reducing (Kurdek, 1991), reflecting the impact of new social trends. Overall, it

appears that although the relationship between marriage and life satisfaction may vary according to issues such as culture and gender, being happily married tends to exert a beneficial impact on life satisfaction.

Satisfying Relationships and Better Health

Both marital status and marital quality have positive associations with health outcomes. Specifically, the state of being married is in itself associated with a lower risk of mortality from a wide range of illnesses, compared with non-married people (Berkman & Syme, 1979; House, Robbins, & Metzner, 1982; Ren, 1997; Verbrugge, 1979). This may be due to married people being more likely to practise more positive health-related behaviours (e.g., exercise and eating breakfast) and fewer negative ones (e.g., smoking or drinking heavily) (Joung, Stronks, van de Mheen, & Mackenbach, 1995) than other marital status groups (e.g., non-married, separated and divorced). However, it is possible that these findings may be due to other factors, such as the possibility that people who have better health to begin with are more likely to be married, and that couples who divorce due to illness and stress reasons are consequently not included in studies of married couples.

Research indicates that a better predictor than marital status of health outcomes is the quality of marital interactions, and relationships have a key role to play in maintaining better health (Burman & Margolin, 1992). Marital dissatisfaction is a significant predictor of poor physical health (e.g., Adamson, Feinauer, Lund, & Caserta, 1992; Quirouette & Pushkar-Gold, 1992; Ren, 1997). Several studies have demonstrated a relationship between lower marital satisfaction in patients and spouses, and patients' perceptions of health problems (e.g., Waltz, Badura, Pfaff, & Schott, 1988; Kerns & Turk, 1984), such that patients and spouses who are maritally dissatisfied report more

health problems. The association between marital dissatisfaction and health problems may be particularly strong for women, who are more likely than dissatisfied husbands to report poor physical health (Levenson, Carstensen, & Gottman, 1993; Quirouette & Pushkar-Gold, 1992).

While the causal mechanisms for this relationship remain to be clearly established, there are a number of likely pathways through which marital quality might influence health. In addition to the possibility that happily married couples might encourage each other to practise health-related behaviours, changes in marital quality appear to exert direct physiological and immunological effects. For example, marital conflict produces specific physiological changes in partners (Burman & Margolin, 1992) in indices such as heart rate, pulse transmission time, skin conductance levels and general somatic activity. In general, expressions of negativity during a couple interaction have been associated with responses in these indices, and greater levels of conflict tend to produce greater physiological response. Some researchers have also found that levels of physiological response and arousal at Time 1 predicted a decline in marital satisfaction three years later (Levenson & Gottman, 1983, 1985). Marital conflict is also associated with an increase in blood pressure in people with essential hypertension (Ewart, Taylor, Kraemer, & Agras, 1991); and distressed couples are significantly more likely than non-distressed couples to experience more physiological arousal due to negative marital interactions (Burman & Margolin, 1992).

The quality of marital interaction has also been associated with immune functioning. Studies examining immunological response to marital interaction have found that lower reported marital quality significantly predicts poorer immune functioning on a range of qualitative immune measures (Kiecolt-Glaser, et al., 1987) for

both men and women (Kiecolt-Glaser, et al., 1988). These findings suggest that the positive support offered by a close marital partner may be important in maintaining immune functioning. Other psychoneuroimmunological studies with cancer patients have similarly highlighted the importance of support in reducing immunosuppression (e.g., Levy, 1986; Levy, Herberman, Lippman, & d'Angelo, 1987; Levy, et al., 1990), and the benefit of support may still apply even when the effects of self-care behaviours are statistically controlled (Andersen, et al., 1998). In sum, it appears that a satisfying, supportive marriage exerts positive effects on partners' psychological well-being and health.

The Influences on Relationship Satisfaction

Most relationships begin with both partners reporting high levels of satisfaction and fulfilment (Markman & Hahlweg, 1993), a phase popularly known as the 'honeymoon phase'. Over the early years of marriage, many couples experience a decline in marital satisfaction from the very high levels initially experienced (Kurdek, 1999). Some couples are able to maintain satisfaction throughout life transitions they experience, while other couples are not, and experience lowered satisfaction and potentially higher levels of conflict within their relationship (Bradbury, 1998). Point prevalence studies of relationship satisfaction generally indicate that if people are asked if they are happy in their relationship at any given time, they will state that they are happy. For example, in the Marriage in Oklahoma study (Johnson, et al., 2002), the vast majority of married Oklahomans are more likely to say that they are very happily married, even more so than are most couples nationally in the United States. However, lifetime statistics show that 35 to 40% of couples will divorce (De Guibert-Lantoine & Monnier, 1992), depending on their country of residence. Another significant number of people

will report that they are distressed within their relationship, but will stay together anyway (Gallup, 1989). The difference between point prevalence and lifetime prevalence statistics suggests that at some time in many relationships, marital satisfaction can slip into decline, often leading to divorce.

The path of a couple's satisfaction over time is known as the trajectory of relationship satisfaction, and has been the focus of some research aiming to identify the factors which longitudinally influence satisfaction. Karney and Bradbury (1995) provided a useful model of how these factors might affect relationship satisfaction and stability. This model brought together the available evidence on relationship satisfaction, demonstrating that individual enduring vulnerabilities or characteristics (e.g., family-of-origin experiences, psychological conditions), stressful events (e.g., the transition to parenthood, unemployment), and couple adaptive processes (e.g., communication behaviours), interact to produce a couple's level of marital quality, and subsequent marital stability. Halford (2001) later extended this model to include the concept of relationship context, or the broader macro-level, societal influences operating on the couple.

Several factors have been identified in longitudinal research which contribute predict the trajectory of relationship satisfaction. One couple adaptive process which predicts future relationship satisfaction is communication (Karney & Bradbury, 1997; Kelly, Huston, & Cate, 1985; Markman, 1981). Specifically, more positive communication behaviours during marital interaction in newly-wed couples, or couples just prior to their marriage, predict higher future marital satisfaction, at least up to five and a half years later. However, positive communication behaviours are not significantly associated with marital satisfaction early in the relationship (e.g., Sanders, Halford, &

Behrens, 1999). This finding suggests that while positive communication is not especially important in relationship establishment, it is an important factor in ongoing relationship maintenance. Related to positive communication is the extent of partners' engagement in conflict, when conflict occurs. There is some evidence that disengagement is predictive of later poorer marital quality. Smith, Vivian, & O'Leary (1990) found that couples' disengagement in conflict prior to marriage predicted lower marital satisfaction after 18 and 30 months of marriage. In a similar vein, Gottman and Krokoff (1989) found that couples' engagement in conflict predicted lower satisfaction in the short-term, but higher satisfaction in the long-term. However, it should be noted that Gottman and Krokoff measured relationship satisfaction at only one point in time, so these results need replication (Jacobson, 1990).

Individual characteristics such as neuroticism and depression have also been examined in relation to the longitudinal trajectory of relationship satisfaction, but findings are more mixed. While both neuroticism and depression are associated with lower marital quality cross-sectionally, there is some evidence for a link between depression and satisfaction longitudinally (e.g., Fincham, Beach, Harold, & Osborne, 1997) but mixed evidence for a causal link between neuroticism and marital quality longitudinally (Karney & Bradbury, 1997; Kelly & Conley, 1987; Kurdek, 1998). At most, neuroticism seems only predictive of the initial status of the trajectory, rather than its subsequent path.

A number of factors cross-sectionally associated with relationship satisfaction have also been identified, and Karney and Bradbury's (1995) overall framework will be adopted here to review these factors.

Relationship Context

The context in which a relationship exists can influence relationship satisfaction on a number of levels, from the macro level (e.g., cultural or social influences) to the micro level (e.g., the presence or absence of supportive family or friends). For example, on the macro level, cultural expectations or structures may apply such that higher levels of marital conflict need not necessarily be associated with marital dissatisfaction. A cross-cultural study comparing distressed and non-distressed German and Australian couples found that non-distressed German couples' interactions were characterised by higher levels of conflict, which were typical of the interactions of Australian distressed couples (Halford, Hahlweg, & Dunne, 1990). This study suggested that expressed conflict may be more acceptable in the German cultural context than in the Australian context, pointing to the influence of context on relationship satisfaction.

Some cultures have higher divorce rates than others. For example, approximately 55% of American marriages end in divorce, compared with 37% of German marriages (De Guibert-Lantoine & Monnier, 1992). A number of reasons could contribute to differences in divorce rates, including the extent to which a culture is individualist in nature (i.e., the extent to which its people seek their personal goals and desires above those of others), the religious acceptability of divorce, or broader social or economic issues. However, clearly some element exists in the American cultural context which seems to place American marriages at higher risk for divorce than marriages in other cultures. While divorce rate is a somewhat crude measure of relationship distress, since people who are distressed may remain married for traditional or religious reasons, it does provide a rudimentary indication that relationships may be more satisfying in some cultures than in others.

At a more micro level, other contextual variables can affect relationship satisfaction. For instance, the extent to which a partner's workplace implements more family-friendly work practices (e.g., greater flexibility, parental leave etc) is likely to impact positively on relationship satisfaction through ways such as reducing partners' long absences from home, or lowering excessive role strain (Thompson, 1997). Furthermore, the presence or absence of supportive friends and family around the relationship may also affect relationship satisfaction. Talking to people outside the relationship about relationship problems is not necessarily associated with better marital adjustment, as too many people may begin to influence the relationship and may develop solutions to problems which are not necessarily in the other partner's best interests (Julien & Markman, 1991). In sum, the context surrounding a relationship, on both macro and micro levels, can be an important influence on relationship satisfaction.

Individual Characteristics

Individual partners bring a number of stable demographic, historical, personality and experiential characteristics with them into a relationship (Bradbury, 1995), some of which are likely to impact on subsequent relationship satisfaction. Key characteristics which have been identified as being likely to impact on relationship functioning and satisfaction include family-of-origin experiences, personality variables including attachment style, and psychological disorder.

Partners with problematic family-of-origin experiences, including a history of parental divorce or violence, are more likely to have more relationship complaints, suffer relationship problems, and endure subsequent divorce themselves (Amato & Keith, 1991; Glenn & Kramer, 1987; Overall, Henry, & Woodward, 1974; Rodgers, 1990; Vaillant & Vaillant, 1990). Partners with a domestically violent parent or parents are more likely to

be in an aggressive relationship as an adult (Widom, 1989). People from a divorced family-of-origin background generally display deficits in communication skills and conflict management skills as adults (Franz, McClelland, & Weinberger, 1991; Koestner, Franz, & Weinberger, 1990) including before marriage (Halford, Sanders, & Behrens, 2000), and tend to hold more negative expectations of marriage (Black & Sprenkle, 1991; Franklin, Janoff-Bulman, & Roberts, 1990; Gabardi & Rosen, 1991). It is possible that these behaviours may have been learned through observation of their parents' relationship, and as adults the behaviours are maintained in their own intimate relationships, leading to relationship problems.

A number of personality variables have been proposed to influence relationship satisfaction. Most of these have contributed little variance with the exception of neuroticism and attachment style. Neuroticism refers to chronic negative affectivity, or the inability to regulate negative affect. High levels of neuroticism predict an increased risk for relationship problems and divorce (Davila, Bradbury, & Fincham, 1998; Karney & Bradbury, 1995; Kelly & Conley, 1987; Marco & Suls, 1993). Partners who begin their relationship with a high level of neuroticism tend to report lower marital satisfaction, although there is mixed evidence for the longitudinal association between neuroticism and satisfaction (Karney & Bradbury, 1997).

Attachment style refers to the nature of people's internal working models, or schemata, about intimate relationships (Ainsworth, Bell, & Stayton, 1971; Bowlby, 1969). Based on the consistency, closeness and availability of their primary caregiver as a child (usually the mother), children develop an attachment to their caregiver which is typically characterised as secure or insecure. A secure attachment involves comfort with closeness and anxiety on separation; whilst insecure attachments can involve avoidance

of closeness and lack of distress on separation, or ambivalent reactions to closeness and separation. This developmental childhood theory has been extended to adult relationships and adults' comfort with intimacy (Hazan & Shaver, 1987) with an acknowledgement that adult romantic love also involves reciprocal caregiving and sexual behaviour, elements not included in the original theory. Research suggests that adult partners who are comfortable with closeness in their relationships generally have higher levels of relationship satisfaction (Feeney, 1994; Feeney, Noller, & Callan, 1994; Fuller & Fincham, 1995), and partners who are highly anxious that they will be abandoned in their relationship tend to be less satisfied (Feeney, 1994; Feeney, Noller, & Callan, 1994). Securely attached partners are also less likely to divorce or separate (Hazan & Shaver, 1987; Kirkpatrick & Hazan, 1994).

Past or present psychological disorder is a final major individual characteristic that is generally associated with relationship dissatisfaction. Partners with alcohol abuse, depression, severe psychiatric disorder and some anxiety disorders are at much higher risk than others for relationship problems and subsequent divorce (Emmelkamp, De Haan, & Hoogduin, 1990; Halford, 1995; Halford & Osgarby, 1993; O'Farrell & Birchler, 1987; Reich & Thompson, 1985; Ruscher & Gotlib, 1988; Weissman, 1987). There is evidence that depression longitudinally predicts lower relationship satisfaction, and that lower satisfaction predicts the onset of depression (Fincham, Beach, Harold, & Osborne, 1997). There are also personal factors which predispose partners to both relationship problems and to specific psychological problems, such as alcohol abuse (Halford & Bouma, 1997). For example, deficiencies in communication skills and in controlling negative affect are predictive of both the onset of alcohol abuse (Block, Block, & Keyes, 1988) as well as relationship problems (Karney & Bradbury, 1995). In

sum, individuals bring specific experiences and characteristics into a relationship. Some of these are likely to influence relationship satisfaction positively (e.g., a secure attachment style) whilst others may have deleterious effects on satisfaction (e.g., individual psychopathology, or divorce in the family of origin).

Life Events

In addition to the broader relationship context and individuals' own characteristics, what actually happens to the couple can influence relationship satisfaction. Both major life events as well as an accumulation of minor life events can lead to less satisfaction. For example, two diary-based studies of couples found that couples were more likely to have marital problems on more stressful days, and that problems were also more likely to occur on weekdays rather than on weekends (Bolger, DeLongis, Kessler, & Wethington, 1989; Halford, Gravestock, Lowe, & Schledt, 1992). This finding suggests that an accumulation of the minor day-to-day stresses or hassles may set up an environment where couples are more stressed and consequently more likely to have problems.

Major life events can also lead to relationship difficulty and impede satisfaction. For example, one partner developing a health problem can put a couple at risk for increased relationship and sexual problems (Schmaling & Sher, 1997). The experience of becoming unemployed has been associated with an increased number of negative marital interactions for blue-collar workers (Aubry, Tefft, & Kingsbury, 1990), as has an increased workload in air traffic controllers (Repetti, 1989). Key life transitions, such as the transition to parenting and retirement, are often associated with a decrease in relationship satisfaction (Cowen & Cowen, 1992). Life transitions often necessitate large changes in roles which can impact on satisfaction. For example, women whose husbands

have recently retired from work often report significantly decreased marital satisfaction due to perceived inequity over domestic chores (e.g., Myers & Booth, 1996; Pina & Bengtson, 1995; Szinovacz, 1996). New parents typically have to renegotiate household roles and often cope with role strain from juggling work roles with parenting roles (Belsky, 1990; Rollins & Galligan, 1978; Sanders, Nicholson, & Floyd, 1997). Taken together, these findings suggest that both major and minor life events may increase the chances of couples experiencing problems and possibly a decline in relationship satisfaction.

Couple Interaction

A final major component of relationship satisfaction is the nature of a couple's interaction. Research has identified specific behavioural, cognitive and affective interactional processes that typify satisfied and dissatisfied couples and influence relationship satisfaction. For example, when interacting with their partners, even in a conflict situation, non-distressed partners exhibit more positive behaviours than distressed partners, including more approval, humour, empathy, problem solving, smiling and positive non-verbal behaviours (Gottman, 1994; Weiss & Heyman, 1997). Satisfied couples also tend to have an unrealistically positive view of their partners and their relationships (Flowers, Applegate, Olson, & Pomerantz, 1994), and they tend to selectively recall the positive aspects of the relationship interaction (Halford & Osgarby, 1996). These couples also tend to overlook negative behaviours by their spouses (Gottman, Markman, & Notarius, 1977; Notarius, Benson, Sloane, Vanzetti, & Horyak, 1989).

In contrast, distressed couples display a range of communication deficiencies and cognitive biases. Distressed couples' interactions are usually characterised by higher

levels of hostility and criticism (Christensen & Shenk, 1991; Gottman, 1994; Gottman & Krokoff, 1989; Halford, Hahlweg, & Dunne, 1990; Heavey, Christensen, & Malmuth, 1995; Notarius & Markman, 1993), withdrawal (Christensen & Shenk, 1991; Gottman, 1994; Halford, Gravestock, Lowe, & Scheldt, 1992; Heavey, Christensen, & Malmuth, 1995) and a lack of active listening (Halford, Hahlweg, & Dunne, 1990; Jacobson, McDonald, Follette, & Berley, 1985; Weiss & Heyman, 1990). Negative interaction between partners is negatively associated with relationship quality and positively associated with divorce potential (Stanley, Markman, & Whitton, 2002), and there is some evidence that this association is particularly strong for men (Schilling, Baucom, Burnett, Allen, & Ragland, 2003; Stanley, et al., 2002). Additionally, there is some evidence that disengagement from conflict predicts later poorer marital quality, at least in the short term (Gottman & Krokoff, 1989; Smith, et al., 1990), although these studies need replication.

Cognitively, distressed couples selectively attend to and recall their partners' negative behaviours (Eidelson & Epstein, 1982; Floyd & Markman, 1983; Halford & Osgarby, 1996; Jacobson & Moore, 1981), hold unrealistic beliefs about relationships and about their partner (Baucom & Epstein, 1990; Baucom, et al., 1996; Eidelson & Epstein, 1982), tend to attribute relationship problems to stable internal and negative characteristics of their partner (Bradbury & Fincham, 1990; Fincham & Bradbury, 1992), and expect negative outcomes from interaction with their partner (Vanzetti, Notarius, & NeeSmith, 1992). These findings are robust and suggest that there are a number of specific behavioural and cognitive processes that couples carry out which can increase or decrease their relationship satisfaction.

Directions for Research in Couple Relationships

The literature reviewed above has highlighted that satisfying couple relationships are important for people's personal and physical well-being and satisfaction, and that we know of a number of factors which are reliably associated with higher and lower levels of satisfaction. For example, constructive communication behaviours and benign partner attributions are very robust correlates of higher relationship satisfaction (e.g., Bradbury & Fincham, 1990; Fincham, Harold, & Gano-Phillips, 2000; Halford, et al., 1990). Consistent with our current understanding of behaviours and processes associated with higher satisfaction, we have developed a number of intervention strategies to assist couples either regain, or maintain, relationship satisfaction.

Most couple interventions have attempted to bring about changes in couples' relationships either when the relationships are distressed (i.e., from a 'treatment' perspective) (e.g., Epstein, Baucom, & Daiuto, 1997) or alternatively, when the relationship is currently satisfactory, but at risk of future distress (i.e., from a 'prevention' perspective) (e.g., Berger & Hannah, 1999; Fraenkel & Markman, 2002; Halford, Sanders, & Behrens, 2001). Many of these types of interventions focus on skills training, that is, providing couples with the types of communication, problem-solving and conflict resolution skills which have been shown to correlate with higher satisfaction. For example, key therapeutic techniques used in many couple interventions are cognitive-behavioural in nature (e.g., Epstein, 2001; Epstein & Baucom, 2002; O'Farrell, 1993). In behavioural interventions, the therapist identifies sources of deficits in couples' interactional skills, and implements training with the couple to teach them appropriate skills so that they will implement the skills in future interactions. In cognitive interventions, therapists will work with the couple to identify partners' unhelpful or faulty

thinking processes, such as persistent blaming attributions. Training to help partners identify and correct their thinking is often provided, again with the intention that skills will be transferred to the home environment.

Empirical research into the effectiveness of couple interventions has led to a substantial evidence base (Epstein, 2001; Halford, 1998; Lebow, 2000). At this stage, empirically supported approaches to couple therapy are behavioural, cognitive and cognitive-behavioural therapy, emotion-focused and insight-oriented couple therapy, and self-regulatory couple therapy (Halford, 2001). While cognitive-behavioural, emotion-focused and other types of therapy or training work modestly well with couples some of the time, they are not consistently effective for all couples. For some couples, although therapists may be relatively effective in changing partners' attributions, or in building more constructive communication skills, partners' self-reported satisfaction does not improve (Halford, 1998).

This lack of consistent effectiveness of some types of couple intervention suggests that perhaps more is needed than simply a set of new or improved relationship skills. At this point, there is little compelling evidence to suggest that teaching communication skills or correcting faulty attributions will, in isolation, always result in improved satisfaction. While good interactional skills are probably helpful, meta-skills such as knowing when such skills are needed and how to apply the skills to novel situations may be a critical element in the success of couple interventions. Partners who possess the meta-skills to evaluate their relationship, evaluate what skills or tasks are needed, and evaluate their effectiveness, may be better equipped in the longer-term than partners who have simply learnt a set of communication skills in isolation. The construct of relationship self-regulation was developed as a way to understand the importance of

partners' meta-skills (Halford, Sanders, & Behrens, 1994). As will be discussed more fully in Chapter 2, relationship self-regulation refers to the extent to which partners make efforts to evaluate and make changes in their relationship to bring about improvement. Central to the idea of self-regulation are partners' meta-skills of self-appraisal, self-directed goal setting, self-implementation of change and self-evaluation of change efforts (Halford, et al., 1994). A key question awaiting exploration is whether relationship self-regulation is associated with higher satisfaction, and if so, how this association may come about.

A second limitation of the current research on couple relationships is that most of the examined factors influencing satisfaction tend to focus on the process of problem-solving or the processes underlying relationship dissatisfaction. For example, the body of research which has examined the role of couple interpersonal processes is large. Less research has systematically examined the nature of problems which couples confront, and the content of these problems. While there is good evidence for an association between poor interpersonal skills and dissatisfaction, it may also be that couples who are more dissatisfied have to deal with more difficult issues. For example, a number of research studies have identified that partners in second or third marriages, commonly stepfamilies, break up more frequently than other types of family structures (Booth & Edwards, 1992; Bumpass & Sweet, 1985; White & Booth, 1985; Whitsett & Land, 1992). What is currently less clear is whether this higher rate of relationship dissolution is due to these couples having poorer interpersonal skills, or due to their having to wrestle with harder problems, such as ongoing custody negotiations with previous partners, financial problems, or relationship problems between step-children and step-parents (e.g., Arnaut, Fromme, Stoll, & Felker, 2000; Beaudry, Parent, Saint-Jacques, Guay & Boisvert, 2001).

It is possible that some couples bring better content knowledge with them to their relationships than others, potentially equipping them to anticipate likely relationship events and deal with them better when they occur. Some partners may have a better understanding than others of the typical issues and problems confronted in relationships, and this content knowledge may mean that they cope better with life events. A number of researchers have suggested that people's knowledge about life events can be captured by assessing their 'wisdom-related knowledge' (e.g., Baltes & Smith, 1990; Baltes & Staudinger, 2000; Staudinger & Baltes, 1994). As discussed more fully in Chapter 3, wisdom-related knowledge refers to a person's expert knowledge system in fundamental life issues (Baltes & Staudinger, 1993). Based on this framework, when confronted with a life event, a person who is 'wise' will have more knowledge and experience to draw on to deal with the event. The person will consequently think about the event more deeply and more broadly, as well as considering the event from a number of perspectives.

It may be that this kind of rich knowledge about typical events in a relationship is important for partners to have, at least to some degree. For example, couples are likely to cope better with the transition to parenthood if they have some idea of typical challenges to expect, such as sleep loss, financial strain or role changes. Couples where one partner is made redundant may manage better if partners understand the context surrounding the redundancy, and are able to devise a number of strategies to help the partner find work. Wisdom-related knowledge, as it relates to close relationships, has not been explored, and therefore it would be useful to address whether this type of knowledge would be beneficial to relationship happiness. These issues will be explored further in Chapter 3.

CHAPTER TWO

Relationship Self-Regulation and Couple Satisfaction

“A good marriage is one which allows for change and growth in the individuals and in the way they express their love.” (Pearl Buck, 1892-1973).

“Good marriages don’t just happen – they take a lot of love and a lot of work.” (Tipper Gore, *Life*, February 1999).

“Life happens and where does the magic go? Can it be revived? Yes, but it takes more than magic. It takes work; it takes time.” (Arp & Arp, 2001, p.118).

“The development of a really good marriage is not a natural process. It is an achievement.” (David & Vera Mace).

It is commonly believed in western society that successful intimate relationships require effort by both partners. The idea of relationship effort, or ‘working at the relationship’, typically calls upon concepts of partners’ paying attention to processes within their relationship, and effectively taking actions to bring about constructive changes. This chapter aims to evaluate how relationship effort may be associated with couple satisfaction in both short- and long-term relationships.

As discussed in Chapter 1, the average trend in most couples is for decreased relationship satisfaction across time. However, there is tremendous variability among couples in the satisfaction trajectory. Many couples maintain high levels of satisfaction from early in their relationship onwards, while others do not (Karney & Bradbury, 1995). Some recent research into this variability has focused on the idea of relationship effort as

a process by which individual partners pay attention to their relationship, monitor relationship changes or events, and take action to bring about constructive change.

The Concept of Self-Regulation

The notion of relationship self-regulation was first proposed by Halford, Sanders and Behrens (1994) as a useful way of conceptualising partners' efforts in working on their relationship. The idea of self-regulation has a long history within psychology, stemming from detailed formulations of self-control phenomena and the role of self-generated events in regulating human behaviour (Bandura, 1977; 1986; Catania, 1975; Karoly, 1993; Mahoney & Thoreson, 1974; Skinner, 1953).

Self-regulation specifically focuses on how people can influence their own behaviour, and while it is acknowledged that self-generated behaviours and external influences are often interdependent, it is assumed that individuals possess the capacity to control and adjust (i.e., regulate) their own behaviours. The most inclusive definition of self-regulation was offered by Karoly (1993, p.25), who was a pioneer in the field of self-regulation:

“Self-regulation refers to those processes, internal and/or transactional, that enable an individual to guide his/her goal-directed activities over time and across changing circumstances (contexts). Regulation implies modulation of thought, affect, behaviour, or attention via deliberate or automated use of specific mechanisms and supportive meta-skills. The processes of self-regulation are initiated when routine activity is impeded or when goal directedness is otherwise made salient (e.g., the appearance of a challenge, the failure of habitual action patterns, etc).”

This definition suggests that self-regulatory processes are embedded in a social context which not only provides opportunities and restrictions on self-directedness, but

also proposes a dynamic mutual exchange between the external and internal determinants of human motivation.

Halford, et al. (1994) suggested that relationship self-regulation is comprised of four central metacompetencies: self-appraisal, self-directed goal setting, self-implementation of change, and self-evaluation of change efforts. Self-appraisal of relationship functioning involves being able to describe relationship functioning, and the influences on that functioning, in a constructive manner promoting maintenance and enhancement of the relationship. In other words, self-appraisal involves being able to analyse adaptive processes in a relationship in terms of one's helpful and unhelpful cognitions, affect and behaviour. Self-appraisal of the relationship also includes being able to identify contextual factors and life events which influence the relationship. Examples of poor skills in relationship self-appraisal are the common behaviours of distressed partners, who ignore the impact of contextual factors or life events on their relationship, instead focusing on partner-blaming attributions for relationship problems (Bradbury & Fincham, 1990).

Self-directed goal setting involves each partner being able to identify specific, actionable goals for making changes in one's own behaviour, based on their self-appraisal of their relationship functioning. Self-implementation of change is the process by which each partner makes attempts to implement their goals, with the aim of changing future relationship processes. Finally, self-evaluation refers to the process by which the partner appraises the extent to which desired goals were achieved, and the extent to which these goals produced the desired relationship changes.

The Measurement of Relationship Self-Regulation

The Self-Regulation for Effective Relationships scale (SRERS) is a 19-item self-report scale of behavioural self-regulation in couple relationships (Wilson, Halford, Lizzio, Kimlin, Iselin, & Moore, 2003), and has high internal consistency and reliability. The scale is comprised of statements tapping partners' relationship appraisal, goals and strategies. Examples of statements include, "I am clear about the type of relationship I want to have with my partner," and "I tend to put off doing anything about problems in our relationship in the hope that things will get better by themselves."

Wilson et al. (2003) examined the concurrent correlation between SRERS self-regulation and couple satisfaction as measured by the Dyadic Adjustment Scale (DAS; Spanier, 1976). Results indicated that the three subscales of the SRERS were all significant in predicting DAS scores ($p < .001$), and in total accounted for about 36% of the variance in DAS. SRERS scores were also a significant predictor of change in DAS across the first year of marriage, although only accounting for about 10% of the variance in both genders. However, as satisfaction levels were high in the newly-wed couples, and changes across the first year of marriage were modest, the variance explained is probably limited by the restricted range of scores.

The Distinctiveness of Relationship Self-Regulation

Relationship self-regulation, as measured by the SRERS, appears to be a distinct construct from other established constructs in the couple literature. Wilson et al. (2003) examined the convergent and divergent validity of the SRERS, correlating it with intelligence, five key personality variables (neuroticism, extraversion, conscientiousness, agreeableness, and openness), emotional intelligence, mood, and general self-regulation. Wilson et al. hypothesised that there should be little relationship between the SRERS and

mood, intelligence and personality. Results were consistent with this hypothesis. Wilson et al. also hypothesised that to show evidence of convergent validity, the SRERS should correlate moderately with the related constructs of general self-regulation and emotional intelligence. Results also supported this hypothesis.

To date, therefore, the SRERS appears to be a useful tool in assessing partner's self-regulation within their relationship. It is reliably associated with satisfaction, at least in couples in the early stages of their relationship, and cannot be fully explained by other established constructs such as personality or intelligence.

Relationship Self-Regulation in the Clinical Context

Assuming that relationship self-regulation significantly impacts on relationship outcomes, teaching self-regulatory skills may be beneficial to the relationships of some couples. Those couples who may benefit most from improved self-regulation skills probably would be those at high risk of developing future relationship problems, as well as couples currently experiencing relationship problems (Halford, Wilson, Lizzio, & Moore, 2002). Couples at high risk of relationship problems are typically those where the woman's parents divorced, or the man's parents were violent towards each other (Halford, Sanders, & Behrens, 2000; Sanders, Halford, & Behrens, 1999). Self-regulatory couple therapy could benefit couples currently experiencing relationship problems for two reasons. First, many distressed partners tend to inaccurately attribute the causes of their relationship problems to their partners' behaviours (Bradbury & Fincham, 1990; Fincham & Bradbury, 1992). This can lead to distressed partners feeling relatively powerless to change their relationship (Vanzetti, Notarius, & NeeSmith, 1992). Providing self-regulatory skills may encourage the partner to make constructive changes and alter his/her own behaviours. Second, providing such an intervention would give

distressed partners the self-change skills needed to enhance their relationship in the future (Halford, et al., 2002).

Halford and his colleagues (Halford & Moore, in press; Halford, Sanders, & Behrens, in press) have developed two different relationship education programs incorporating a self-regulation focus. These programs present educational information concerning goal setting, communication, intimacy, conflict management, sexuality and change management (Halford, in press). In the Self-Regulation Positive Relationship Education Program (Self-PREP), relationship education is provided in face-to-face groups. In the Couple Commitment and Relationship Enhancement Program (Couple CARE), similar content is provided, but the method of delivery is flexible and self-directed.

In the Self-PREP intervention, engaged couples were stratified into high- and low-risk for distress groups, based on negative family-of-origin experiences. Couples were then randomly assigned to either the Self-PREP program or a discussion and information control condition (Halford, et al., in press). Results examining relationship satisfaction outcomes suggested that high-risk couples receiving Self-PREP sustained high relationship satisfaction significantly better than high-risk couples in the control condition. However, in the low-risk couples, there was no evidence of increased benefits of Self-PREP over the control condition. These results suggested that Self-PREP was differentially more useful for high-risk couples than for low-risk couples. However, a limitation of this program was that partners' self-regulation was not directly assessed, so the effects of Self-PREP on self-regulation could not be determined.

Couple CARE is currently being evaluated as a controlled trial. Preliminary results of 34 satisfied couples who were assessed on self-regulation using the SRERS

before and after the program, suggest benefits of Couple CARE on self-regulation. Self-reported self-regulation increased across the course of the program, for both men and women. In ongoing research, Couple CARE is being evaluated in a randomised controlled trial, and early results have shown that self-regulation increased significantly more in the Couple CARE group than in a wait-list control group (Halford, et al., 2002).

Summary of Research into Relationship Self-Regulation

Taken together, research to date suggests that relationship self-regulation is an important correlate of satisfaction. It has been reliably associated with relationship satisfaction across several samples of couples in the early stages of their relationship, and its effects cannot be fully explained by other variables such as intelligence, personality or mood. Support has been found for the psychometrics of the SRERS, which shows good reliability, as well as convergent and divergent validity. The application of relationship self-regulation ideas to relationship education programs has shown promising results in satisfaction and self-regulation skills.

Directions for Research in Relationship Self-Regulation

Several key questions remain to be answered concerning relationship self-regulation. First, the work of Wilson et al. (2003) showed a moderate association between self-regulation and relationship satisfaction. However, the sample used to examine this association was comprised of newly-wed couples, who generally have higher levels of relationship satisfaction than couples in longer relationships. As a result, we do not know whether relationship self-regulation is equally important for couples in longer-term relationships. This issue is important to address, since a reliable association between self-regulation and satisfaction in long-term couples would support the importance of the relationship self-regulation construct.

Second, assuming that a reliable association is found, through what mechanism might self-regulation be linked to satisfaction? One possibility is that partners' communication skills mediate the association between relationship self-regulation and satisfaction. The role of communication skills in predicting satisfaction levels is well established, and has been consistently replicated in the couple literature. Couples with lower levels of criticism, negating, withdrawal and negative affect are generally more satisfied in their relationships (Christensen & Shenk, 1991; Halford, Hahlweg, & Dunne, 1990; Heavey, Christensen, & Malmuth, 1995). Conversely, happier couples tend to display more positive behaviours, such as approval, humour, empathy and smiling (Gottman, 1994; Weiss & Heyman, 1997). It is possible that partners who can self-regulate better are more aware and have more control over their communication behaviours, making more efforts to speak and listen positively. More positive communication behaviours would likely lead to greater satisfaction. This possibility of communication potentially mediating the self-regulation/satisfaction association has not yet been tested. Demonstrating that self-regulation is not merely an artefact of the association between communication and relationship satisfaction would represent an important contribution to understanding the role of self-regulation in couples' relationships.

A second possibility is that partners' cognitive attributions about each other's behaviour may mediate the association between relationship self-regulation and satisfaction. Broadly, attributions refer to the cognitive explanations partners make about each other's behaviours. It is well established, and has been consistently replicated that negative, blaming attributions are associated with, and predict longitudinally, lower relationship satisfaction, independently of other key variables, such as mood (e.g.,

Bradbury & Fincham, 1990; Fincham & Bradbury, 1993; Fincham, Harold, & Gano-Phillips, 2000). This robust association has been demonstrated repeatedly using different samples (e.g., Bradbury, Beach, Fincham, & Nelson, 1996; Byrne & Arias, 1997; Fincham, Bradbury, Arias, Byrne, & Karney, 1997; Johnson, Karney, Rogge, & Bradbury, 2001) and within different cultures (e.g., Stander, Hsiung, & MacDermid, 2001). Support for causal links between negative attributions and lower satisfaction has also been found (e.g. Fincham & Bradbury, 1988). If self-regulation were associated with satisfaction beyond the variance accounted for by cognitive attributions, evidence would be found for the unique importance of self-regulation in understanding partners' satisfaction. In addition, blaming a partner tends to shift the focus away from oneself and one's own actions onto the partner. Ultimately, this places the blaming person in a position of demanding change from his/her partner. A more constructive approach would be for a partner to examine and modify his/her own behaviours, which is the essence of self-regulation. Making more effort and focusing on their own behaviour changes may lead partners to make fewer blaming attributions about their spouse. This possibility of attributions mediating the association between self-regulation and satisfaction needs to be tested.

CHAPTER THREE

Wisdom and Relationship Satisfaction

“Wisdom is knowledge which has become a part of one’s being.” (Orison Swett Marden)

“The art of being wise is the art of knowing what to overlook.” (William James)

“A loving heart is the truest wisdom.” (Charles Dickens)

To become wise by the end of a lifetime is often seen as having reached the pinnacle of the human existence. Wisdom is viewed by many as a rare quality involving exceptional insight into what it means to be human, and wise people are frequently sought for their knowledge and capacity to give advice to others. This review explores the concept of wisdom as it may apply to processes within close relationships, and suggests that relationship-based wisdom may be a key contributing factor to relationship happiness and satisfaction.

The Link Between Wisdom and Relationship Satisfaction

The research described in Chapter 1 points to a range of different influences on relationship satisfaction: relationship context, individual characteristics, life events, and couple interaction processes. It is possible that the extent to which people recognise and use these different classes of influences on relationships might be reflected in how much wisdom they have about relationships, and their own relationship in particular. For example, given that some people seem to be able to recognise contextual factors operating in their relationships more easily than others can, perhaps these people are displaying a higher level of relationship wisdom in being able to think about their relationship in contextual terms. In this chapter, I turn to examining the concept of

wisdom. I firstly define it, explain how it can be measured reliably, and then focus on the possible links between wisdom and people's cognitions and behaviours in close relationships. Overall, I suggest that people's wisdom about their own relationships could be a useful construct to assess, given that it could be predictive of their relationship behaviours, and ultimately their relationship satisfaction.

The Importance of Wisdom in Couple Relationships in Older Age

The Concept of Wisdom

Wisdom is a notion that has roots in tradition, culture and philosophy (Csikszentmihalyi & Rathunde, 1990; Robinson, 1990). The presence of wisdom is typically associated with having exceptional insight and reasoning ability, especially into the nature of the human condition. Wisdom is generally understood to develop more towards the end of people's lives, because it is seen as being tied to having had rich life experience. A person considered wise towards the end of life is thought to have reached the pinnacle of a good life (Baltes & Staudinger, 2000; Kekes, 1995).

Research attempting to investigate the nature of wisdom and the processes it involves can be divided into two general categories: implicit theories and explicit theories of wisdom (Sternberg, 1990). Studies trying to develop implicit theories of wisdom typically focus on people's common sense views of wisdom (Baltes & Staudinger, 2000), or a folk understanding of what wisdom means. This line of research aims to identify what most people perceive as wisdom or the processes used by people deemed to be wise. In contrast, explicit theories of wisdom are usually derived by psychologists or other scientists (Sternberg, 1990). This approach involves developing theoretical models of wisdom which lend themselves to empirical enquiry, so that

wisdom can actually be measured based on expressions of wise behaviours (Baltes & Staudinger, 2000).

Both implicit and explicit theories of wisdom have offered considerable insight in terms of defining the nature of wisdom. A line of implicit theory research was initiated by Clayton and her colleagues (e.g., Clayton, 1975; Clayton, 1982; Clayton & Birren, 1980), which involved identifying words which might be associated with wisdom using multidimensional scaling procedures and participant samples from different age groups. In one study (Clayton, 1975), words that were scaled included experienced, pragmatic, understanding and knowledgeable. Across the age groups, it was found that two dimensions of wisdom consistently emerged, described as an affective dimension and a reflective dimension, as well as a suggestion of a dimension associated with age.

Sternberg (1985, 1986) has also conducted considerable implicit theory research in wisdom. In one study, four experiments and a pre-study are described which aimed to discover the nature and use of people's implicit theories of intelligence, creativity and wisdom (Sternberg, 1985). The results of this study indicated that in general, intelligence, creativity and wisdom were perceived as being positively correlated in people, although intelligence and wisdom were more closely correlated than any other combination. Further, by using multidimensional scaling techniques, three dimensions constituting people's perceptions of wisdom were identified, which accounted for 87% of the variance in the data. The interpretations of the dimensions were reasoning ability and sagacity (dimension 1), learning (from ideas and the environment) and judgment (dimension 2), and expeditious use of information and perspicacity (dimension 3).

The consistencies in implicit theory findings concerning the nature of wisdom have been comprehensively discussed by Baltes and Staudinger (2000), who draw five

conclusions from implicit theory work. In their view, wisdom is a concept that is easily understood and widely shared by people, and is distinct from other concepts such as intelligence or maturity. Wisdom is associated with an exceptionally high level of functioning, and is associated with a high level of interpersonal ability including the capacity to listen and give advice. Wisdom tends to be multidimensional, in that it involves the interplay of functioning in different areas, including intellectual, motivational and affective domains. Finally, Baltes and Staudinger note that wisdom involves good intentions, and is typically used for the benefit of people.

Considerably less work has been conducted from an explicit theory perspective on wisdom, and consequently this area is relatively new. The most influential explicit theory studies have been conducted by Baltes, Staudinger, Smith and colleagues (e.g., Baltes & Smith, 1990; Staudinger & Baltes, 1994). These researchers have developed the Berlin wisdom paradigm as a theoretical and methodological base from which to scientifically measure wisdom. The Berlin model of wisdom defines wisdom as “an expert knowledge system in the fundamental pragmatics of life, permitting exceptional insight, judgment, and advice involving complex and uncertain matters of the human condition” (Baltes & Staudinger, 1993, p.76). In their model, the fundamental pragmatics of life refer to knowledge about conditions and variabilities in development, an understanding of social and cultural issues and how they interact, knowledge about oneself and one’s limitations, as well as knowledge about aspects of life which are more difficult to understand (e.g., death and dying issues) (Baltes & Staudinger, 2000).

Five specific criteria pertaining to wisdom as expert knowledge have been identified, based on research in lifespan development, expert systems, adult cognitive development, and cultural-historical analyses of wisdom (Baltes & Staudinger, 2000).

These criteria are: rich factual knowledge in the fundamental pragmatics of life, rich strategic knowledge in the fundamental pragmatics of life, knowledge which considers the uncertainties of life, knowledge which considers the relativism of values and life goals, and knowledge which considers the contexts of life and societal change.

The first two criteria, factual knowledge and strategic knowledge, were originally drawn from work in the defining features of expert systems (Baltes & Staudinger, 2000). Rich factual knowledge refers to knowledge about a range of topics of human life, including changes, variations in development, normative social customs, traditions and knowledge about one's own well-being and that of others. Rich strategic or procedural knowledge involves a detailed knowledge of strategies or rules-of-thumb for handling conflicts, prioritising life goals, and knowledge concerning contingency planning in unexpected situations. The remaining three criteria, contextualism, relativism, and uncertainty management, are considered by Baltes and his colleagues as meta-criteria specific to wisdom. Lifespan contextualism is meant to denote a rich understanding and awareness of the context surrounding events and developmental processes, including interrelations between contexts and cultural variation in context, as well as an understanding of context from a temporal perspective (Baltes & Staudinger, 2000). Relativism concerns acknowledging and having tolerance for different people and societies holding different values and priorities to oneself. However, Baltes and his colleagues note that this criterion is not intended to denote "full-blown relativity of values and value-related priorities" (Baltes & Staudinger, 2000, p.126). People who display high levels of relativism may still hold particular values or priorities, but the emphasis is on their capacity to recognise that their own values are relative with respect to others. The last meta-criterion, recognising and dealing with uncertainty, involves the acceptance

of a number of issues, including that we cannot ever really know the future fully in advance, that people only have access to a certain select part of reality, and that the capacity of human beings to process information is inherently limited (Baltes & Staudinger, 2000).

Overall, it can be seen that the model of wisdom proposed by Baltes and colleagues deems wisdom to be multidimensional, a conclusion shared by implicit theorists. Both explicit and implicit theorists also tend to concur that wisdom involves an exceptionally high level of cognitive and interpersonal functioning, especially in difficult or uncertain life matters, and is typically used for the benefit of people. The main difference between implicit and explicit theories lies in the fact that explicit theories, such as the Berlin model of wisdom, lend themselves more readily to testing and to the measurement of wisdom based on people's behaviours.

The Measurement of Wisdom-Related Performance

Wisdom-related performance can be empirically measured. Based on the five criteria outlined in the Berlin model, Baltes and his colleagues (e.g., Staudinger & Baltes, 1996; Smith & Baltes, 1990) developed a method to assess wisdom-related performance. Participants are typically presented with life scenarios, describing problems centering around life planning issues, life management issues, or life review issues. An example of a life management issue is, "Somebody gets a phone call from a good friend who says that he/she can't go on anymore, that he/she has decided to commit suicide. What should one do and consider?" (Staudinger & Baltes, 1996, p.762). An example of a standard life review problem is, "Martha, an elderly woman, had once decided to have a family and not to have a career. Her children left home some years ago. One day Martha meets a woman friend whom she has not seen for a long time. The friend had decided to have a

career and no family. She had retired some years ago. This meeting causes Martha to think back over her life. What might her life review look like? Which aspects of her life might she remember? How might she explain her life? How might she evaluate her life retrospectively?" (Staudinger, Smith, & Baltes, 1992, p.275). In the life review problem, the age of the target (Martha) could also be systematically varied to describe a young target at the beginning of having a career/family.

Having been given the life scenario, participants are required to reflect out loud on the dilemma, using a "thinking-aloud protocol" derived from the work of Ericsson and Simon (1984). Participants are usually given intense training in thinking aloud prior to receiving the life scenarios, in an attempt by the researchers to encourage participants to verbalise all the steps in their thought processes and mental searching, as well as the outcomes of their searching (Smith & Baltes, 1990). Participants' responses to the life scenarios are taped, and later transcribed for coding.

Coding is performed by a select panel of judges (raters), who receive intensive training in the use and application of the wisdom criteria. Raters are professionals drawn from the general community through media outreach, who consider themselves experienced in matters of life (Staudinger & Baltes, 1996). From an initial pool of potential raters, final raters are selected for further training, based on the extent of their rich factual knowledge, procedural knowledge and relativism awareness displayed in initial sessions. The further training involves identification of an ideal response to a life scenario, an average response and a poor response, and how to score each of these. After training, raters then code participants' responses to the life scenarios, and are usually paid for this work. Each participant's response is coded on each of the five wisdom criteria,

using a 7-point scale (with 7 being the maximally wise response). Coding proceeds on the basis of a manual (Staudinger, Smith, & Baltes, 1994).

From the results of research performed to date using this system, psychometric data support the use of the rating system, and demonstrates an acceptable level of raters' test-retest reliability (Baltes & Staudinger, 2000). Overall, it is evident from the work performed by researchers, based on the Berlin wisdom model, that wisdom can be scientifically and reliably measured. The valid and reliable measurement of wisdom has led to further research to more specifically examine the associations of wisdom with other constructs, and what factors may influence its display.

The Distinctiveness of Wisdom

Both implicit theory and explicit theory research has supported the distinctiveness of the construct of wisdom. This research has found that wisdom is not the same as a number of other related constructs, including intelligence, creativity, or even social intelligence. As part of his four-experiment study, Sternberg (1985) examined people's conceptions of wisdom, intelligence and creativity. While the three constructs were positively associated with each other, there were conceptually distinct dimensions which made up each construct. In addition, people were able to easily distinguish wisdom from creativity when judging descriptions of hypothetical people, although they found it more difficult to distinguish wisdom from intelligence.

A second, detailed study has examined the distinctiveness of wisdom from an explicit theory perspective (Staudinger, Lopez, & Baltes, 1997), and has provided support for a clear distinction to be made between wisdom and intelligence. This study used the Berlin wisdom paradigm to assess wisdom, and examined the relationship of wisdom to other constructs in the areas of intelligence, personality and the personality-intelligence

interface. In terms of intelligence measures, the researchers assessed fluid and crystallised intelligence; personality was assessed using two different inventories including the NEO-PI (Costa & McCrae, 1985), as well as a measure of ‘psychological-mindedness’; and the personality-intelligence interface was assessed with measures of social intelligence, creativity, and cognitive style. Most measures were well established with good psychometric properties. The researchers expected significant relationships amongst wisdom and the three measurement domains. However, they predicted that none of the measures when considered separately would account for variance in wisdom-related performance, and they expected some uniqueness to remain in wisdom variance even if all of the measures were considered conjointly.

Using a sample of 125 participants, results indicated that a substantial proportion (40%) of the variance in wisdom-related performance was predicted by a combination of measures from personality, intelligence, and the personality-intelligence interface. However, consistent with predictions, none of the individual predictors could be considered equivalent to the wisdom measure; and overall, wisdom-related performance demonstrated a fair degree of measurement independence (Staudinger, Lopez, & Baltes, 1997).

These findings, combined with earlier work by Sternberg (1985), point to the distinctiveness of wisdom as a measurable construct. Both in people’s minds and in psychological research, wisdom appears to be a construct which is related to, but separate from, other constructs in the areas of personality, intelligence, and the personality-intelligence interface.

Enhancing Wisdom-Related Performance

The folk and cultural underpinnings of wisdom have traditionally linked it closely to increased age (Clayton & Birren, 1980; Meacham, 1990). This line of thought suggests that wisdom tends to only be acquired by people in the later stages of life who have had substantial life experience, and that not necessarily all older, experienced people will eventually become 'wise'. Empirical studies using the Berlin wisdom paradigm have demonstrated that although it may be helpful in some situations, age is not an essential pre-requisite for wisdom-related performance, and that other conditions exist which may also influence wisdom.

Several studies by Baltes and his colleagues have examined the role of age in wisdom-related performance. In one study (Smith & Baltes, 1990), 60 participants of varying ages responded to life-planning problems using the standard verbal think-aloud protocols, where the target person in the scenarios was either younger or older. Responses were rated using the standard Berlin wisdom procedures. Results indicated that there were few responses (5%) which were considered wise (scoring 5+ on the 7 point rating scale). However, wise responses were equally distributed across age groups, suggesting that generally, age was not a necessary condition for wisdom-related performance. In addition, when results were analysed according to the target of the life scenario (young or old), the young and middle-aged adults had been rated significantly higher than older adults for young target problems. No differences were found for old target problems, although within their own age group, younger participants were rated more poorly on these problems than they were rated on younger target problems. These findings suggested that younger adults' wisdom-related performance may be enhanced

when the scenario is salient to their own life stage, but that overall, there were no wisdom differences among age groups.

Other studies have since confirmed the finding that broadly, older adults perform as well as younger adults (e.g., Smith, Staudinger, & Baltes, 1994; Staudinger, Smith, & Baltes, 1992; Baltes, Staudinger, Maercker, & Smith, 1995). Older adults perform significantly better than younger adults when the fictitious character in the life scenario is matched to their own age (i.e., older) (Smith, Staudinger, & Baltes, 1994; Staudinger, Smith, & Baltes, 1992). These findings suggest that people may exhibit higher levels of wisdom-related performance when the scenario is more closely matched to their own situation, regardless of their age.

A person's professional specialisation may make a significant difference to wisdom-related performance. One study utilised female participants from two age groups (21 young women, and 22 older women) and different professional specialisations (17 clinical psychologists, and 26 controls) to examine the role of age and professional specialisation on wisdom (Staudinger, Smith, & Baltes, 1992). The researchers deliberately chose clinical psychologists on the basis that these were professionals who were judged to have had considerable experience with questions of life planning, life management and life review, and who therefore had more access to processes conducive to the development of wisdom. The control group of professionals was varied and included natural scientists, journalists, architects, and high school teachers. Standard life review tasks were used, with the target person being either young or old, and the Berlin wisdom paradigm was followed with respect to rating and coding responses.

Results indicated that the human services professionals overall outperformed the control group in wisdom-related performance, particularly in having rich factual and

procedural knowledge and in displaying life-span contextualism (Staudinger, Smith, & Baltes, 1992). Consistent with other studies, older adults performed as well as younger adults, and older adults' performance was especially enhanced by the match between their own age and the age of the fictitious character. These findings were confirmed by a later study, which also investigated the role of professional specialisation in wisdom-related performance (Smith, Staudinger, & Baltes, 1994), but using a life-planning dilemma instead of the life review problem used in the first study. Again, clinical psychologists were rated significantly more highly than control professionals, and the same findings with respect to age and the match with the target person were also recorded.

It is possible that these studies could have been confounded by a self-selection problem; specifically, that people with a particular set of personality and motivational traits are more likely to become clinical psychologists. To address this possibility, a study was performed using communality analyses to quantify the joint and separate effects of professional specialisation, intelligence and personality variables (Staudinger, Maciel, Smith, & Baltes, 1998). The results of this study indicated that professional specialisation was still the most important unique predictor of wisdom-related performance, contributing 15% unique variance in performance. It appears that professional specialisation exerts an influence on wisdom-related performance above and beyond effects of other variables such as personality and intelligence.

A final variable which appears to enhance wisdom-related performance is that of social collaboration or interaction with others. Staudinger and Baltes (1996) conducted a study examining the role of interaction in wisdom-related performance, and randomly assigned 122 couples to one of five conditions. The conditions mainly differed according

to whether the partners in the couple could discuss the life scenario given to them or not, and whether they had time to think about their own responses to the problem. The five conditions were external dialogue (discussion between the two people present), external dialogue plus (external dialogue plus time to think about one's own response to the problem), internal dialogue (individuals each thinking about what other people whose advice would be useful, might say), individual thinking time (unconstrained thinking time), and standard (the individual is given the task, and asked to think about the problem immediately without any intervening instruction). Three wisdom-related tasks were used: two life management tasks and a life review task. The researchers predicted that the external plus and internal dialogue would result in higher performance than the other three conditions, as these two conditions were more ecologically relevant and prompted for the interaction of minds.

Consistent with predictions, results indicated that both the external dialogue plus and the internal dialogue conditions resulted in significantly higher performance levels than the other three conditions (Staudinger & Baltes, 1996). There were no significant differences between the external dialogue plus and internal dialogue conditions. Amongst the other three conditions, internal thinking time yielded higher performance levels than the external-dialogue and standard conditions. When analysing only the 'wise' group (in this case, the top 20% of responses), participants in this group were significantly more likely to have come from the external dialogue plus condition.

The researchers also found an advantage of older age in the study (Staudinger & Baltes, 1996). On the top two conditions (external dialogue plus and internal dialogue), older adults performed at higher levels than younger adults, compared to the other three conditions. This was particularly true for the external dialogue plus condition, where

older adults benefited significantly more than younger adults. Taken together, these findings point to the conclusion that wisdom-related performance can be enhanced by interaction with another person whose opinion is likely to be considered important. This is particularly true for older adults, who may have a knowledge base which can be enhanced through interpersonal interaction or dialogue (Baltes & Staudinger, 2000). These findings also suggest that as the experimental condition increasingly mirrors real-life situations (e.g., talking an issue over with one's partner), wisdom-related performance is likely to be significantly enhanced.

The Personal Relevance of Wisdom

A question that remains in the literature is the extent to which global wisdom, measured using the Berlin wisdom paradigm, translates to wise performances in everyday functioning. This is a key empirical and theoretical issue, as the extent to which wisdom is manifested in people actually behaving in more adaptive ways has implications for the usefulness of wisdom as a psychological construct. The fact that research to date has not taken this step and focused on the products of wisdom, has been observed already (e.g., Baltes & Staudinger, 2000; Birren & Fisher, 1990), with one researcher suggesting that it may be slower and more difficult to develop insight into one's own life problems, compared with developing knowledge about life issues in general (Staudinger, 1999). For example, one would expect that people high in relationship-based wisdom might also be happier in their close relationships, and would display better communication skills than another person with lower levels of relationship-based wisdom. If this were true, potentially the skills, knowledge and thinking styles associated with wisdom could be taught to other people to improve their relationships. Similarly, if a person identified as being wise about parenting issues also seemed to be a successful parent themselves on a

number of indices, perhaps some of the approaches and the knowledge they hold about parenting could be used for parents who were struggling with child-rearing.

In sum, the degree to which wise performance (both global performance and domain-specific performance) predicts everyday functioning needs to be explicated. If wise performance does predict good outcomes in everyday functioning, then some of the knowledge and skills associated with wise performance could potentially be taught to others who are struggling with various life problems.

Wisdom About Close Personal Relationships

If wisdom translates to wise functioning in life, one can propose ways that wisdom might affect a person's close personal relationships. In this context, personal relationship-based wisdom would imply the presence of an expert knowledge system in the fundamental pragmatics of one's close relationships, leading to an exceptional ability to consider issues such as contextualism, relativism and uncertainty (e.g., Baltes & Staudinger, 2000) within relationships.

Rich Factual Knowledge.

A person rich in factual knowledge about relationships is likely to have acquired detailed knowledge of how a range of life situations and transitions might impact on the couple relationship. For example, such a person would be aware that the transition to parenting can be a difficult time for many couples, as domestic roles often have to be adjusted, there is frequently less time for the couple themselves due to the demands of the new baby, and there may be some sexual or medical problems following the birth. Similarly, a person who has rich factual knowledge about life transitions would realise that relocation to a new area because of changed job requirements can lead to partners' increased dependency on each other because of a reduction in social networks following

the move, which might impact on couple satisfaction. Having detailed knowledge about different life situations would probably impact positively on couple interaction, as processes such as problem-solving may become more effective. This is likely as people with rich factual knowledge about life transitions and processes are likely to have a better idea of the nature of problems to be solved in the relationship, which would facilitate brainstorming a range of options and finding the most appropriate solution.

Rich Procedural Knowledge.

In the context of one's close relationships, a person with rich procedural knowledge is likely to be able to bring to mind a range of options for dealing with specific problems or issues, as well as a range of contingency plans to implement if things were not to proceed as initially planned. For example, in the event that a particular behaviour of a partner was irritating or was causing problems, a person with rich procedural knowledge is likely to be aware that there is a range of options available to him/her in response. The partner may choose from several alternatives including trying to change his/her own reaction to the problem, trying to change his/her own behaviour to try to offset the problem, or trying to discuss the problem with the other person. If the problem is serious and persists or worsens, the partner may add the contingency or back-up option of leaving the relationship to his/her range of options. This is in contrast to being locked in to one response, such as criticising or blaming the partner, which is typical of partners in distressed relationships (e.g., Christensen & Shenk, 1991; Gottman, 1994; Notarius & Markman, 1993). Knowledge of a range of responses in a given relationship situation may produce better outcomes and higher couple satisfaction, as partners are likely to feel less locked into a particular solution and are therefore more likely to problem-solve more effectively.

Awareness and Management of Uncertainty.

Within a close relationship, management of uncertainty is likely to involve an awareness that particular plans or goals of the couple may not necessarily happen if circumstances change, or if strategies are ineffective. For example, partners in a couple may plan to retire early together, in order to embark on goals of travelling extensively. However, partners with relationship wisdom are likely to be aware that problems such as ill health or unexpected financial changes (e.g., losing money on investments) could well curtail their plans. Partners with relationship wisdom are likely to recognise that while uncertainty is present, it can be managed, in ways such as developing contingency plans. An important aspect of relationship wisdom is the recognition that the presence of uncertainty does not automatically preclude an individual from developing plans or strategies to solve a problem. Plans can still be made, but an individual with relationship wisdom would recognise that unforeseen events can happen, necessitating changes in those strategies.

Tolerance for Relativism.

A person who displays tolerance for relativism in their relationship is likely to be aware that their partner's values and life priorities may differ from their own. For example, partners may hold different expectations and place different emphases on the use of money in their relationship. One partner may believe that maintaining a rigid savings program is essential; while the other would prefer to opt for a more flexible savings program and enjoy life with money earned. In this situation, a partner with a higher tolerance for relativism is probably less likely to see this difference in priorities as a major conflict threatening the relationship. Instead, the difference is likely to be seen as an expected result of having two separate individuals trying to merge their financial

plans, and that different pre-existing financial priorities are likely to be present. This type of more benign understanding of differences between partners is likely to facilitate a more cooperative discussion of strategies, since partners are less likely to use critical or blaming techniques pinpointing the other partner as being 'in opposition'. In addition, a more cooperative interaction is likely to produce higher levels of couple satisfaction, since critical or blaming techniques have been reliably associated with couple distress (e.g., Christensen & Shenk, 1991; Gottman, 1994).

Appreciation of Context.

In the context of close relationships, an understanding of how context influences partners' behaviours, attitudes and emotions is likely to be important in facilitating good communication and enhancing couple satisfaction. If a partner has high relationship wisdom and considers context, negative blaming attributions, which are associated with relationship distress (Bradbury & Fincham, 1990; Fincham & Bradbury, 1992), are likely to be less probable. For example, if a wife's partner snaps at her, and the wife concerned is unaware of contextual influences, she may be more likely to attribute her husband's behaviour to the fact that he is always grumpy, or snappy, or doesn't care about her anymore. In contrast, if the wife is aware of the context of her spouse, she may realise that her husband's outburst is probably a function of other issues, such as stress at work, concern about a health problem, worry about finances etc. An appreciation of context in this example probably would produce fewer personal criticisms, and more accurate comments showing understanding of the partner's broader situation. These behaviours are likely to lead to higher relationship satisfaction.

In addition, an awareness of the impact of context would probably foster better empathic listening and perspective-taking in partners. Understanding the broader range

of factors and environments influencing a spouse means that the context-aware partner can gain greater insight into their partner's life, and more accurately describe a situation from their partner's point of view. This type of empathy is also likely to be manifested in higher levels of behaviours such as positive non-verbal responses, smiling, approval and active listening in interactions, all of which are associated with higher couple satisfaction (e.g., Gottman, 1994; Halford, Hahlweg, & Dunne, 1990; Weiss & Heyman, 1997).

Overview of the Research Program

In summary, an established body of research has shown that couple relationships are important, not only for personal satisfaction, but also for health and physical well-being. While most couples start out being satisfied at the beginning of their relationship, there is considerable variability in the trajectory of couples' satisfaction over time. Two constructs likely to be important for relationship satisfaction are self-regulation and wisdom, respectively referring to a partner's effort invested in a relationship, and the extent of a partner's knowledge and understanding about relationship events.

This program of research therefore aimed to investigate the association between wisdom and self-regulation, and relationship satisfaction. Three separate studies were conducted. Study 1 explored the association between wisdom and self-regulation, and relationship satisfaction in couples in long-term relationships. Based on the results of Study 1, self-regulation appeared to be the more promising area to pursue in further research. Studies 2 and 3 therefore aimed to explore the mechanisms behind the self-regulation/satisfaction association. Study 2 examined whether this association was mediated through communication behaviours, and Study 3 examined whether cognitive attributions mediated the relationship between self-regulation and satisfaction.

CHAPTER FOUR

STUDY ONE

The current study aimed to investigate the associations between general and personal wisdom, relationship self-regulation and relationship satisfaction, using a sample of couples in long-term committed relationships. Specifically, the study aimed to assess whether self-regulation was an important correlate of satisfaction in couples in longer-term relationships, given its association with satisfaction in early-stage relationships (Wilson, et al., 2003). Self-regulation has been shown to correlate with satisfaction in a sample of newly-wed couples, and there is evidence for its distinctiveness from general self-regulation, personality, mood and intelligence (Wilson, et al., 2003). The current study also aimed to assess whether knowledge about life events (general wisdom), and about one's own relationship (personal wisdom), was associated with how happy people were within their relationship.

There is substantial evidence for the distinctiveness and relevance of wisdom as a construct (e.g., Staudinger, Lopez, & Baltes, 1997), but we know little about its influences on everyday behaviour. It was predicted that both general and personal wisdom would be associated with satisfaction, assuming that more knowledge about ways to deal with life events and issues would assist in maintaining a happy relationship. In particular, it was expected that personal wisdom, that is, wisdom displayed by partners in relation to issues in their own relationship, would correlate with satisfaction. If partners were able to display wisdom in the way that they analysed problems or issues within their own relationships, this should be reflected in higher levels of relationship satisfaction. The current study therefore aimed to test the association of wisdom with

relationship satisfaction, a well-established indicator of relationship functioning. In addition, this study aimed to evaluate the association between general wisdom and personal relationship wisdom, to explore how wisdom might translate into real life situations.

There were several reasons for the use of long-term committed couples in this study. As previously discussed, there is evidence that relationship self-regulation is an important correlate of satisfaction in couples in early stages of their relationship (e.g., Wilson, et al., 2003). However, it may be that people are attentive to their partner early in their relationship, and that relationship effort may be important only to establish the relationship. We do not know whether relationship self-regulation remains important later in the relationship, when couples have been together for a long period of time. An older sample was also used in an attempt to sample people scoring more highly on wisdom-related knowledge. Although there are not broad effects of age on wisdom scores (Smith & Baltes, 1990), older people are over-represented in the top 20% of wisdom scores (Smith, Staudinger, & Baltes, 1994), and are over-represented when asked to discuss a problem relevant to their age group (e.g., Smith & Baltes, 1990; Smith, Staudinger, & Baltes, 1994). I therefore attempted to specifically sample for higher wisdom scorers by using older couples.

When establishing new constructs in a field of literature, it is important to ensure that the new constructs are not the same as other existing, established constructs. Intelligence and personality are traditional, well-established constructs in psychology, and it was important to understand their association with self-regulation. Potentially, partners who self-regulate more may simply have higher intelligence scores, or may exhibit more open or conscientious personality characteristics, than those who self-

regulate less. Other variables which could potentially explain self-regulation are emotional intelligence and mood. Partners reporting higher levels of self-regulation may simply be more emotionally intelligent, or may have more elevated mood than partners reporting lower levels of self-regulation. Some evidence for the differentiation of self-regulation from intelligence, personality and mood has been found in newly-wed couples (Wilson, et al., 2003), but these possibilities were important to establish in the current study which utilised a sample of older couples in long-term committed relationships.

In evaluating the associations among wisdom, self-regulation and satisfaction, two main hypotheses were tested. It was hypothesised that 1) higher levels of general and personal wisdom would be associated with higher levels of relationship satisfaction; and 2) higher levels of self-regulation would be associated with higher levels of relationship satisfaction, and this association would remain after accounting for variance attributable to emotional intelligence, personality, distress and intelligence variables.

Method

Participants

Sixty-one couples were recruited via an advertisement in a major metropolitan newspaper in Brisbane, Australia, asking for couples who had been in a committed relationship for at least 15 years to participate in research on relationship wisdom. The average length of relationship was 28 years ($M=28.4$, $SD=8.3$). The mean age of the men was 53.7 years ($SD=9.1$) and the mean age of the women was 51.6 years ($SD=10.4$). Most couples (93%) had children together.

Materials

Self-report measures.

The Dyadic Adjustment Scale (DAS) (Spanier, 1976) is a widely-used 33-item self-report measure of dyadic relationships. Completion of the DAS allows for calculation of a total dyadic adjustment score, which has been found to be highly reliable ($\alpha = .96$). The DAS is capable of discriminating between married and divorced samples on the basis of dyadic adjustment, and correlates highly ($r = .86 - .88$) with other measures of dyadic adjustment (Spanier, 1976).

The Depression Anxiety Stress Scales – Short Form (DASS) (Lovibond & Lovibond, 1995) is a 21-item self-report measure of depression (seven items), such as dysphoric mood, hopelessness and devaluation of life; symptoms of anxiety (seven items), such as autonomic arousal and situational anxiety; and symptoms of stress (seven items), such as difficulty relaxing and being easily upset/agitated. Respondents indicate how often each item has applied to them over the last week, on a four-point Likert-type scale from 0 to 3. A total score can then be calculated, which has been shown to be psychometrically sound, with reliability coefficients ranging from $\alpha = .73$ to $.81$ (Brown, Chorpita, Korotitsch, & Barlow, 1997; Lovibond & Lovibond, 1995). High correlations with other established measures of depression and anxiety support its convergent validity, and evidence has also been found to support the discriminant validity of the DASS (Brown, et al., 1997).

The Self-Regulation for Effective Relationships Scale (SRERS) (Wilson, et al., 2003) is a new scale measuring the degree to which each partner engages in relationship self-regulation attempts in their intimate relationships. Self-regulation is the extent to which a partner can appraise the relationship's current level of functioning, set goals for desired functioning, and implement strategies to achieve those goals. Partners rate their own self-

regulation by responding to each of 19 statements on a five-point Likert-type scale, ranging from “not at all true” to “very true”. Examples of statements include, “I am clear about the type of relationship I want to have with my partner,” and “I tend to put off doing anything about problems in our relationship in the hope that things will get better by themselves.” Preliminary analyses indicate that the SRERS consists of three factors: self-reported self-regulation strategies, relationship efforts, and relationship goal clarity. Each factor is internally consistent (Cronbach’s $\alpha > .75$) (Wilson, et al., 2003). Analyses also demonstrate that the SRERS has good construct validity, inter-partner agreement, convergent and divergent validity (Wilson, et al., 2003).

The Emotional Intelligence Scale (EIS) (Schutte, et al., 1998) is a 33-item measure assessing evaluation and expression of emotion, management of emotion, and use of emotion to solve difficulties. Participants rate a series of statements on a Likert-type scale which ranges from “strongly disagree” to “strongly agree”. Statements in the EIS include, “I am aware of my emotions as I experience them” and “I use good moods to help myself keep trying in the face of obstacles”. The EIS has good internal consistency ($\alpha = .87$) and test-retest reliability ($\alpha = .78$) (Schutte, et al., 1998). The scale correlates with theoretically related constructs (e.g., alexithymia and optimism) and demonstrates criterion-related validity (Schutte, et al., 1998).

The NEO Five Factor Inventory (NEO-FFI) (Costa & McCrae, 1992) is a 60-item measure of five broad domains of personality: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Participants rate each item statement on a five-point scale indicating their extent of agreement, from “strongly disagree” to “strongly agree”. Examples of items are: “I often feel tense and jittery” (neuroticism); “I like to have a lot of people around me” (extraversion); “I often try new and foreign foods”

(openness); “I try to be courteous to everyone I meet” (agreeableness); and “I have a clear set of goals and work toward them in an orderly fashion” (conscientiousness).

Completion of the instrument yields a separate scale score for each of the five personality domains. Internal consistency of the five scales is adequate, with Cronbach’s alphas reported to be .86, .77, .73, .68 and .81 for neuroticism, extraversion, openness, agreeableness and conscientiousness respectively (Costa & McCrae, 1992). Evidence has also been found for the convergent and discriminant validity of the five scales in the NEO-FFI (Costa & McCrae, 1992).

The National Adult Reading Test (NART) (Nelson, 1982) is a measure of intelligence, evidenced by an individual’s reading ability. All partners were individually administered the NART to assess general intelligence. The NART consists of 50 words printed on a sheet in order of increasing difficulty, which must be pronounced by the participant. All words are ‘irregular’ in that they cannot be pronounced correctly through phonemic decoding (i.e., ‘sounding out’ the word). Examples of irregular words used include ‘psalm’, ‘simile’, and ‘drachm’. High scores require extensive word recognition and knowledge, which are strongly associated with intelligence. Completion of the NART yields a total number of words correctly pronounced, out of 50. Psychometrically, the NART is highly reliable ($\alpha = .93$) (Nelson, 1982). There is also strong evidence for the construct and concurrent validity of the NART. The NART correlates highly with other established measures of intelligence, and can accurately discriminate between groups of subjects in theoretically consistent ways (Nelson, 1982).

Assessment of wisdom.

Each partner separately completed two tasks, one assessing global wisdom and one assessing personal relationship wisdom. Prior to completing the tasks, each partner was

instructed and given practice in thinking aloud (Ericsson & Simon, 1993) when responding to problems. This was intended to maximise the richness of information obtained from participants as they thought during their responses to wisdom tasks. Think-aloud training consisted of a participant's being asked to respond to a question such as, "On your way here, how often did you make a left or a right turn?", and then receiving feedback and prompting to highlight areas where more verbalising was needed. Following think-aloud training, participants completed a practice wisdom task to familiarise them with the actual task procedure. An example of a practice task used was, "Imagine that you have to organise a move to another city. What matters would you have to pay attention to?" Participants again received feedback to assist their response and identify parts of the problem that they needed to address.

In the first task, assessing global wisdom, each participant was presented with a hypothetical wisdom scenario (drawn from Staudinger, Smith, & Baltes, 1994): "Barbara is contemplating getting a divorce. She is wondering what she should do. Among other options, she can try, as much as possible, to continue living the way she has been, or she can make a drastic change in her life. What should Barbara do and consider in making her plans? What additional information is needed?" The scenario with the target name of 'Barbara' was used for female members of couples. The name 'Barbara' was replaced with a male name, 'Peter', when testing male respondents. Participants were asked to respond to the scenario by verbalising aloud what they were thinking. Participants' responses were audiotaped and later transcribed for coding.

In the second task, assessing personal relationship wisdom, each participant was asked to identify an issue that had been a source of recent conflict in their relationship with their partner. The participant was then presented with a standardised set of written

instructions, similar to those in the first task: “What do you think you should do and consider in this situation? What additional information do you need?” These questions related to the participant’s own issue of conflict which had earlier been identified.

Participants’ responses were audiotaped and later transcribed for coding.

Both wisdom task transcriptions were coded using the same system adopted in the Berlin wisdom paradigm (outlined in Staudinger, Smith, & Baltes, 1994). Five research assistants, blind to the experimental aims and hypotheses, underwent 25 hours of training, including memorising code definitions, practice rating, and feedback. Using a seven-point Likert-type scale, responses were rated on the five wisdom criteria of the degree of participants’ rich factual knowledge, rich procedural knowledge, life-span contextualism, value-relativism, and extent to which they show management of uncertainty. Factual knowledge refers to knowledge about a range of topics of human life, including change, developmental variation, social customs, and knowledge about well-being. Procedural knowledge relates to strategies or rules-of-thumb for managing conflict, life dilemmas, contingency planning and prioritising life goals. Contextual knowledge refers to a rich understanding of the context surrounding events and developmental processes. Value relativism involves acknowledging and tolerating different people and societies who may hold different values and priorities to oneself. Finally, uncertainty management involves the acceptance of several issues, including humans’ inherent information-processing limitations, and that humans can never really know the future fully in advance. Completion of protocol coding allowed a score on each of the five criteria to be computed per task for each partner, as well as a total global wisdom score and a total personal relationship wisdom score.

A third of the transcripts were randomly coded for reliability, and intra-class correlations were .66, .57, .51, .49 and .76 for factual knowledge, procedural knowledge, contextualism, value relativism and uncertainty management, respectively. Research to date using the Berlin wisdom coding system has generally obtained acceptable reliability for its codes (Baltes & Staudinger, 2000). However, in both the current research and past research, lower reliability is usually due to a truncated range of scores. High wisdom ratings are rare (Baltes & Staudinger, 2000), which is often reflected in lower reliability estimates. Support has been found for the validity of the coding system devised by Staudinger, Smith and Baltes (1994), and studies have shown the construct validity of the system, particularly convergent validity (e.g., Baltes, Staudinger, Maercker, & Smith, 1995; Staudinger, Lopez, & Baltes, 1997).

Demographical information.

In addition to the measures described above, information on a range of demographic indices was collected from participants. These indices included age, length of relationship, whether the couple had children, level of income, type of work, years of education, religious orientation, and church attendance.

Procedure

Assessment of participating couples took place in a research laboratory at Griffith University. Couples first underwent an intake interview. Written informed consent was obtained from both partners, and couples were provided with information about the purpose of the study and what was required during the assessment session. In addition, couples were jointly given a list of common issues which can be sources of conflict in close relationships (e.g., finance, how much time spent together, etc.), and asked to identify an issue that can be a source of conflict for them. This process identified the

issue to be discussed by partners in the personal relationship wisdom task during the assessment process.

After the intake interview, one partner was administered the wisdom tasks, and the other was placed in a separate room to complete the questionnaire booklet. Following completion, partners were swapped to administer appropriate tasks to the other partner. To avoid possible order effects, male partners were administered the observational tasks first in half of the couples, and female partners were administered the observational tasks first in the other half of the couples. After all tasks and booklets were completed, couples were debriefed on the research and had the opportunity to discuss the study with the researcher. Couples were paid \$50 on completion of assessment to reimburse them for travel-related expenses.

Results

Descriptive Information

Most partners reported their religion to be Protestant (for males, 42.6% and for females, 47.5%), or to have no religion (for males, 29.5%, and for females, 23.0%). Most men were working full-time (52.5%) or had retired (31.1%). Most women (48%) worked part-time or full-time. The average combined household income was \$63 600 (SD =\$30 870). Amongst the men, 34% reported having completed a university degree and 30% had completed high school, while 33% of women had completed high school and 28% had completed a college training certificate. Overall, the sample had higher incomes and educational attainment than the general Australian population.

Means and standard deviations on self-report measures are presented in Table 1. Partners' scores on the Dyadic Adjustment Scale indicated that couples were maritally satisfied, given that the mean population score on the DAS is 115 (Spanier, 1976). Couples did not report significant depression, anxiety or stress disturbance on the Depression Anxiety Stress Scales; scores in the current sample were below mean scores of the normal population (Lovibond & Lovibond, 1995). Partners' scores on the Self-Regulation Scale for self-report were very similar to means and standard deviations obtained by a previous study using a large sample of newly-wed couples (Wilson, et al., 2003). These scores demonstrated that couples' ability to appraise, make efforts and maintain clear relationship goals was similar to most newly-wed couples.

Table 1

Summary of Means (and Standard Deviations in Parentheses) of Key Measures

Measure		Male	Female
Dyadic Adjustment Scale (Total)		119.49 (11.37)	118.68 (10.58)
Depression Anxiety Stress Scales (Total)		7.54 (7.49)	8.02 (7.05)
Self-Regulation	Change strategies	35.44 (6.47)	36.37 (6.57)
	Relationship efforts	22.74 (4.56)	23.30 (4.54)
	Goal clarity	12.74 (2.09)	13.22 (2.21)
	Total	70.92 (9.85)	72.88 (9.30)
Emotional Intelligence Questionnaire (Total)		125.61 (15.95)	132.03 (13.26)
NEO-FFI	Neuroticism	17.11 (7.40)	19.38 (7.84)
	Extraversion	28.31 (6.12)	28.67 (6.04)
	Openness	28.51 (6.60)	30.52 (6.19)
	Agreeableness	31.43 (4.92)	34.75 (5.87)
	Conscientiousness	34.49 (5.68)	36.38 (5.95)
General Wisdom	Factual knowledge	3.75 (1.22)	3.53 (1.21)
	Procedural knowledge	3.00 (1.21)	2.67 (0.91)
	Contextual knowledge	2.67 (1.04)	2.13 (0.85)
	Value relativism	2.34 (0.83)	2.67 (0.97)
	Uncertainty management	3.31 (1.13)	3.07 (0.88)
Personal Wisdom	Factual knowledge	4.39 (1.02)	3.83 (1.16)
	Procedural knowledge	2.13 (0.88)	2.12 (0.77)
	Contextual knowledge	2.59 (1.28)	2.81 (1.24)

Measure (continued)		Male	Female
Personal Wisdom	Value relativism	3.03 (0.77)	3.56 (1.19)
	Uncertainty management	2.25 (0.83)	2.08 (0.88)
General Wisdom Task Response Length (words)		1265.33 (627.92)	1013.97 (489.01)
Personal Wisdom Task Response Length (words)		1411.54 (717.43)	1143.47 (580.41)
National Adult Reading Test (words correct)		29.26 (7.45)	30.22 (8.79)

Note. NEO-FFI = NEO Five Factor Inventory.

Partners' average total emotional intelligence scores were highly similar to male and female mean scores on the scale in past research (Schutte, et al., 1998), indicating an average ability of partners to appraise and express emotion. Most male and female partners scored within the normal range on all of the five personality dimensions assessed by the NEO Five Factor Inventory, and mean scores were very similar to the norms originally reported for each gender (Costa and McCrae, 1992).

Although the means for each of the wisdom criteria are low (averaging between two and three on a seven-point scale) and standard deviations are restricted, these data are similar to the low means and standard deviations reported for normal, older community adults (e.g., Smith, Staudinger, & Baltes, 1994; Staudinger & Baltes, 1996). High scores on the wisdom criteria are, according to Baltes' definition, assumed to be rare (Baltes & Staudinger, 2000). The norms on the National Adult Reading Test (Nelson, 1982), a test of intelligence, were compared with scores in this sample. Male and female partners in

this sample scored slightly better than the normative means, which is consistent with participants in the sample being better educated than the general population.

Correlations Amongst Key Constructs

Bivariate correlations among general and personal wisdom, self-regulation and satisfaction are presented for each gender in Table 2. Due to the high number of correlations presented, maintaining a $p < .05$ level of significance would have inflated the Type I error. As a partial correction for this, the level for significance was reduced to $p < .01$. It is recognised that correction of alpha will always result in trade-offs of either Type I or Type II error (Schmidt & Hunter, 2002). If a correction is not made, Type I error is likely with a large number of interrelated variables. If too stringent a correction is made, then Type II error becomes a real risk where true relationships between variables can be dismissed. In general, the goal of presenting a table of correlations here is to allow pattern recognition (Wilkinson and the Task Force on Statistical Inference, 1999), whereby clusters of significant relationships can be identified rather than individual bivariate associations.

For males, the most prominent cluster of significant ($p < .01$) associations was between the three self-regulation scales and satisfaction. In particular, males' goal clarity was moderately associated with satisfaction. For females, few significant patterns of association were noted. Only general and personal wisdom correlated significantly, as did self-regulation change efforts and goal clarity. It was also noted that general and personal wisdom were significantly correlated for males. Across genders, personal wisdom correlated significantly, and there was a moderate association of relationship satisfaction.

Table 2.

Bivariate correlations amongst males and females on key constructs

	1	2	3	4	5	6
1. Satisfaction	(.56)**	-.16	.06	.11	.21	.23
2. General wisdom	-.04	(.10)	.43**	.07	.07	-.06
3. Personal wisdom	-.28	.40*	(.39)*	.22	.21	.16
4. Self-regulation change efforts	.38*	.31	.22	(.07)	.10	.47**
5. Self-regulation perseverance	.34*	.14	.13	.24	(.20)	-.09
6. Self-regulation goal clarity	.62**	.05	-.22	.41**	.27	(.18)

Note. * $p < .01$ ** $p < .001$. Numbers on the diagonal refer to intercorrelations between male and female variables. Numbers below the diagonal are male variables and numbers above the diagonal are female variables.

Given the significant correlations between general and personal wisdom totals for each gender, and for personal wisdom across genders, additional bivariate correlations were performed between the original subscales. This was in order to see if specific wisdom criteria were particularly important in contributing to the overall significant correlations amongst the total scores. Table 3 presents the inter-correlations amongst the five wisdom criteria for males and females. Most correlations between the general and personal wisdom criteria were small and predominantly not significant. The highest correlation was between general and personal wisdom for females on uncertainty management, which approached a moderate correlation ($r = .48$).

Table 3.

Bivariate correlations amongst general and personal wisdom criteria.

Wisdom Criterion	Males	Females
Factual knowledge	.19	.36*
Procedural knowledge	.30	.28
Lifespan contextualism	-.14	.12
Value relativism	.16	.08
Management of uncertainty	.38*	.48**

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

Table 4 presents the inter-correlations amongst the five personal wisdom criteria across the two genders. Again, most correlations between men and women are small in

magnitude and predominantly non-significant, with the exception of factual knowledge and lifespan contextualism.

Table 4.

Bivariate correlations amongst personal wisdom criteria across genders.

Wisdom Criterion	Correlation
Factual knowledge	.37*
Procedural knowledge	.33
Lifespan contextualism	.37*
Value relativism	.26
Management of uncertainty	.09

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

Wisdom and Relationship Satisfaction

A series of hierarchical regressions was used to determine if wisdom significantly predicted relationship satisfaction for each gender, above the influence of length of each partner's response. Length of response was controlled, given the possibility that partners who talked for longer may have received higher wisdom scores, thus introducing a confound. Data were first screened to ensure normality, linearity and homoscedasticity of residuals. No multicollinearity among predictors was identified. Response lengths for both tasks for male and female partners were significantly positively skewed, and consequently square-root transformations were performed on these variables. Univariate

outliers were identified on the response length variables for both tasks for male and female partners. Using a $p < .001$ criterion for Mahalanobis distance, one multivariate outlier was identified among the output assessing wisdom and satisfaction for both male and female partners, but these ceased to be outliers when the univariate outliers were excluded. Due to the presence of skewness and outliers in the data, analyses were run with and without outliers, and using transformed and untransformed data to assess the difference these variables might make on the outcome. As there were no substantive differences in the results when using transformed data or removing outliers, the regression is reported with untransformed data and retaining outliers.

Table 5 shows the results of hierarchical regressions predicting male and female relationship satisfaction from general and personal wisdom (tasks 1 and 2) ($N = 61$ and $N = 59$, respectively). Lengths of response to the tasks were entered in step 1, to statistically control for their effects in predicting relationship satisfaction. General and personal wisdom totals were entered in step 2. R was not significantly different from zero after all predictors had been entered for either men, $R = .33$, $F(4, 56) = 1.69$, n.s. (adjusted $R^2 = .04$) or women, $R = .29$, $F(4, 54) = 1.22$, n.s. (adjusted $R^2 = .02$). Thus, for both men and women, neither response length nor general or personal wisdom reliably predicted satisfaction.

Suppression, or more correctly, correction for distortions (Rosenberg, 1968), was identified in the results shown in Table 5. Correction for distortion refers to a situation where the direction of a variable's sign is different between its zero-order correlation with the dependent variable, and its beta weight in the regression analysis. This situation has also been referred to as 'negative suppression' (Tabachnick & Fidell, 2001), although it has been suggested that true suppression only occurs if the adjusted predictor(s) is

useful in the analysis (i.e., significant) (Smith, Ager, & Williams, 1992). In the current results, none of the adjusted (suppressed) predictors was significant, indicating distortion correction only. Specifically, for men, while length of the personal wisdom task had a weak negative relationship with satisfaction, once general wisdom task length was taken into account, increases in personal wisdom length predicted increases in satisfaction. For women, personal wisdom length was weakly positively correlated with satisfaction, but became negative once both general wisdom length and general wisdom entered the equation.

Finally, a check on the wisdom construct used in the above analyses was performed. In the current study, total wisdom scores for each partner on each of the two tasks were calculated by summing scores on the five wisdom criteria. These totals were then used in the analyses described above. However, as the current sample was different from samples used in previous wisdom research of Baltes and colleagues, the five wisdom criteria were factor analysed to determine whether they hung together as a single construct. Based on the results of the factor analyses, the value relativism criterion was discarded from all totals, as it did not load highly on the extracted wisdom factor. The same regression analyses were then performed using the new composite variable, but results were not substantively different, suggesting that the current findings were not an artefact of poor construct validity within this sample.

Table 5

Hierarchical Regression of Length and Wisdom on Males' and Females' Relationship Satisfaction

Variables	1	2	3	4	5	Mean (SD)	β	sr^2
Males								
1. Satisfaction (DV)	1					119.49 (11.37)		
2. Length – General wisdom task	-.01	1				1265.33 (627.92)	-.06	.00
3. Length – Personal wisdom task	-.05	.64	1			1411.54 (717.43)	.24	.02
4. General wisdom	-.04	.69	.36	1		15.08 (4.17)	.10	.00
5. Personal wisdom	-.28	.37	.65	.40	1	14.39 (3.22)	-.45*	.10
Females								
1. Satisfaction (DV)	1					118.68 (10.58)		
2. Length – General wisdom task	.07	1				1008.32 (491.23)	.39	.04
3. Length – Personal wisdom task	.06	.76	1			1143.47 (580.41)	-.13	.01
4. General wisdom	-.13	.70	.49	1		13.94 (3.61)	-.41*	.08
5. Personal wisdom	.06	.43	.62	.43	1	14.41 (3.47)	.15	.01

Note. * $p < .05$. For males, unique variability \sim .12; shared variability = .00. For females, unique variability = .14; shared variability = .00.

Self-Regulation and Relationship Satisfaction

A series of standard multiple regressions was conducted to examine whether self-regulation significantly predicted relationship satisfaction in male and female partners. The measures of self-regulation examined were each partner's self-report on the three self-regulation dimensions of change strategies, perseverance, and goal clarity. Separate regressions were conducted predicting satisfaction for each gender.

Data were screened to ensure normality, linearity and homoscedasticity of residuals. No multicollinearity among predictors was identified. Females' report of their own goal clarity was significantly skewed, and required a reflection and a logarithmic transformation to be corrected. A univariate outlier was identified on the variable of females' reports of their own goal clarity. Using a $p < .001$ criterion for Mahalanobis distance, one multivariate outlier was identified on females' goal clarity, but disappeared when the univariate outlier was excluded. Due to the presence of skewness and outliers in the data, analyses were run with and without outliers, and using transformed and untransformed data to assess the difference these variables might make on the outcome.

Male relationship satisfaction was predicted from males' reports of their own self-regulation on the three self-regulation dimensions and was entered in the first block. Female self-regulation was then entered in the second block, to examine how much additional variance female self-regulation could explain in male satisfaction. There were no substantive differences in the results when using transformed data or removing outliers, and the regression with untransformed data and retaining outliers, is reported in Table 6 ($N = 60$).

For men, \underline{R} for regression was significantly different from zero, $R = .65$, $F(6, 53) = 6.54$, $p < .001$, adjusted $R^2 = .36$. Only males' reports of their own goal clarity in their

relationship, were a significant predictor of males' relationship satisfaction ($p < .001$), uniquely explaining approximately 20% of the variance. Goal clarity was positively related to satisfaction. Adding females' self-regulation in the second block did not significantly explain any further variance in male satisfaction, and none of the individual female self-regulation subscales was significant.

To examine whether a similar pattern existed for female partners, a similar regression was performed, predicting female relationship satisfaction from their reports of their own self-regulation on the three dimensions, and males' reported self-regulation on the same dimensions. As differences were noted in the results when using transformed data, results with transformed data and outliers in, are reported in Table 6. R for regression was significantly different from zero, $R = .68$, $F(6, 53) = 7.46$, $p < .001$ (adjusted $R^2 = .40$). A different pattern of results emerged compared with the results for male partners, as both females' self-reported self-regulation and males' self-regulation predicted females' relationship satisfaction. When the first block containing female self-regulation had been entered, $R^2 = .22$, $F_{change}(3, 56) = 5.16$, $p < .01$. Within this block, only the transformed goal clarity subscale was a significant predictor ($p < .05$), and was positively related to satisfaction, uniquely explaining 5% of the variance. After step 2, with male self-regulation added, $R^2 = .46$, $F_{change}(3, 53) = 7.87$, $p < .001$. The addition of male self-regulation significantly added to the prediction of female satisfaction. Both males' reported perseverance ($p < .01$) and males' goal clarity ($p < .05$) were significant predictors of female satisfaction, accounting uniquely for 9% and 7% of the variance, respectively. These findings indicate that male self-regulation was an important correlate of both male and female satisfaction, although female self-regulation did help to explain female satisfaction.

Finally, in both analyses, some correction for distortion was noted, although in both cases the adjusted predictor was not significant. For males, the zero-order correlation of female change strategies with satisfaction was positive, but became negative once the three male self-regulation subscales were taken into account. This suggests that in some way, male self-regulation enhanced the predictive power of female change strategies, but not to a great extent as change strategies remained non-significant. Similarly, for females, female change strategies correlated weakly and positively with satisfaction, but predicted lower levels of satisfaction once goal clarity was included in the equation. Goal clarity seemed to strengthen female change strategies, but again this effect was not significant.

Table 6

Hierarchical Regression of Self-Regulation Scales on Males' and Females' Relationship Satisfaction

Variables	1	2	3	4	5	6	7	Mean (SD)	β	sr^2
Males										
1. Satisfaction (DV)	1							119.77 (11.26)		
2. Male change efforts	.39	1						35.40 (6.52)	.13	.01
3. Male perseverance	.34	.24	1					22.77 (4.59)	.16	.02
4. Male goal clarity	.61	.43	.27	1				12.78 (2.07)	.51***	.20
5. Female change efforts	.05	.07	.04	.11	1			36.37 (6.57)	-.04	.00
6. Female perseverance	.12	.11	.20	.03	.10	1		23.30 (4.54)	.06	.00
7. Female goal clarity	.13	.05	.18	.18	.47	-.09	1	13.22 (2.21)	.03	.00
Females										
1. Satisfaction (DV)	1							118.68 (10.58)		
2. Female change efforts	.11	1						36.37 (6.57)	-.06	.00
3. Female perseverance	.21	.10	1					23.30 (4.54)	.14	.02
4. Female goal clarity (transf.)	.40	.38	-.03	1				-.34 (.30)	.27*	.05
5. Male change efforts	.30	.07	.11	.09	1			35.40 (6.52)	.06	.00
6. Male perseverance	.52	.04	.20	.26	.24	1		22.77 (4.59)	.33**	.09
7. Male goal clarity	.47	.11	.03	.25	.43	.27	1	12.78 (2.07)	.29*	.07

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Transf refers to a transformed version of a variable, corrected for significant skewness. For males, unique variability = .23; shared variability = .20. For females, unique variability = .23; shared variability = .23.

To test whether the relationship between self-regulation and satisfaction could be adequately represented using total self-regulation scores instead of individual subscales, hierarchical regressions were performed to predict male and female satisfaction from self-regulation for each gender. Data were screened to ensure adequacy for analysis. No multicollinearity among predictors was identified. No significant skew, univariate or multivariate outliers were identified. Analyses were therefore performed using untransformed data, with all cases included.

Table 7 shows the results of hierarchical regressions predicting satisfaction from self-regulation totals ($N = 60$). To predict male satisfaction, male total self-reported self-regulation was entered in step 1 and female self-reported self-regulation was entered next in step 2. Examining first the prediction of male satisfaction, with all predictors in the equation, $R = .54$, $F(2, 57) = 11.93$, $p < .001$ (adjusted $R^2 = .27$). After the first block, with male self-regulation in the equation, $R^2 = .29$, $F_{change}(1, 58) = 24.20$, $p < .001$. Male self-regulation reliably explained 29% of the variance in satisfaction. After step 2, with female self-regulation totals added, $R^2 = .30$, $F_{change}(1, 57) = .81$, n. s. The addition of female self-regulation did not significantly add to the prediction of male satisfaction. This indicated that the only important predictor of male satisfaction was male self-regulation, and that female self-regulation was not significant.

Examining next the prediction of female satisfaction from female self-regulation then male self-regulation, after all predictors were entered, $R = .55$, $F(2, 57) = 12.55$, $p < .001$ (adjusted $R^2 = .28$). After the first block, with female self-regulation in the equation, $R^2 = .05$, $F_{change}(1, 58) = 3.27$, n. s. Female self-regulation did not reliably explain variance in female satisfaction. After the second step, with male self-regulation totals in

the equation, $R^2 = .31$, $F_{change}(1, 57) = 20.73$, $p < .001$. Including males' self-regulation in the equation reliably added to the prediction of female satisfaction.

Final analyses were performed entering male and female self-regulation in reverse order, but results still indicated that for both male and female satisfaction, male self-regulation was a significant correlate of satisfaction above the effects of female self-regulation. Overall, these results show that male self-regulation is more important than female self-regulation in predicting both male and female satisfaction. However, differences were noted between the analyses run using the subscales and those run using only the total scores. In general, using individual subscales as predictors led to increased variance being explained in satisfaction for both genders. Further, when using individual subscales, female self-regulation was a significant correlate of female satisfaction; it was not significant when totals were used.

The Interaction Between Self-Regulation and Wisdom in Predicting Relationship Satisfaction

There were no main effects of wisdom, but it seemed possible that wisdom might interact with relationship self-regulation. Potentially, wisdom could influence satisfaction but only in the context of high relationship self-regulation. In other words, having knowledge about relationship dilemmas (wisdom) might only be helpful if one also makes efforts to improve one's relationship (self-regulation). To investigate this possibility, cross-products were calculated for each gender, between the two wisdom task total scores and the self-regulation total score. This produced two cross-products for each gender.

Table 7

Hierarchical Regression of Self-Regulation Total Scores on Male and Female Relationship Satisfaction

Variables	1	2	3	Mean (SD)	β	sr^2
Males						
1. Satisfaction (DV)	1.00			119.77 (11.26)		
2. Self-reported male self-regulation	.54**	1.00		70.95 (9.93)	.54*	.28
3. Self-reported female self-regulation	.13	.18	1.00	72.88 (9.30)	.03	.00
Females						
1. Satisfaction (DV)	1.00			118.68 (10.58)		
2. Self-reported female self-regulation	.23*	1.00		72.88 (9.30)	.14	.02
3. Self-reported male self-regulation	.54**	.18	1.00	70.95 (9.93)	.51**	.25

Note. * $p < .05$, ** $p < .001$. Males: unique variance = .28; shared variance = .02. Females: unique variance = .27; shared variance = .04.

Total scores were used in preference to individual subscale scores, otherwise the number of products would have been too numerous and the analysis would have lacked power. A hierarchical regression was conducted for each gender to see if the interaction between wisdom and self-regulation predicted satisfaction, over and above the main effects for these variables. The other gender's variables were also entered in later regression steps, to see if their wisdom or self-regulation cross-products could account for additional variance.

In the first analysis ($N = 59$), lengths of response to the wisdom tasks were entered in step 1 and general wisdom, personal wisdom and self-regulation totals were entered in step 2. In step 3, the cross-products of male self-regulation by general and personal wisdom were entered. To examine for additive effects of female wisdom and self-regulation, female wisdom and self-regulation variables were entered in step 4, and female cross-products were entered in step 5. There were no substantive differences in the results when using transformed data or removing outliers, so the regression with untransformed data and outliers in, is reported in Table 8. After step 5, with all predictors entered into the analysis, $R = .69$, $F(12, 46) = 3.42$, $p < .01$ (adjusted $R^2 = .33$).

After the first block, with response lengths in the equation, $R^2 = .01$, $F_{change}(2, 56) = .14$, n. s. Response length to the wisdom tasks did not reliably predict males' scores on relationship satisfaction. Addition of the second block, containing wisdom and self-regulation totals, significantly improved the prediction of satisfaction, $R^2 = .45$, $F_{change}(5, 53) = 8.81$, $p < .001$. This finding was consistent with previous analyses reported earlier. However, adding the four cross-products to the equation in the third step did not reliably improve prediction of satisfaction. Adding this third step to the analysis was not significant, and none of these products was a significant predictor of the dependent

variable. The subsequent addition of both the female variables and cross-products to the equation also did not reliably improve the prediction of satisfaction, indicating that there was no additive effect of either in predicting male satisfaction. Correction for distortion was noted in the results, although the corrected predictor was not significant.

Specifically, length of the personal wisdom task correlated negatively with satisfaction, but changed to positively predict satisfaction once length of the general wisdom task was taken into account. This suggests that general wisdom task length enhanced the predictive power of personal wisdom task length; however, this was not substantive since neither predictor was significant.

A second regression was run to predict female relationship satisfaction from the cross-product of wisdom and self-regulation ($N = 59$). This analysis was run similarly to the previous analysis, except to predict female satisfaction from female wisdom, self-regulation and cross-products. As before, male variables and male cross-products were entered in the final regression steps to examine if there were an additive effect. Some differences in results were found when excluding the outlier from the data; however, the outlier was examined and considered to be part of the population, so it was retained. Results with untransformed data and the outlier in are reported in Table 9. With all predictors entered into the analysis, $R = .65$, $F(12, 46) = 2.78$, $p < .01$ (adjusted $R^2 = .27$).

After the first block, with response lengths in the equation, $R^2 = .01$, $F_{change}(2, 56) = .20$, n. s. Response lengths to the wisdom tasks did not reliably predict females' scores on relationship satisfaction. Addition of wisdom and self-regulation totals in the second block increased the value of R^2 , but showed only a trend towards statistical significance ($p = .099$). Adding the two cross-products to the equation in the third step also did not overall reliably improve prediction of satisfaction. The inclusion of male wisdom and

self-regulation totals in the fourth step did reliably improve prediction of female satisfaction, consistent with previous analyses ($R^2 = .40$, $F_{change} (10, 48) = 3.25$, $p < .01$), but adding the male cross-products in the last step was not significant. In addition, it was noted that some distortion had been corrected in the results. While personal wisdom task length had a small positive correlation with satisfaction, once both general wisdom task length and either general or personal wisdom were taken into account, increases in personal wisdom task length predicted increases in satisfaction. However, these relationships were not significant.

In sum, the addition of either female or male cross-products in equations predicting satisfaction for men and women did not account for significant additional variance. Finally, as an additional check, all of the analyses were run again excluding response length. However, the results were identical, and for consistency the analyses with length included are reported above.

The Distinctiveness of the Relationship Between Self-Regulation and Satisfaction

Given the significant prediction of relationship satisfaction by male self-regulation for both men and women, further analyses were run to establish whether the relationship between self-regulation and satisfaction was mediated by mood, personality or emotional intelligence. Personality, mood and emotional intelligence variables were considered important to test as these variables potentially could share variance with self-regulation in theoretically logical ways. For example, high scores on emotional intelligence may be associated with increased ability to self-regulate in relationships, as well as increased satisfaction. These possibilities needed to be excluded.

Table 8

Hierarchical Regression of Length, Wisdom, Self-Regulation and Cross-Product Variables on Males' Relationship Satisfaction

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	β	sr^2
1. Satisfaction (DV)	1.00														
2. Length – general wisdom task	-.05	1.00												.07	.00
3. Length – personal wisdom task	-.07	.63	1.00											.13	.00
4. General wisdom	-.07	.69	.35	1.00										-.44	.00
5. Personal wisdom	-.27	.40	.66	.40	1.00									-.96	.01
6. Self-regulation	.55	.15	.17	.28	.16	1.00								.09	.00
7. General wisdom x self-regulation	.18	.61	.34	.92	.36	.63	1.00							.37	.00
8. Personal wisdom x self-regulation	.08	.37	.60	.45	.85	.64	.60	1.00						.70	.00
9. M General wisdom	-.04	.39	.43	.10	.31	.06	.08	.27	1.00					.12	.00
10. M Personal wisdom	.09	.02	.11	.03	.39	.28	.11	.48	.43	1.00				.46	.00
11. M Self-regulation	.13	.10	.03	.04	.11	.18	.09	.18	.09	.29	1.00			.32	.00
12. M General wisdom x self-regulation	.02	.33	.39	.12	.32	.14	.12	.32	.92	.51	.47	1.00		-.15	.00
13. M Personal wisdom x self-regulation	.11	.02	.11	.04	.27	.30	.13	.47	.40	.92	.64	.62	1.00	-.51	.00
Means	120	1260	1401	15	14	71	1086	1028	14	14	73	1021	1060		
Standard deviations	11	615	722	4	3	10	377	284	4	3	9	309	317		

Note. M refers to male. ^a Unique variability = .01; shared variability = .46. No individual predictor was significant in the final model.

Table 9

Hierarchical Regression of Length, Wisdom, Self-Regulation and Cross-Product Variables on Females' Relationship Satisfaction

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	β	sr^2
1. Satisfaction (DV)	1.00														
2. Length – general wisdom task	.07	1.00												.16	.01
3. Length – personal wisdom task	.06	.76	1.00											-.20	.01
4. General wisdom	-.13	.70	.49	1.00										-2.10	.03
5. Personal wisdom	.06	.43	.62	.43	1.00									2.16	.03
6. Self-regulation	.23	.17	.15	.09	.29	1.00								.36	.00
7. General wisdom x self-regulation	-.01	.69	.52	.92	.51	.47	1.00							2.31	.03
8. Personal wisdom x self-regulation	.13	.42	.57	.40	.92	.64	.62	1.00						-2.71	.02
9. F General wisdom	-.00	.09	.05	.10	.03	.04	.12	.04	1.00					-1.40	.02
10. F Personal wisdom	-.09	.22	.27	.31	.39	.11	.32	.37	.40	1.00				.81	.01
11. F Self-regulation	.54	.28	.32	.06	.28	.18	.14	.30	.28	.16	1.00			.49	.01
12. F General wisdom x self-regulation	.22	.17	.17	.08	.11	.01	.12	.13	.92	.36	.63	1.00		1.51	.01
13. F Personal wisdom x self-regulation	.20	.32	.40	.27	.48	.18	.32	.47	.45	.85	.64	.60	1.00	-1.06	.01
Means	119	1008	1144	14	14	73	1021	1060	15	14	71	1086	1028		
Standard deviations	11	491	580	4	3	9	309	317	4	3	10	377	284		

Note. F refers to female. ^a Unique variability = .19; shared variability = .23. No individual predictor was significant in the final model.

The traditional model of mediation, as discussed by Baron and Kenny (1986), posits three conditions which must be met in order to demonstrate mediation. First, the proposed independent variable must correlate significantly with the possible mediator. Second, the possible mediator must significantly correlate with the dependent variable. Third, if mediation is present, the independent variables will no longer significantly predict the dependent variable when the mediating variables are statistically controlled. In the current study, separate mediation models were tested for each gender.

For males, correlations were first obtained between several personality, mood, and intelligence variables measured in the study and males' self-regulation. Variables which were assessed as possible mediators were mood disturbance (measured by the Depression Anxiety Stress Scales), emotional intelligence (measured by the Emotional Intelligence Scale), personality variables (extraversion, neuroticism, openness to experience, agreeableness and conscientiousness, measured by the NEO-FFI) and intelligence (measured by the National Adult Reading Test). Correlations were then performed to assess which potential mediating variables also correlated with relationship satisfaction, the dependent variable. The only variables which significantly ($p < .05$) correlated with both self-regulation and satisfaction were emotional intelligence and conscientiousness. A hierarchical regression was run to establish whether the third criterion was satisfied; that is, whether the relationship between self-regulation and satisfaction would become not significant when emotional intelligence and conscientiousness were controlled.

Data were first screened to ensure adequacy for analysis. No multicollinearity among predictors was identified. No significant skew, univariate or multivariate outliers were identified. Consequently, analyses were performed using untransformed data, with

all cases included. Table 10 shows the results of the hierarchical regression predicting male relationship satisfaction from males' reported own self-regulation ($N = 61$). Males' emotional intelligence and conscientiousness were entered in step 1, and males' report of their own self-regulation was entered in step 2. With all predictors in the equation, $R = .55$, $F(3, 57) = 8.02$, $p < .001$ (adjusted $R^2 = .26$).

After the first block, with emotional intelligence and conscientiousness in the equation, $R^2 = .15$, $F_{change}(2, 58) = 4.95$, $p < .05$. Emotional intelligence and conscientiousness reliably explained 15% of the variance in satisfaction. With males' self-regulation totals added to the equation, $R^2 = .30$, $F_{change}(1, 57) = 12.24$, $p < .05$. This indicated that the relationship between self-regulation and satisfaction remained significant even after controlling for emotional intelligence and conscientiousness.

A similar analysis was performed to see if the relationship between female self-regulation and satisfaction was mediated by other variables. Correlations were first performed between the variables outlined in the previous analyses with males in the study, and females' self-regulation and relationship satisfaction. However, these analyses indicated that there were no variables which correlated with both self-regulation and satisfaction, so no further tests for mediation effects were performed.

In total, analyses to test potential mediating variables of the relationship between self-regulation and satisfaction did not show evidence of mediation. For females, no mediating variables were identified. For males, results showed that self-regulation significantly added to the prediction of satisfaction, above the influence of other factors which also predicted satisfaction.

Table 10

Hierarchical Regression of Emotional Intelligence, Conscientiousness and Self-Regulation of Self on Males' Relationship Satisfaction

Variables	1	2	3	4	β	\underline{sr}^2
1. Satisfaction (DV)	1.00					
2. Emotional intelligence	.35	1.00			.08	.00
3. Conscientiousness	.30	.43	1.00		.04	.00
4. Self-reported self-regulation	.54	.51	.46	1.00	.48*	.15
Means	119.49	125.61	34.49	70.92		
Standard deviations	11.37	15.95	5.68	9.85		

Note. * $p < .01$. Unique variability = .15; shared variability = .15.

Discussion

Results did not support the first hypothesis that general and personal wisdom would predict higher levels of satisfaction in partners. Neither men's nor women's general or personal wisdom was significantly associated with their relationship satisfaction. However, the second hypothesis that self-regulation would predict higher levels of satisfaction was supported. Specifically, results indicated that higher levels of male self-regulation significantly predicted higher relationship satisfaction in men and women.

A number of factors may have contributed to the non-significant relationship between wisdom and satisfaction. First, the data set obtained had a truncated range of scores on both relationship satisfaction and on wisdom. In relation to satisfaction, the means obtained for males and females were broadly consistent with the original DAS norms (Spanier, 1976), but there was little representation of partners scoring in the distressed range (scoring less than 98 on their total DAS score). Specifically, only 7% of males and 3% of females scored 98 or less on the DAS. Similarly for wisdom, the range of scores was truncated as most partners scored low on the seven-point wisdom scale. It is possible that partners who would have scored extremely low on the wisdom measures were not part of the sample, as they may have previously separated or divorced.

To address these issues in future, it would be helpful to specifically sample for clinically distressed couples (e.g., those seeking couple therapy). Wisdom may account for variance in such a sample. It might also be useful to sample people who score exceptionally highly on wisdom measures, and examine the quality and satisfaction within their personal relationships. For example, those working in human services professions (e.g., clinical psychology) tend to score significantly higher on wisdom measures than those in other professions (e.g., accounting) (Smith,

Staudinger, & Baltes, 1994; Staudinger, Smith, & Baltes, 1992). Another strategy which could be useful would be to sample people who are nominated as being wise by others, as this approach generally yields people scoring higher in wisdom (Baltes, Staudinger, Maercker, & Smith, 1995).

While these sampling techniques might be useful in future, it should be noted that even with a truncated range of scores, the spread of relationship satisfaction in the current sample was sufficient to demonstrate a clear association between satisfaction and self-regulation. In addition, the scores obtained were consistent with past research of Baltes and his colleagues investigating normal, older community adults (e.g., Smith, Staudinger, & Baltes, 1994; Staudinger & Baltes, 1996). It seems evident that across a broadly representative range of DAS scores, wisdom does not predict relationship satisfaction. It would be of theoretical interest if there are people in the population who are extremely wise and who have superlative relationships, but this will probably not make a big difference to the population given that high wisdom is such a rare commodity.

The relationship between wisdom and satisfaction might be moderated by life crises. Many studies have demonstrated the links between negative life events and decreased relationship satisfaction (e.g., Cohan & Bradbury, 1997; Jacobson, Schmaling, & Holtzworth-Munroe, 1987; Krokoff, Gottman, & Roy, 1988). For example, if one partner develops a health problem, the couple is at risk for increased relationship and sexual problems (Schmaling & Sher, 1997). Applying these findings to wisdom, it is possible that wisdom may be of most use when life crises are experienced by the couple. Characteristics typically assumed to represent wisdom, such as pragmatic procedural knowledge, management of uncertainty, and awareness of contexts surrounding issues would logically seem to be of benefit in a life crisis.

In the current sample, life crises were not specifically assessed and it is possible that I inadvertently obtained couples who were unlikely to be experiencing life crises. Couples in the study were all in long-term, relatively satisfied relationships, with higher levels of household income than the general population. It is possible that some couples in the sample would have experienced health problems given that men and women were, on average, in their fifties. However, it is likely that couples who were experiencing major life crises would not have volunteered to participate in the study, leading to a group of couples experiencing a relatively low number of negative life events. It would be useful for future research to examine this possibility by specifically measuring the number and severity of life crises reported by couples, and testing for an interaction between life crises and wisdom scores (i.e., moderation) in analyses predicting relationship satisfaction. For example, a major life crisis that a significant number of older couples confront is one partner's diagnosis of cancer, given that the most significant risk factor for cancer is increasing age (Garfinkel, 1995). It would be informative to examine the role of wisdom in predicting relationship satisfaction amongst couples dealing with a cancer diagnosis. If it is true that wisdom is a resource which is most beneficial during times of crisis, then possibly higher levels of wisdom would significantly predict couples' satisfaction levels during the cancer experience.

Another issue concerning the results concerning wisdom relates to the intercorrelations among the wisdom variables for each gender. One interesting finding was that within each gender, men's and women's general wisdom and personal wisdom scores were moderately correlated. In addition, across genders, men's and women's personal wisdom scores were modestly correlated but their general wisdom scores were unrelated to each other. These findings raise two questions: are there particular aspects of general wisdom which overlap with personal

wisdom, and second, are there particular aspects of personal wisdom on which partners converge? In relation to the first question, when the original five wisdom criteria were correlated for each gender, there were no especially high correlations on a particular subscale, which provided no evidence that a particular subscale was especially strongly associated with satisfaction. In relation to the second question, when men's and women's scores on each of the five personal wisdom criteria were correlated, similar findings were obtained. These findings probably indicate a scaling effect for wisdom, in that the total wisdom score is more reliable than the individual scales. These findings also suggest that men's and women's personal wisdom scores are related, but at the general wisdom level rather than in terms of specific wisdom criteria.

A final consideration relating to the results predicting satisfaction from wisdom is the difficulty of the tasks discussed by couples. Couples who are most distressed are probably those who deal with the most difficult issues (e.g., having an affair, substance dependence, etc). Some recent research (Sanford, 2003) has partially supported this idea, finding that task difficulty is likely to affect how couples talk about a range of issues, not merely the difficult issue itself (referred to as the "distal effect" of task difficulty). Based on the original conceptualisation of wisdom as assisting to manage difficult life dilemmas (e.g., Baltes & Staudinger, 2000), presumably wisdom is likely to be most beneficial when dealing with high task difficulty topics. To assess personal wisdom in the current study, couples chose one topic to discuss. No restrictions were placed on topic choice except that couples had experienced some disagreement about the issue. As a result, it is likely that couples varied considerably in the difficulty level of the different topics chosen, which may have impacted on their personal wisdom scores. If partners had been asked to report how difficult they found the task, then obviously task difficulty could have been

controlled in analyses. However, the more important question is under what conditions personal wisdom might be important. It may be helpful in future research to specifically examine differences in personal wisdom under conditions of high task difficulty, as this would be consistent with the idea of wisdom being an expert knowledge system which assists problem-solving in difficult life dilemmas (Baltes & Staudinger, 2000).

The second hypothesis that higher levels of self-regulation would predict higher levels of satisfaction, was supported. This finding replicates previous work indicating an association between self-regulation and satisfaction in newly-wed couples (Wilson, et al., 2003), and it extends past research by demonstrating that the association remains in long-term married couples as well. Of course, while it can be concluded that self-regulation predicts satisfaction cross-sectionally, it is not yet possible to say whether higher self-regulation causally leads to higher satisfaction. Future research needs to focus on the longitudinal prediction of satisfaction from self-regulation, as this would help clarify the nature of the relationship.

Male self-regulation predicted relationship satisfaction for both men and women, whereas females' self-regulation showed no association with female satisfaction. Examination of males' and females' self-regulation means indicated that they were similar, yet the amount that men work at their relationship is more strongly associated with relationship satisfaction. This finding parallels with gender differences in other areas of relationship functioning. For example, in the transition to parenthood, males' efforts at household tasks and care for the child are more strongly predictive of both partners' satisfaction and well-being than are female efforts (Feeney, Hohaus, Noller, & Alexander, 2001; Tomlinson, 1987; Vandell, Hyde, Plant, & Essex, 1997; Willoughby & Glidden, 1995). Research into male and female conflict management has indicated that men tend to experience greater difficulty than

women in managing conflict, so that the extent to which they are able to successfully manage it strongly influences couple satisfaction (Gottman, 1994).

Other authors have focused on how partners' cognitions predict their dyadic adjustment, with particular attention to the role of attributions and gender differences (e.g., Fincham & Bradbury, 1987, 1988, 1992, 1993). In general, these studies have indicated that attributions for a partner's behaviour which emphasise the impact of negative events and minimise the impact of positive relationship events, generally result in lower relationship satisfaction (Fincham, Harold, & Gano-Phillips, 2000). However, some studies have suggested that while attributions about one's partner tend to predict women's satisfaction, no such relationship is found for men (Fincham & Bradbury, 1987). Other research in the area of cognition (Carels & Baucom, 1999) has focused on perceptions of support in relationships, and has found that compared with women, men appear to be less influenced by the immediate aspects of a supportive interaction and more influenced by general sentiment about the relationship (known as "sentiment override") (Weiss, 1980).

In all, these findings suggest that women seem to be more attentive to relationship processes and more responsive than men, engaging in more "bottom-up" or data-driven processing, compared with men who are said to be less attentive, engaging in more "top-down" or sentiment-driven processing (Carels & Baucom, 1999; Fincham, Garnier, Gano-Phillips, & Osborne, 1995). Applying these findings to self-regulation, it is possible that the importance of men's self-regulation in predicting male and female satisfaction (and corresponding lack of predictive importance of women's self-regulation) represents an example of women's use of data-driven processing influencing their satisfaction. For women, it may be that their perceptions of their own efforts at the relationship are secondary to what degree of effort they perceive their partner as making. Women may be more likely to monitor

the relationship more carefully than men. If a woman perceives that her partner is not making sufficient effort, she may become distressed. In this way, males' self-regulation may be more crucial, since it guides women's evaluations of the relationship and subsequent satisfaction.

Furthermore, if a female partner becomes distressed due to her partner's perceived lack of effort, it is probable that eventually her partner will realise she is unhappy and his satisfaction will decrease as a result. This idea of a lag effect in terms of changes in women's satisfaction later leading to changes in males' satisfaction has been identified in previous research. For example, in studies examining the process of separation in distressed relationships, it is frequently the female partner who initiates separation due to her low relationship satisfaction (Kincaid & Caldwell, 1995; Wadsby & Svedin, 1992; Wolcott & Hughes, 1999). Often the male partner is unaware of her distress until she initiates separation, at which later time he in turn may also become distressed, and remain so (Jordan, 1996). In this way, one possibility is that female satisfaction may influence male satisfaction in a cyclical pattern involving her perceptions of her partner's self-regulation efforts. More satisfied males are probably likely to make more efforts, leading to happier females and eventually increased satisfaction themselves.

Overall, the findings of the current study raise a number of theoretical issues. First, it may be useful to know the extent to which wisdom, as it is measured in this study and previous work, is actually manifested in real life problem-solving. The method of wisdom measurement used by Baltes and colleagues (e.g., Smith, Staudinger, & Baltes, 1994) and in the present study, yields a verbal report of problem-solving processes which are said to be indicative of various wisdom-related components or skills. However, we know little about how this verbal report correlates with day-to-day functioning. In theory, a person's wisdom level should predict how

they respond to specific life dilemmas. Yet in the present study, general and personal wisdom correlate only modestly, suggesting that a person's wisdom about general life dilemmas does not necessarily translate into how they respond to personal situations.

Second, it is unclear whether the present method of assessing wisdom captures the wisdom construct optimally. Although the current method of wisdom assessment is generally reliable and is different from other constructs in theoretically consistent ways (i.e., shows construct validity), it could be argued that it does not represent some aspects of the wisdom construct. In addition, the range of wisdom scores obtained using the current system of assessment is truncated and as a consequence, variability amongst individuals is restricted. Other researchers have focused not only on the cognitive aspects of wisdom, but also on the affective or reflective aspects, such as compassion, good listening skills, sensitivity and concern for humanity (e.g., Ardel, 1997; Kramer, 2000; Lyster, 1996). Traits such as these are generally endorsed within the community as being part of the essence of wisdom (Sternberg, 1985); however, they are not explicitly part of the wisdom assessment method used in the current study and in past research. It is likely that these traits are important in managing dilemmas involving personal relationships, as well as in determining relationship satisfaction more broadly. It would be useful to re-examine the way in which we define and measure wisdom, and how this might be informative in understanding personal relationships.

A third theoretical implication of the current research concerns the self-regulation construct. The present results indicated that broadly, self-regulation predicts higher levels of global relationship satisfaction. Specifically, the extent to which the male partner reports or is perceived to be making efforts to bring about helpful changes in the relationship, persevere in the face of difficulties, and maintain clear relationship goals, predicts both his satisfaction and that of his partner.

However, how might this reported self-regulation be displayed in actual behaviour? It would be informative to examine what might be the possible mechanisms for the association between self-regulation and satisfaction.

One possibility is that self-regulation might exert a direct effect on couples' communication patterns. The association between communication behaviours and relationship satisfaction is reliable and has been consistently replicated (e.g., Stanley, Markman, & Whitton, 2002). Partners who are higher in self-regulation may be able to identify strengths and weaknesses in the way they relate to their spouse, and consequently make efforts to demonstrate more positive communication behaviours during interactions with their partner. Positive behaviours such as verbal encouragers (acknowledgement and agreement), low levels of hostility and criticism, and active engagement (as opposed to withdrawal), typically associated with happier couples (e.g., Christensen & Shenk, 1991; Gottman & Krokoff, 1989; Halford, Hahlweg, & Dunne, 1990; Heavey, Christensen, & Malmuth, 1995; Notarius & Markman, 1993; Weiss & Heyman, 1990), may be indicative of couples who self-regulate effectively within their relationships. A useful avenue for future research would therefore be to obtain recordings of couples' interactions while discussing a real issue in their relationship.

Based on the current conceptual understanding of self-regulation, a number of relationship behaviours could be identified and assessed. Compared with partners with lower levels of self-regulation, those with higher levels of self-regulation should in theory display greater levels of positive speaking and listening skills, and positive affect. Couples with higher levels of self-regulation should also display lower levels of negative speaking and listening skills, and negative affect, compared with couples with lower levels of self-regulation. One strategy to test these hypotheses would be to ask partners to identify an issue of conflict, and then ask them to discuss strategies to

manage the conflict. This discussion could be recorded for later analysis. The use of a conflict situation for couples to discuss is often helpful (Heyman, 2001) as it typically elicits higher levels of negative emotion and physiological arousal, which make good communication harder to maintain. It would be valuable to examine the possible behavioural pathways of self-reported self-regulation in future research, as it would determine whether self-regulation was an independent correlate of satisfaction, or was merely an artefact of the association between communication and satisfaction.

A second possibility concerning the translation of self-regulation to actual behaviours is the impact of self-regulation on cognitive factors, such as attributions made about one's partner. Logically, it is possible that if a partner is making efforts to appraise and make changes to improve the relationship, these changes may be manifested through more positive and fewer blaming attributions about the other partner. Partners who self-regulate may be more likely to have a better understanding of relationship problems, which may lead to their forming a more positive set of attributions about their partners' behaviours. More positive attributions about one's partner are likely to lead to higher relationship satisfaction (Fincham, Harold, & Gano-Phillips, 2000; Johnson, et al., 2001). In turn, these attributions are likely to impact on their affect arousal and subsequent interactions with their partner. It would be useful to conduct a study to examine whether the effects of self-regulation on satisfaction were actually mediated by the attributions partners made about each other.

If self-regulation were predictive of attributions (such that higher levels of self-regulation predicted more positive partner attributions), it would be constructive to know whether this mediated relationship was maintained longitudinally. For example, would a newly-wed partner's self-regulation at the start of their relationship be predictive of their attributions and consequent satisfaction at a later time point in

the relationship? If so, the importance of making efforts to appraise and to change one's personal relationship would be further underlined.

In summary, the current study has demonstrated that in long-term married couples, the efforts made to improve the relationship are more important to satisfaction than are knowledge and understanding about relationship issues in general (i.e., wisdom). Currently, the measurement of wisdom tends to result in a very restricted range of responses: higher wisdom-related knowledge scores are extremely rare, which limits the capacity for research to explore the usefulness of wisdom in everyday life. In addition, other unresolved issues such as when wisdom is likely to be most helpful (e.g., in life crises, or in everyday living) will be difficult to sort out until we can assess the wisdom construct in such a way as to achieve a better spread of scores. Alternatively, if people really are very similar to one another in their wisdom-related knowledge, then the utility of the wisdom construct is unclear. It would be theoretically interesting to examine those individuals scoring very highly on wisdom; however, it is uncertain whether pursuing this line of enquiry would be of benefit to the broader population who score relatively low on wisdom measures. Conducting further research into the association between self-regulation and satisfaction therefore seems more promising.

Several directions for future research into self-regulation are important to consider. First, it would be helpful to identify how these self-reported change efforts translate into actual behaviours, such as communication skills, which are a well established correlate of satisfaction. Second, research needs to demonstrate whether self-regulation exerts an effect on satisfaction via cognitive factors, such as attributions. This would provide useful information about whether self-regulation was an independent construct in its own right, or whether its association with

satisfaction is merely an artefact of the consistently replicated association between attributions and satisfaction.

To partially address the question of the mechanisms of the association between self-regulation and satisfaction, Study 2 examined the associations between self-regulation, communication skills, and satisfaction.

CHAPTER FIVE

STUDY TWO

The aim of the current study was to replicate the association found in Study 1 between relationship self-regulation and satisfaction, and to extend Study 1 by investigating whether communication skills mediated this association. As previously discussed, the association between communication skills and relationship satisfaction is robust and has been consistently replicated (e.g., Gottman, 1994; Weiss & Heyman, 1990). Couples who exercise better interpersonal skills when interacting with their partner tend to be less distressed in their relationship, have a significantly lower chance of relationship dissolution than couples who exercise poor communication skills (e.g., Stanley, Markman, & Whitton, 2002; Weiss & Heyman, 1990).

If relationship self-regulation is a key correlate of relationship satisfaction, it would be important to ensure that its effects on satisfaction are not purely mediated by communication skills. It may be that good communication skills allow couples to better understand and appraise issues in ways leading to more effective behaviours to address these issues. If the association between self-regulation and satisfaction were not significant beyond variance attributable to communication skills, then self-regulation might not be a useful construct.

The current study aimed to examine whether the association between self-regulation and satisfaction was mediated by communication skills, using a sample of couples in the early stages of their relationship. It was hypothesised that 1) self-regulation would be significantly associated with satisfaction; and 2) the association between self-regulation and satisfaction would remain significant even after controlling for communication skills.

Method

Participants

Participants were 101 couples in the early stages of a committed relationship, who were either engaged, living together with plans for a future together, or recently married. Couples were recruited as part of a broader randomised controlled treatment trial on the effectiveness of a flexibly delivered relationship education program. In the current study, pre-treatment data before couples were assigned to treatment groups were utilised. Couples were recruited using a combination of media outreach approaches (television and radio interviews, press advertisements and interviews) and distribution of program information brochures. The outreach offered free participation in a university-based relationship preparation program forming part of ongoing research into relationships. The mean age of men was 36.15 ($SD = 9.88$) and the mean age of women was 34.19 ($SD = 10.29$).

The sample was highly educated relative to the overall Australian population, with 35% of men and 41% of women having completed one to four years of tertiary education. Partners were asked their occupations, which were classified using the Australian Standard Classification of Occupations (ASCO) rating system (Australian Bureau of Statistics, 1986). This system classifies occupations using a 6-digit coding system, the first digit of which provides an overall classification from 1 (highest) to 8 (lowest) of the skill level required within the occupational group. The mean occupational skill level of the sample was average to high, with women having a mean occupational skill level of 2.8 ($SD = 2.0$) and men 2.8 ($SD = 1.8$).

Materials

Self-report measures.

Couples were assessed using self-report measures (in the form of a questionnaire booklet) and some observational measures. Only the measures relevant to the current study are reported here.

Marital satisfaction was assessed using the Dyadic Adjustment Scale (DAS) (Spanier, 1976), which is an established 33-item measure assessing overall relationship satisfaction. Once completed, the DAS yields a total relationship satisfaction score, which is highly reliable ($\alpha = .96$). The DAS also shows discriminant validity, in terms of reliably differentiating between married and divorced samples on the basis of total DAS scores, and correlates highly with other measures of dyadic adjustment (Spanier, 1976).

Relationship self-regulation was assessed using the Self-Regulation for Effective Relationships Scale (SRERS) (Wilson, et al., 2003). As described in Study 1, the SRERS is a new scale comprised of 19 items which measure the degree to which each partner engages in relationship efforts within their intimate relationships. Self-regulation efforts involve the extent to which a partner can appraise the relationship's functioning, set goals to improve the relationship, and implement strategies to achieve those goals. Analyses indicate that the SRERS consists of three factors: self-reported self-regulation strategies, relationship efforts, and relationship goal clarity. These factors can also be summed to produce a total self-regulation score. Each factor is internally consistent (Cronbach's $\alpha > .75$), as is the total score (Cronbach's $\alpha = .88$) (Wilson, et al., 2003). The SRERS has good construct validity, inter-partner agreement, convergent and divergent validity (Wilson, et al., 2003).

Behavioural tasks.

Couples completed several behavioural communication tasks, which were videotaped for coding purposes. The first task was a positive reminiscence task, where partners were asked to identify and discuss for 10 minutes a positive time they had shared together. This was followed by a problem-solving communication task, in which an issue of conflict was identified and was then discussed for 10 minutes. Asking couples to discuss topics of conflict is a commonly used way of assessing couple communication (Heyman, 2001).

The Rapid-KPI (Halford, et al., 2001; Halford, et al., 2000) was used to code each of the communication tasks. The Rapid-KPI was derived from the original KPI (Kategoriensystem für Partnerschaftlich Interaktion) (Hahlweg & Conrad, 1985; Hahlweg, et al., 1984) which assesses a range of communication behaviours during couple interaction. Using the Rapid-KPI, each 30-second time interval is coded for the occurrence of behaviour that fits into one of the KPI's original verbal content categories, as well as the presence of negative non-verbal behaviour (negative affect). KPI categories can then be collapsed into four summary scales, based on research indicating that behavioural codes can be usefully condensed into a small number of functional classes (Sayers, Baucom, Sher, Weiss, & Heyman, 1991).

Table 11 provides definitions of each of the relevant KPI codes making up the Rapid-KPI summary scales. The summary scales were positive speaking (problem describe, positive solution), positive listening (accept, agree), negative speaking (criticise, negative solution) and negative listening (disagree, justify). The occurrence of positive and negative non-verbal behaviours (known as positive and negative affect) was also coded. (Positive affect was not a part of the original Rapid-KPI, but was coded in the current study). The derived measures of communication were the percentage of intervals in which the particular behaviour occurred. There is evidence

to suggest that these measures derived from the Rapid-KPI reliably discriminate between distressed and non-distressed couples (Kelly, Halford, & Young, 2002), and are sensitive to changes in communication resulting from relationship education (Halford, et al., 2001) and couple therapy (Halford, Sanders, & Behrens, 1993; Kelly & Halford, 1995).

The videotaped interactions were coded by trained research assistants blind to the hypotheses of the study. Coders received approximately 30 hours of coding training using the Rapid-KPI. Training included memorising code definitions, watching pre-coded videotapes, and extensive practice coding. One third of all tapes was randomly sampled to be coded independently by a second coder. The observed inter-coder agreement was high, with intraclass correlation coefficients (ICCs) of 0.77 for positive speaking, 0.92 for positive listening, 0.97 for negative speaking, 0.94 for negative listening, 0.97 for positive affect, and 0.93 for negative affect. The derived percentages for the two communication tasks were averaged, to create a more reliable overall measure of positive and negative speaking, listening and affect for each gender.

Table 11.

Code definitions for the couple communication tasks.

Code	Code definition
Positive solution	Constructive proposals, or suggestions to compromise or resolve a problem.
Acceptance	Demonstrations of acceptance of the other person, using paraphrasing, open-ended questions or positive feedback.
Agreement	Demonstration of agreement with the other person, by direct agreement, assent or acceptance of responsibility
Problem description	Neutral problem descriptions, or neutral questions seeking problem description.
Criticise	Any expression of dislike or disapproval, or statements which are likely to demean the listener.
Negative solution	Descriptions of something the speaker wants the listener to not do, or to stop doing, in order to solve a problem.

Table 11 (continued).

Code definitions for the couple communication tasks.

Justification	Denial of responsibility, or excuses for one's behaviour or a problem.
Disagreement	Direct disagreement of partner, or "Yes, but..." type disagreements.
Negative non-verbal (negative affect)	Non-attending to discussion, or negative facial expression or voice qualities.
Positive affect	Positively attending to discussion, displaying positive/interested facial expression, and warm/interested voice tone.

Note. Code descriptions derived from Halford, Sanders, & Behrens (2000).

Procedure

Couples contacted the university registering interest in participating in the project, and were then asked a series of questions over the telephone to ensure their suitability for the project. These questions verified that the person contacting the university was in a committed relationship, that the relationship was in its early stages (that couples had not been living together for more than four years), and that both partners in the couple were willing to come in for an initial session. Data were subsequently obtained from 110 couples. Coded data for nine couples were not available owing to inaudible tape recordings, leaving complete data of 101 couples for analysis. Assessment of participating couples took place in a research laboratory at Griffith University. An initial intake interview was conducted, where written informed consent was obtained from both partners, and couples were given information about the purpose of the study and what was required during the assessment session. Each partner individually completed the questionnaire booklet, and couples then participated in the behavioural tasks, which were videotaped. Following completion of all tasks, couples had the opportunity to ask questions concerning the research.

Results

Descriptive Statistics and Correlations

From the original available data for 110 couples, 21 couples were deleted as no data were collected on self-regulation and/or communication measures for both partners. Of the remaining 89 cases, 15 couples were deleted as they did not satisfy inclusion criteria (they had lived together for more than 4 years). In the final sample of 74 couples, partners' total scores on satisfaction, self-reported self-regulation, positive and negative speaking and listening skills and positive and negative affect, were used in analyses. Means and standard deviations for all variables used are presented in Table 12, as well as inter-correlations between variables and across genders. The correlations indicate a moderate and reliable association for both men and women between satisfaction and self-reported self-regulation. Moderate correlations were also found among some of the communication codes (e.g., negative speaker and negative listener codes). Although not germane to the research question, reliable and moderate associations were found for most variables between men and women.

The current study aimed to explore whether communication mediated the association between self-regulation and satisfaction. The results in Table 12 suggest this is not the case. Two key criteria for mediation to be present are that the potential mediator correlates significantly with the dependent variable, and that the independent variable correlates significantly with the mediator (Baron & Kenny, 1986).

Table 12.

Descriptive statistics and correlation coefficients.

Scale		1	2	3	4	5	6	7	8
1. Satisfaction		(.56)	.51	-.17	.25	-.46	-.35	.34	-.21
2. Self-regulation		.46	(.25)	-.06	.03	-.12	-.17	.19	-.05
3. Positive speaking		.07	.09	(.55)	-.13	-.08	-.20	-.01	-.01
4. Positive listening		.18	-.12	-.06	(.44)	-.19	-.17	.35	-.14
5. Negative speaking		-.42	-.19	-.14	-.44	(.47)	.52	-.11	.36
6. Negative listening		-.27	-.24	-.32	-.36	.41	(.69)	-.06	.25
7. Positive affect		.30	-.03	-.11	.51	-.14	.02	(.83)	-.19
8. Negative affect		-.27	-.27	-.14	-.21	.46	.44	-.23	(.48)
Means	Male	116.5	67.5	14.2	63.2	3.6	19.7	56.8	1.7
	Female	117.1	69.5	20.3	60.1	6.5	16.8	63.2	5.1
SD	Male	14.1	11.1	11.5	16.6	6.6	17.4	24.3	5.3
	Female	13.6	12.1	14.1	18.4	11.3	12.8	21.3	11.7

Note. Correlations for men are above the diagonal; correlations for women are below the diagonal. Correlations between men and women are in the diagonal. Correlations significant at the $p < .01$ level are in bold.

The results show that neither of these criteria is met here. While self-regulation correlates moderately and reliably with satisfaction for both men and women, self-regulation does not correlate with communication. In addition, communication does not share significant variance with satisfaction. There are a few statistically reliable correlations between satisfaction and the indices of communication for men and

women, but these correlations are relatively small in magnitude and may represent Type I errors.

As a result, further analyses to identify a possible mediating role of communication would be uninformative. The most striking finding that can be gleaned from the above table of correlations is the replication of the moderate correlation between self-regulation and satisfaction for both genders. In this sample, self-regulation is a moderately strong and statistically reliable correlate of couple satisfaction. In contrast, communication behaviours appear to have little to do with either self-regulation or satisfaction.

Discussion

The primary aim of the current study was to investigate whether communication behaviours mediated the association between self-reported self-regulation and satisfaction. Communication behaviours were measured via positive and negative speaking and listening skills, and positive and negative affect. It was hypothesised that self-regulation would be significantly associated with satisfaction. This hypothesis was supported for both men and women. It was also hypothesised that the association between self-regulation and satisfaction would remain significant, even after controlling for communication. This hypothesis was supported. The results obtained indicated that none of the above communication measures mediated the self-regulation/satisfaction association. However, consistently strong associations between self-regulation and satisfaction were found for both genders.

The reliable and moderately strong association found in the current study between self-reported self-regulation and satisfaction replicates Study 1, as well as other past research using the self-report self-regulation measure (Wilson, et al., 2003). The current finding suggests that self-regulation is a reliable correlate of satisfaction in couples in the early stages of a committed relationship. Results also showed that self-regulation showed a larger magnitude correlation with satisfaction compared with communication behaviours. However, for both men and women, measures of communication did not mediate this association. Specifically, observational measures of positive and negative speaking and listening skills, and positive and negative affect, did not mediate the association between self-regulation and satisfaction.

There are a number of possible reasons for the lack of mediation by communication of the association between self-regulation and satisfaction. One possibility for the absence of mediation in the current study may be low statistical power. The sample size allowed for the detection of medium to large effect sizes, but

was not sufficiently large to detect smaller effects. It would be useful in future research to replicate the current study using a larger sample of couples in early stages of relationships. However, notwithstanding the small sample size, communication behaviours are often not correlated with satisfaction in the early stages of a committed relationship, and instead tend to predict the longitudinal trajectory of relationship satisfaction (Karney & Bradbury, 1997). As couples in the current study were all in early stages of their relationship, the absence of mediation may simply be an artefact of the effect of communication on the satisfaction trajectory, rather than cross-sectionally. However, this explanation could be fully tested by following up a large sample of couples in longitudinal research, and examining whether the self-regulation/satisfaction association is mediated by communication longitudinally.

The findings of the current study raise a number of theoretical and measurement issues. The primary issue concerns the possible mechanisms of self-regulation. The current study has shown that the effect of self-reported self-regulation on satisfaction is not exerted via communication behaviours (measured by speaker and listener behaviours, or affect). It may be that other variables not explored here mediate this association.

A component of self-regulation originally proposed by Karoly (1993) was cognitive regulation. It is possible that the ability to monitor and regulate one's cognitions would be an important skill in maintaining good relationship functioning. One of the most well-established cognitions in the couple literature is relationship attributions, particularly blaming and responsibility attributions (e.g., Bradbury & Fincham, 1990; Fincham & Bradbury, 1992). Relationship attributions are generally defined as the explanations made for partners' behaviours which focus on stable and negative partner characteristics (Bradbury & Fincham, 1990). There is substantial evidence for the association between responsibility and blaming attributions, and

relationship satisfaction. Negative, blaming attributions are inversely associated with satisfaction, and predict lower satisfaction longitudinally, independent of other established variables such as mood (e.g., Bradbury & Fincham, 1990; Fincham, Harold, & Gano-Phillips, 2000). This association has been found using diverse samples (e.g., Bradbury, Beach, Fincham, & Nelson, 1996; Byrne & Arias, 1997; Stander, Hsiung, & MacDermid, 2001), and support for a causal link between attributions and satisfaction has been found (Fincham & Bradbury, 1988). Applied to self-regulation, if a partner is making efforts to appraise and make positive changes to his/her relationship, these changes may lead to more positive and fewer blaming attributions about the other partner. In turn, these more positive attributions about one's partner would be likely to promote higher relationship satisfaction (Fincham, et al., 2000).

It would therefore be useful to explore whether the association between self-regulation and satisfaction is mediated by attributions. Partners' self-regulation and attributions about their partners' behaviour could be concurrently assessed. Full mediation by attributions would indicate that all of the predictive power of self-regulation could be explained by attributions. Partial mediation of the self-regulation/satisfaction association by attributions would indicate that while self-regulation may be associated with partners' attributions, self-regulation also predicts satisfaction independently. This possible mediation of the self-regulation/satisfaction association by attributions, is the subject of Study 3.

Overall, the current study provided further support for the reliable association between self-reported self-regulation and relationship satisfaction, using a sample of couples in early stages of a committed relationship. No evidence was found for the potential mediating role of communication behaviours between self-regulation and satisfaction. These results suggested that self-regulation appears to be a different

construct from communication behaviours, and may exert its effects on satisfaction in other ways.

CHAPTER SIX

STUDY THREE

The results of Studies 1 and 2 have shown that relationship self-regulation is an important correlate of relationship satisfaction, and that its association with satisfaction is not merely an artefact of communication skills. As discussed in Study 2, the association between communication and relationship satisfaction is well-replicated, so it was important to distinguish the effects of self-regulation from the effects of communication. This study aimed to build on the findings of Studies 1 and 2 by examining whether the association between self-regulation and satisfaction is mediated by attributions. The current study also aimed to replicate the differential partner effects found in Study 1, where male self-regulation was an important correlate of female satisfaction, but female satisfaction did not correlate with male satisfaction.

As has been discussed previously, the association between attributions and relationship satisfaction is well established. In particular, blaming and responsibility attributions are reliable predictors of satisfaction. Attributions of partner blame and responsibility predict satisfaction both cross-sectionally and longitudinally (e.g., Bradbury & Fincham, 1990; Fincham & Bradbury, 1993; Fincham, Harold, & Gano-Phillips, 2000; Johnson, Karney, Rogge, & Bradbury, 2001), and there is evidence for a causal link from responsibility and blaming attributions to satisfaction (Fincham & Bradbury, 1988). It is possible that relationship self-regulation may be associated with satisfaction via more positive cognitions about one's partner. Partners who self-regulate more effectively may be likely to have fewer negative blaming or responsibility attributions about their partner's behaviour, than partners self-regulating less well. In particular, partners who are not blaming their partner or

attributing responsibility to their partner might be more able to focus on their own behaviours, and what they can do to change those. It is therefore important to establish whether blaming and responsibility attributions mediate the association between self-regulation and satisfaction.

The current study aimed to address the role of cognitive attributions in the self-regulation/satisfaction association, and aimed to replicate the differential partner effects found in Study 1. Specifically, it was hypothesised that the association between self-regulation and satisfaction would remain significant after controlling for blaming and responsibility relationship attributions. It was further hypothesised that, consistent with the differential partner effects identified in Study 1, male self-regulation would be significantly associated with female satisfaction.

Method

Participants

Participants were 73 newly married couples, who were recruited as part of a broader program of longitudinal research on predicting the trajectory of couple satisfaction. Data collection for this program is ongoing. In the current study, data for the first-year follow-up of the 2000-recruited cohort are utilised. Couples were recruited using a mail-out via the Register of Marriages to all couples married in February, 2000. The mean age of men was 34.15 ($SD = 9.08$) and the mean age of women was 31.86 ($SD = 7.33$). The mean household annual income for couples was \$71 000 ($SD = \$30\ 000$). Most men worked full-time (86%), and this was also the most frequently endorsed category for women (47%). Overall, the couples in the current study came from a wide variety of socioeconomic backgrounds, but in general were of higher socioeconomic status than the average couple in Australia.

Materials

A questionnaire booklet was given to participants to complete. Only the measures relevant to the current study are reported here.

Marital satisfaction was assessed using the Dyadic Adjustment Scale (DAS) (Spanier, 1976), which is a well-established 33-item measure assessing self-reported overall relationship satisfaction. Once the DAS is completed, a total dyadic adjustment score can be calculated, which is highly reliable ($\alpha = .96$). The DAS also shows discriminant validity, in terms of reliably differentiating between married and divorced samples on the basis of total DAS scores, and correlates highly with other measures of dyadic adjustment (Spanier, 1976).

Relationship self-regulation was assessed using the Self-Regulation for Effective Relationships Scale (SRERS) (Wilson, et al., 2003). As described in Study 1, the SRERS is a new scale comprised of 19 items which measure the degree to which each partner engages in relationship efforts within their intimate relationships. Self-regulation efforts involve the extent to which a partner can appraise the relationship's functioning, set goals to improve the relationship, and implement strategies to achieve those goals. Analyses indicate that the SRERS consists of three factors: self-reported self-regulation strategies, relationship efforts, and relationship goal clarity. These factors can also be summed to produce a total self-regulation score. Each factor is internally consistent (Cronbach's $\alpha > .75$), as is the total score (Cronbach's $\alpha = .88$) (Wilson, et al., 2003). The SRERS has good construct validity, inter-partner agreement, convergent and divergent validity (Wilson, et al., 2003).

Relationship attributions were evaluated using the four-item version of the Relationship Attribution Measure (Fincham & Bradbury, 1992). This instrument assesses causal and responsibility/blame attributions for partner behaviour in close relationships. Four hypothetical scenarios are presented (e.g., "Your partner is cool

and distant”), and for each scenario the respondent indicates extent of agreement or disagreement on six questions, using a six-point likert-type scale. Three of the questions concern causal attributions (stability, globality and locus) and the remaining three relate to responsibility attributions (blame, motivation and intent). Completion of the RAM allows for separate causal and responsibility attribution totals to be calculated. These RAM subscales are highly reliable (Cronbach’s α ranging from .86 to .93) and valid (Fincham & Bradbury, 1992). Due to the small sample size used to perform the path analyses in the current study, causal and responsibility subscale totals were summed to create a composite total. This total score also displayed acceptable reliability (Cronbach’s $\alpha = .82$ and $.77$, for male and female total attributions respectively).

Procedure

The personal details of married couples are held by the State Registry of Births, Deaths and Marriages in the state of Queensland, Australia. This information is confidential. Permission was obtained from the Registrar to conduct a mail-out to the 2050 couples who were married in February, 2000. The mail-out consisted of a covering letter, a brochure, and a reply-paid envelope. The letter explained the purpose of the study, provided the information that the study was being conducted by the Griffith University School of Applied Psychology, and invited each couple to take part. The letter also emphasised that couples’ personal details had not been released to the researchers, and that participation was entirely voluntary. The brochure described the study and the researchers, and incorporated a tear-off slip which couples could return to indicate interest in participating. The tear-off slip asked couples for their names and contact details, and to return the completed slip to the research team in the reply-paid envelope which had been provided.

Of the couples contacted, 113 couples returned contact information slips. These couples were then telephoned, the study was explained to them, and each partner was then individually sent a questionnaire booklet, an informed consent form which required their signature, and a reply-paid envelope for the booklet return. Partners were asked to return completed booklets within one week. Those who had not returned their booklets within one week were re-contacted, with up to a further two telephone calls to prompt booklet return. Ninety-seven couples completed and returned the questionnaire booklets.

On return of booklets, each partner was interviewed individually over the telephone, and the couple subsequently completed a social support communication task in their own home which was recorded on a cassette recorder sent to the couples.

Follow-up data are being collected at 12-month intervals. In 2001, the first year of follow-up for this cohort, a procedure identical to that described above was performed. In addition to the 97 couples who provided complete data in 2000, a further three couples who could not be contacted originally in 2000 provided data at 12-month follow-up, making 100 couples in total. However, data for 27 couples could not be subsequently obtained. Contact was lost with 10 couples (due to couples' having moved or having provided incorrect details initially), 15 couples were still married but refused to participate due to being too busy, one couple refused without a reason, and one couple refused due to their having separated. This gave a total of 73 couples who provided data at one-year follow-up (75% response rate).

Results

Hypothesised Models

A series of path analyses was conducted, using the Analysis of Moment Structures (AMOS) software package, version 4.0 (Arbuckle & Wothke, 1999). Two models were set up to assess whether relationship attributions mediate the association between self-regulation and satisfaction. The second goal of analysis was to assess whether the differential partner effects of self-regulation found in Study 1 could be replicated in the current study. The effects found in Study 1 suggested that while male self-regulation was an important correlate of female satisfaction, the reverse was not true (i.e., female self-regulation was not an important correlate of male satisfaction). The current study sought to replicate this finding with a different sample.

Both models are pictured, showing the prediction of male relationship satisfaction. (Identical models were also set up, predicting female satisfaction). The baseline independence model posited no relationship between any of the variables. A second model was tested, suggesting that attributions mediate the association between self-regulation and satisfaction, and additionally posits that the partner's self-regulation directly affects satisfaction. The third model, pictured in Figures 1 and 2, suggested that attributions mediate the relationship between self-regulation and satisfaction. In terms of partner effects, Model 3 expanded on Model 2 by hypothesising that one's partner's attributions are linearly dependent on one's own relationship efforts, and that in turn one's partner's efforts are determined by his/her attributions. The efforts made by the partner are then expected to influence one's own attributions (this latter path being consistent with Model 2).

Path analyses were conducted instead of full latent variable SEM due to statistical power considerations. In the current study, the total sample size for

analysis was 67 men and 67 women, but generally sample sizes of at least 200 are recommended for full modelling (Boomsma, 1982) or at the very least a 5:1 subject to estimated parameter ratio (Hair, Anderson, Tatham, & Black, 1998; Ullman, 2001) assuming a normal data set without outliers (Hair, et al., 1998). The current data set was small, not normal and contained a number of outliers, so path analysis was used instead of full SEM.

Assumptions

Data were checked for multivariate normality, linearity and outliers. Single outliers were identified in both male and female relationship satisfaction, and female self-regulation (which was the same couple as that containing the male satisfaction outlier), and two outliers were identified in male self-regulation. These were deleted from the data set, as outliers have a disproportionately large influence on variance calculations in SEM and lead to biased results (West, Finch, & Curran, 1995). Once outliers were removed, no variable was significantly skewed ($p < .05$). Since variables were normally distributed, no bootstrapping procedures were undertaken and standard path analyses were conducted. Finally, two couples were missing all the data for one partner; these couples were deleted. Analyses were performed using 67 cases, with no missing data.

Descriptive Statistics and Correlations

Means and standard deviations for all variables used are presented in Table 13, as well as reliability of variables and correlations. Partners' total scores on satisfaction, self-regulation and attributions were used in analyses. As shown in the Table, most of these scores were highly reliable. The correlations indicate a moderately strong, negative relationship between attribution scores for both genders and their respective satisfaction scores. Moderate relationships were also found between self-regulation and relationship satisfaction for both genders. Female self-

regulation and attributions did not share variance with male satisfaction; whereas every male variable correlated significantly with female satisfaction.

Table 13.

Descriptive statistics, reliabilities and correlation coefficients.

Variable	1	2	3	4	5	6
1. Male satisfaction	(.87)	.49	.65	.19	-.48	-.31
2. Female satisfaction		(.85)	.36	.56	-.40	-.59
3. Male self-regulation total			(.83)	.23	-.38	-.27
4. Female self-regulation total				(.88)	-.32	-.39
5. Male attributions total					(.90)	.27
6. Female attributions total						(.93)
Means	122.69	123.99	71.78	72.87	56.93	61.97
Standard deviations	10.87	9.36	8.48	9.38	16.14	19.92

Note. Internal reliability estimates are in parentheses. Correlations significant at the $p < .01$ level are in bold.

Model Estimation

Maximum likelihood estimation was used to test the fit of the three models described above. Table 14 presents fit indices for each gender, for all models. Well-fitting models generally display non-significant chi-square overall fit statistics (the test of the difference between the theorised and estimated models). Statistics such as the root-mean-square error of approximation (RMSEA), which estimates the lack of fit, and standardised root-mean-square residual (SRMR), which is based on the residuals, should be low (i.e., $< .06$) (Byrne, 2001; Hu & Bentler, 1999). Other

comparative goodness-of-fit indices, such as the comparative fit index (CFI), the normed fit index (NF), and the Tucker-Lewis index (TLI) should ideally approach 1.00 (i.e., $>.90$ is considered acceptable; $>.95$ indicates an excellent fit) (Byrne, 2001; Hu & Bentler, 1999).

Results indicated that the independence model had an extremely high chi-square value, and this model was easily rejected. Clearly, there were associations between the measured variables such that the model of independence was a very poor fit to the data. The possibilities that attributions could mediate the relationship between self-regulation and satisfaction, and that partners' self-regulation could influence one's own satisfaction, were investigated in Model 2. The fit of this model for men and women was moderate, although it provided significantly better fit than the independence model for both men ($\chi^2_{\text{difference}} = 74.88, p < .001$) and women ($\chi^2_{\text{difference}} = 74.88, p < .001$). Although the chi-square value was not statistically significant, the Tucker-Lewis index of fit was low, and the RMSEA was unacceptably high, relative to accepted standards of fit (e.g., Hu & Bentler, 1999). These statistics suggested a considerable degree of misfit within the model.

Finally, Model 3 was tested, which expanded on Model 2 by positing an additional path from self-regulation to partner attributions, and from partner attributions to partner self-regulation. This model demonstrated good fit in predicting satisfaction, and provided significantly better fit than the independence model for both male ($\chi^2_{\text{difference}} = 74.9, p < .001$), and female satisfaction ($\chi^2_{\text{difference}} = 77.93, p < .001$). There was little residual error, and a high degree of similarity between the specified model and the data collected. Relationship satisfaction appears to be well explained by a model incorporating both direct and indirect effects (via attributions) of self-regulation, as well as partner effects of self-regulation.

Figure 1 provides the standardised loadings for Model 3 predicting male satisfaction, and Figure 2 provides the standardised loadings predicting female satisfaction.

For both men and women, their relationship attributions were significant direct predictors of satisfaction (standardised coefficients = $-.28$ and $-.41$, $p < .05$, respectively). For both genders, attributions partially mediated the association between self-regulation and satisfaction. While self-regulation significantly predicted attributions in both genders (standardised coefficients = $-.33$ and $-.35$, $p < .05$, for men and women respectively), the direct path from self-regulation to satisfaction remained significant after attributions had been accounted for (standardised coefficients = $.55$ and $.37$, $p < .05$, respectively). This indicated that for both men and women, self-regulation exerted both a direct and an indirect effect (via attributions) on satisfaction.

The secondary aim of the study was to replicate the differential partner effects of self-regulation found in Study 1. As shown in Figures 1 and 2, these effects were partially replicated. The lack of association in the first study between female self-regulation and male satisfaction was maintained in the current study (standardised coefficient = $-.02$, n.s.). However, the significant influence of male self-regulation on female satisfaction obtained in the first study, failed to reach statistical significance here (standardised coefficient = $.17$, n.s.).

Results further indicated that self-regulation significantly predicted the other partner's attributions, for both genders (standardised coefficients = $-.27$ and $-.32$, $p < .05$, respectively for males and females). In turn, the partner's attributions predicted his/her self-regulation (standardised coefficients = $-.39$ and $-.38$, $p < .05$, respectively). Both of these relationships were negative, such that higher levels of one variable were associated with lower levels of the other.

Table 14.

Fit statistics for path analyses (maximum likelihood estimation) predicting male and female relationship satisfaction.

Model	Sat	χ^2	<i>df</i>	<i>p</i>	NFI	TLI	CFI	RMSEA	SRMR
1. Independence model	Male	78.34	10	.00	.00	.00	.00	.32	.30
	Female	81.76	10	.00	.00	.00	.00	.33	.32
2. Model 2 ^a	Male	3.46	1	.06	.95	.74	.96	.19	.09
	Female	3.46	1	.06	.95	.74	.96	.19	.08
3. Model 3 ^b	Male	3.44	3	.33	.96	.98	.99	.05	.05
	Female	3.83	3	.28	.95	.96	.99	.07	.05

Note. Sat = satisfaction of the target partner; NFI = normed fit index; TLI = Tucker-Lewis index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardised root-mean-square residual. ^a Model 2 hypothesised that attributions mediate the self-regulation/satisfaction association, and that partner self-regulation influences satisfaction. ^b Model 3 posited the same associations as Model 2, with additional paths linking self-regulation to partner attributions, and partner attributions to partner self-regulation.

The link in the model from the partner's self-regulation to one's own satisfaction was less conclusive. When predicting male satisfaction, female self-regulation indirectly affected male satisfaction through male attributions (standardised coefficient = $-.25$, $p < .05$). There was no direct effect of female self-regulation on male satisfaction. When predicting female satisfaction, the same pattern was not found. Males' self-regulation shared neither a direct nor an indirect relationship with female satisfaction. However, examination of the exact p values for the path from partner self-regulation to own attributions in each gender indicated that the effect was probably not stable ($p = .03$ and $p = .10$, predicting male and female satisfaction respectively), and indicated a trend for females. Thus it could not be said with certainty that a gender difference in terms of indirect effects of partner self-regulation exists. A weak indirect influence of partner self-regulation, via one's own attributions, may in fact exist for both genders.

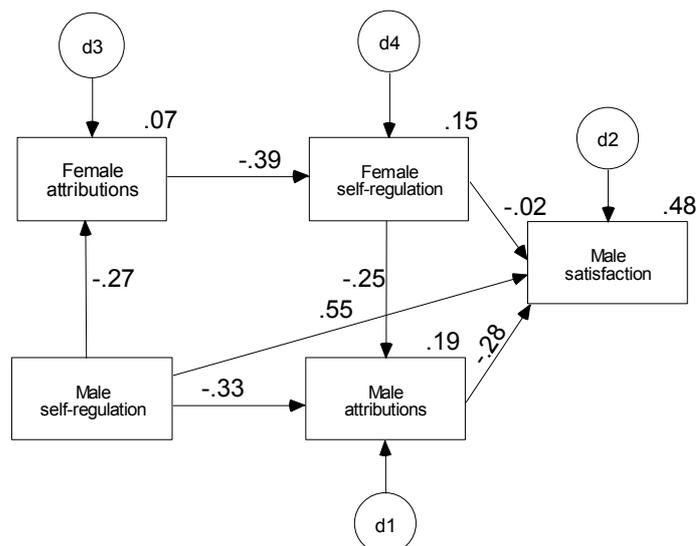


Figure 1. Standardised coefficients of the prediction of male relationship satisfaction.

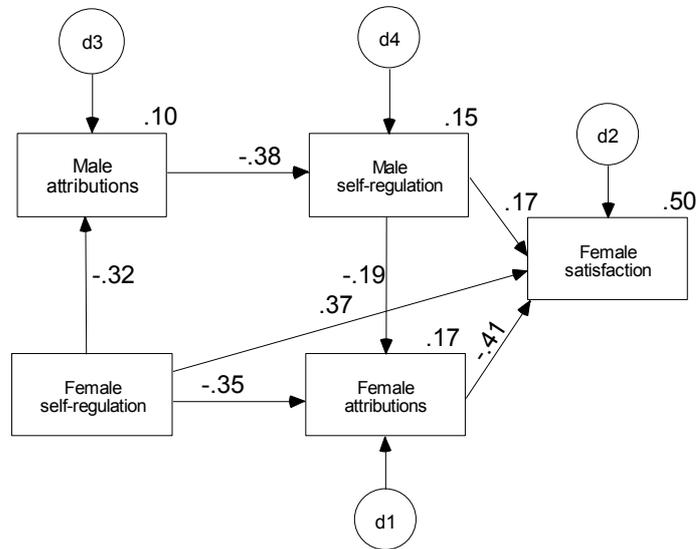


Figure 2. Standardised coefficients of the prediction of female relationship satisfaction.

Discussion

The current study had two primary aims: first, to investigate whether the association between self-regulation and relationship satisfaction was mediated by attributions; and second, to replicate the findings from Study 1 on differential partner effects, where male self-regulation predicted female satisfaction but female self-regulation did not predict male satisfaction. The results obtained using path analysis indicated that attributions partly, but not fully, mediated the relationship between self-regulation and satisfaction for both genders. Similar to the first study, female self-regulation did not significantly predict male satisfaction. However, in contrast to the first study, male self-regulation did not predict female satisfaction.

Attributions partially mediated the relationship between self-regulation and satisfaction. Higher self-regulation predicted fewer maladaptive attributions, which in turn predicted high relationship satisfaction, representing an indirect effect of self-regulation. In other words, partners who reported making more effort in their relationship were less likely to blame their partner for negative relationship events, and in turn were more satisfied with their relationship. In addition to this mediated effect of self-regulation, self-regulation was also directly associated with high relationship satisfaction. Partners who reported making effort in their relationship were more satisfied in their relationship than those who made less effort. This association remained significant even when attributions were accounted for in the model.

Past research has shown both attributions (e.g., Fincham & Bradbury, 1987; Fincham, Harold, & Gano-Phillips, 2000; Johnson, et al., 2001) and self-regulation (Wilson, et al., 2003) are reliably associated with relationship satisfaction. The current study replicates this finding, and extends it by showing the independent predictive power of attributions and self-regulation. The effect of self-regulation on

satisfaction cannot simply be explained via its impact on attributions. Of course, it may be that some relationship cognition other than attributions might mediate the effects of self-regulation on satisfaction. For example, relationship beliefs and expectations have been reliably associated with satisfaction. Irrational beliefs about relationships generally predict lower levels of relationship satisfaction (e.g., DeBord, Romans, & Krieshok, 1996; Sullivan & Schwebel, 1995). It is possible that making efforts to change and evaluate one's relationship (i.e., self-regulation) may affect satisfaction by decreasing irrational relationship beliefs, thus leading to heightened satisfaction.

A second relationship cognition which may be important is expectations about a partner's behaviours. Research has indicated that unhappy couples expect more negative and fewer positive behaviours to result from interaction with their partners, than do happy couples (e.g., Vanzetti, Notarius, & NeeSmith, 1992). In addition, couples' expectations of their interactions directly affect their subsequent appraisals of the interactions (McNulty & Karney, 2002). Potentially, engaging in higher self-regulation may lead to more positive expectations of interactions with partners, which in turn may predict higher satisfaction. The contribution of other cognitions, such as beliefs and expectations, to our understanding of the association between self-regulation and satisfaction would be a useful avenue for future research. However, in the current study, given that the role of attributions as valid cognitions within close relationships is well established and that the remaining direct effect of self-regulation on satisfaction was strong, the mediating potential of other cognitions seems less likely.

In the current study, partners' self-regulation did not directly predict relationship satisfaction, but predicted fewer negative attributions, which in turn led the actor to make more relationship effort. Consistent with Study 1, female partners'

self-regulation did not significantly predict male satisfaction, and in addition, male partners' self-regulation did not predict female satisfaction. In essence, neither partner's self-regulation was of use in predicting the other's satisfaction.

There are a number of possible reasons for this lack of predictive power of self-regulation, compared with the findings in Study 1, which indicated that male self-regulation predicted female satisfaction but that female self-regulation did not predict male satisfaction. First, the finding may be unreliable, given its lack of consistency. It may be that the other partner's self-regulation occasionally contributes to the prediction of satisfaction, but not consistently. However, it is more likely that other factors may explain the discrepancy in results.

The current study utilised a sample of highly satisfied newly-weds, compared to Study 1 which utilised long-term married couples. Differences may exist between the couples due to longitudinal effects (i.e., the effect of having been married longer). Partners' efforts at the relationship (self-regulation) may be less important for the opposite partner's satisfaction when the relationship is newer and when satisfaction is particularly high (the 'honeymoon effect' (Markman & Hahlweg, 1993)).

Alternatively, cohort effects may have played a role in the different findings between the two studies. Couples in the first study, who were in their early- to mid-fifties, would probably have been brought up in the 1940s, compared with newly-wed couples who would have been raised in the 1970s. Due to changes in culture during the last few decades (e.g., Rodman-Aronson & Schaler-Buchloz, 2001; Mansfield, McAllister, & Collard, 1992), such as the rise of women's equality, partners' self-regulation may be of less concern for younger women than the efforts they make themselves in their relationship. For older women, their partners' efforts may play a more important role than their own efforts in maintaining their relationship

satisfaction. These explanations may account for the lack of importance of partners' self-regulation on satisfaction in the current study of newly-wed couples.

One issue of interest raised by the current study concerns that of cognitive appraisal. The model tested in the current study indicated that the effects of one's partner's self-regulation behaviours on another partner are not direct, and instead appear to be mediated through the attributions made about the behaviours. That is, the efforts that a partner makes seem not to directly influence the other partner's satisfaction *per se*, but instead influence what the other partner *thinks* about him/her, which in turn predicts the partner's relationship efforts. This is consistent with the cognitive appraisal model (e.g., Epstein, Pretzer, & Fleming, 1987), which suggests that what is important is one's appraisal of a relationship event or behaviour, rather than the event itself. In the current study, reliable associations were noted between self-regulation, subsequent partner attributions, and subsequent partner self-regulation. These results indicated, for example, that males' relationship efforts affected how females subsequently viewed their partners, which in turn was a significant determinant of females' relationship efforts. This pattern of associations is consistent with Epstein et al's (1987) cognitive appraisal model of relationship events and behaviour.

The results of the current study may also extend what we currently know about the broader area of relationship information processing. Bradbury and Fincham (1987) put forward a model of affect and cognition in close relationships, suggesting that different types of processing take place following a relationship event. Primary processing refers to a person's emotionally-based, reflexive processing of the event. This is typically followed by secondary processing, which involves a person's cognitive evaluation of the event, and formulation of ways to interpret the event (e.g., attributions made about blame or causation). It may be that partners' reports of their

self-regulation efforts constitute a third, tertiary level of information processing about relationship events. Depending on the nature of the initial emotional primary processing, and the subsequent secondary appraisal, partners may report differing amounts of relationship effort.

The results of the current study raise questions concerning the optimal method of analysis when examining couple data. The current study utilised a series of linear path analytic models to test its hypotheses. That is, variables loosely termed to be 'caused' by other variables are assumed to be linearly dependent on those variables. Similarly, the models used assume linear relationships between variables of both partners. It is worth noting that this kind of linear modelling may not be the best method to capture the data. Many associations between variables, especially in relationship research, are reciprocal or circular in nature. For example, it is possible that lower self-regulation drives negative attributions, or alternatively negative attributions drive lower self-regulation, or there may be a reciprocal influence between self-regulation and attributions. Partners who self-regulate less may develop negative partner blaming attributions, leading them in turn to self-regulate even less than before. Setting up non-recursive path analytic models (i.e., allowing loops of reciprocal influence) may have yielded a better fit and explanation of the data. This was not feasible in the current study due to the sample size being too low to permit the increased paths and other requirements involved when testing non-recursive models (e.g., complex model identification strategies) (Kline, 1998). However, future research into relationship processes would benefit from ensuring a large enough sample to allow for the development and testing of reciprocal models.

Overall, the current study has indicated that while self-regulation is a significant predictor of relationship satisfaction, it appears to predict satisfaction in its own right and is not entirely mediated by attributions. It may be that specific

variables beyond those of attributions and communication behaviours play a role in the association between self-regulation and satisfaction, making this association an important focus of future research.

CHAPTER SEVEN

General Discussion

This thesis is a program of research investigating the association of relationship self-regulation (or relationship “effort”) with satisfaction. Study 1 showed that self-regulation was an important correlate of satisfaction, while wisdom was not. Study 2 replicated the association between self-regulation and satisfaction, and found that communication behaviours did not mediate the association between self-regulation and satisfaction. Finally, Study 3 indicated that attributions partially mediated the association between self-regulation and satisfaction, but that self-regulation also had an independent effect on satisfaction. Taken together, these results show that self-regulation is a reliable correlate of satisfaction for both men and women, independent of wisdom or communication, but the association is partially mediated by partners’ attributions.

This research found that self-regulation was associated with satisfaction across three independent samples of couples. Specifically, self-regulation was a correlate of satisfaction in newly-wed couples, couples in the early stages of their relationship seeking relationship education, and in long-term married couples. Each of the samples in the current research was recruited using different method. Couples in Study 1 were recruited via media outreach to long-term married couples; couples in Study 2 were recruited as part of a relationship enhancement program for early-stage relationships; and couples in Study 3 were contacted directly from the Register of Marriages. The consistency of finding the association between self-regulation and satisfaction across three diverse samples attests to the robustness of the association, and is striking, given that the characteristics of the samples of couples are dependent on the method of recruiting and the tasks required of the participants (Karney, et al., 1995). For example, media sampling often draws a higher proportion of distressed

couples than other methods of outreach, such as sampling from representative populations of couples (e.g., via government registers of marriages) (Karney, et al., 1995). Couples where the male is less emotionally involved in the relationship tend to be less likely to participate in research programs than couples where the male is highly emotionally invested (Krokoff, 1990).

The Distinctiveness of Self-Regulation

When introducing a relatively new construct like relationship self-regulation to a field of research, it is important to establish that the new construct is distinct from established constructs. The current research showed that self-regulation is a different construct from communication, and that communication behaviours do not mediate the self-regulation/satisfaction association (at least in the early stages of a relationship). Self-regulation is also different from relationship wisdom, and predicts satisfaction entirely separately from wisdom. Finally, self-regulation is associated with attributions, but shows an independent contribution to the prediction of satisfaction.

Communication and attributions are two of the most established and reliable correlates of satisfaction in the couple literature. Considerable research has shown that a number of different communication behaviours are associated with satisfaction (e.g., Gottman, 1994; Weiss & Heyman, 1997). For example, the frequency and reciprocity of verbal content, the patterns of coercive escalation and demand-withdraw, and certain patterns of negative affect have each been associated with relationship satisfaction (e.g., Christensen & Shenk, 1991; Gottman, 1994; Weiss & Heyman, 1997). The current research program assessed the associations among self-regulation, negative and positive affect, speaking and listening skills, using verbal interactions between partners. While the results demonstrated that self-regulation was distinct from these measures of communication, it should be noted that I did not

examine all aspects of couple communication. It may be that other aspects of communication not assessed here, such demand-withdraw patterns and coercive escalation, share an association with self-regulation. Another variable not explored in these studies is the behavioural participation between partners. Some recent research (Flora & Segrin, 2000) measured partners' behavioural involvement, operationalised as gaze, talk time and speaking turns, and its effect on satisfaction. Their results suggested that concurrent relationship satisfaction was higher when wife talk time was less and husband talk time was greater, particularly when negotiating problems. Satisfaction was lower when either partner, especially the wife, took more speaking turns complaining. It is possible that husbands who are better able to self-regulate contribute relatively more to couple discussions, and wives who self-regulate contribute relatively less. These possibilities warrant investigation in future research.

Attributions are also reliably correlated with satisfaction across a range of couples (e.g., Bradbury & Fincham, 1990; Fincham & Bradbury, 1992; Johnson, et al., 2001; Karney & Bradbury, 2000). This association has been well-replicated across different samples of couples (e.g., Bradbury, et al., 1996; Fincham, et al., 1997; Johnson, et al., 2001), and the experimental manipulation of attributions results in theoretically consistent changes in satisfaction, suggesting a causal link from attributions to satisfaction (Fincham & Bradbury, 1988). Because of the well-established nature of the attributions/satisfaction association, it was important to confirm that self-regulation was distinct from attributions. The findings of the current research show that although self-regulation shared some variance with attributions, it was different from attributions and still correlated with satisfaction in its own right. This distinction further supports the utility and distinctiveness of the self-regulation construct.

The current program of research also showed that self-regulation was distinct from established personality variables and emotional intelligence. In Study 1, the correlations between self-regulation and NEO-PI personality variables (openness, conscientiousness, neuroticism, extraversion, and agreeableness), depression, anxiety, stress, intelligence and emotional intelligence were obtained. Self-regulation shared variance with conscientiousness and emotional intelligence, but still predicted satisfaction above the effects of these variables. Wilson et al. (2003) also documented the distinctiveness of self-regulation from intelligence, personality, and emotional intelligence variables. Consistent with the current research with long-term married couples, they found a moderate association between emotional intelligence and depression with self-regulation in newly-wed couples, and they found that self-regulation predicted satisfaction beyond the effects of these variables. Taken together, the findings of Wilson et al. and the current program of research point to relationship self-regulation being a separate construct from personality and intelligence.

The Nature of the Association Between Self-Regulation and Satisfaction

An important theoretical issue raised in the current program of research is how self-regulation exerts its effect on satisfaction. The current research has focused on communication behaviours and cognitive attributions as mediators, finding that attributions play a partial role in the self-regulation/satisfaction association.

However, other potentially important variables were not explored in this research program. A range of broad classes of variables are important in influencing couple satisfaction, such as partners' individual characteristics, the presence of stressful life events, and other aspects of couple interaction not explored here (Karney & Bradbury, 1995). One aspect of couple interaction which may be related to both self-regulation and satisfaction is the rate of pleasant activities and shared time

together. Couples who self-regulate efficiently may better organise their time to have higher rates of time together doing pleasant activities. As higher rates of quality shared time and activities are associated with higher couple satisfaction (e.g., Kingston & Nock, 1987; Kirchler, 1988), quality time together may mediate the association between self-regulation and satisfaction. This possibility was not explored in the current program of research, and would be worthwhile to investigate in future. Global biases typically associated with self-report measures would need to be considered when seeking to evaluate rates of time spent together doing pleasurable activities. One option to try to minimise biases would be to require partners to maintain a behavioural diary for a set period of time (e.g., a fortnight). This technique has been usefully employed in past research (e.g., Feeney, 2002; Kirchler, 1988). Using this technique, actual time spent could be recorded, as could each partner's individual rating of how enjoyable or satisfying they found each interchange to be. This would enable the recording of subjective partner perceptions. It may be that partners who can self-regulate more efficiently tend to record higher rates of pleasurable events together, which in turn leads to heightened satisfaction. This possibility needs future investigation.

The Measurement of Behavioural Self-Regulation

The self-report relationship self-regulation measure used in the current research was designed to assess the behavioural components of self-regulation based on Karoly's (1993) original definition of self-regulation. The self-report nature of this measure implicitly assumes that people can accurately monitor and report on relationship self-regulation. However, Karoly (1993) suggests that self-regulation can be automatic and not conscious, thereby limiting people's ability to accurately report it. It would be useful for future research to develop a behavioural measure of self-regulation to minimise self-report biases in the measurement of relationship self-

regulation. Karoly's (1993) original self-regulation framework could be used to define self-regulation behaviours, or the development of strategies to improve the relationship. Specific behavioural tasks, such as self-regulation problem-solving tasks could be carried out to assess self-regulation behaviours.

A second aspect of self-regulation not examined in the current research program is self-regulation of affect. Karoly (1993) originally noted that self-regulation implied the ability to modulate thought and affect, as well as behaviour. In addition, the role of affect in couple satisfaction is well established. Couples who display more positive affect and fewer expressions of negative affect tend to be more satisfied in their relationship (e.g., Gottman, 1994; Weiss & Heyman, 1997). Measuring partners' affective self-regulation would be a useful avenue for future research.

Partners who can monitor and regulate their emotions may be more satisfied in their relationship, and in particular, their affect self-regulation may lead to higher satisfaction of their partners. It might be possible to assess partners' affective self-regulation using a self-report measure, containing items such as "I am able to control negative feelings when having a disagreement with my partner" or "I do not let strong emotions get in the way of communicating clearly with my partner". As with any new scale being introduced to a field of research, it would be important during scale development to ensure its distinctiveness from other similar existing scales, such as measures of emotional intelligence, mood, personality and the existing behavioural self-regulation measure.

The Context of Relationship Self-Regulation

An issue raised by the current program of research concerns where relationship self-regulation fits within the existing couple literature. To date, probably the most widely accepted model of antecedents of couple satisfaction is that

originally proposed by Karney & Bradbury (1995) and later modified by Halford (2001). This model suggests that several broad classes of factors impact on satisfaction, those being relationship context, individual characteristics, couple processes, and life events.

Relationship self-regulation could probably be considered as either a couple process in which partners engage to varying degrees, or an individual characteristic that a partner brings to his/her relationship. The results of Study 3 provide some suggestion that self-regulation has reciprocal effects between partners, as self-regulation was found to influence the other partner's attributions and subsequent self-regulation. This suggests that self-regulation is a dynamic couple factor whereby one partner's efforts influence the other partner's subsequent thoughts and efforts. The original theoretical work on self-regulation also highlighted that self-regulatory processes occur within a social context (Kanfer, 1970), indicating that the extent of a person's self-regulation may depend on their interacting with others.

Alternatively, self-regulation may be a characteristic which individuals bring to their relationship. Some individuals may self-regulate more effectively than others, and may bring these skills into their close relationships as an individual characteristic. Having effective relationship self-regulation skills may predispose some couples to be happier in their relationships than other couples with lower levels of self-regulation skills. At this stage, we do not know how stable self-regulation is over time, or how it could potentially be influenced by a partner's self-regulation. It would be useful for future research to test its stability by assessing it across different relationships or across time longitudinally.

Implications of Self-Regulation for Clinical Practice

The current research raises the question of what is the optimal way to promote relationship satisfaction. Many current couple therapies focus on teaching specific

behavioural skills to couples to enhance their communication and their satisfaction. For example, a key component of many cognitive-behavioural interventions is the teaching of active listening skills and the development of benign partner attributions (Epstein & Baucom, 2002). These interventions implicitly assume that telling couples what they need to work on will yield consistently positive results. However, encouraging partners to adopt a self-regulatory focus in their relationship may be at least as helpful as other existing techniques. Adopting a self-regulatory focus to couple therapy would involve encouraging each partner to self-appraise their relationship functioning, identify their personal goals for their relationship, and implement strategies to achieve those goals (Halford, Wilson, Lizzio, & Moore, 2002). This focus would be a shift from more prescriptive “teaching” methods of therapy to more self-driven problem identification and strategy development. In this way, individual needs of couples can be incorporated directly into strategy planning, so that therapy is carefully tailored to the couple.

Using a self-regulatory approach also implies that meaningful therapeutic intervention may be possible with only one partner. It is not unusual in clinical practice for only one partner of a distressed couple to arrive for therapy (Bennun, 1997; Wilcoxon, 1986). However, the presence of only one partner may still be enough for effective intervention. Research by Bennun (1985a, 1985b, 1997a, 1997b) suggests that one-partner marital therapy can work in treating relationship distress. Specifically, Bennun (1985a, 1985b) conducted a controlled trial using 57 couples randomly assigned to either conjoint treatment, couples groups, or treating one partner only. The outcome variables included marital satisfaction, sexual adjustment, and assessing the couples’ specific target problems. Results showed no significant differences between the three treatment modalities, suggesting that single-partner

therapy was equally effective as the other conditions in effecting positive change (Bennun, 1997a).

Using a self-regulatory approach, the available partner could be assisted by the clinician to appraise his/her relationship, identify his/her own roles in behavioural patterns, and develop individual strategies to improve the relationship. Changes brought about by only one partner would likely affect the other non-attending partner, potentially leading to relationship improvement.

Suggestions for Future Research

Based on the results of this research program, several suggestions for future research can be made. The constraints of research in a PhD limited the current research program to a cross-sectional analysis in all three studies. A longitudinal study, tracking the effects of self-regulation over time, needs to be conducted. The key issue that needs to be addressed in longitudinal research is the direction of the association between self-regulation and satisfaction, given that at the current time, we do not know whether self-regulation is a cause or an effect of relationship satisfaction. A longitudinal study into self-regulation is currently being undertaken using a large cohort of newly-wed couples, some of whom formed the sample for Study 3. The newly-wed project was formed approximately three years ago. Data collection is still continuing, and the longitudinal effects of self-regulation will be examined at the five-year follow-up.

At follow-up times, it will be possible to test cross-sectional associations between self-regulation and satisfaction, and examine whether self-regulation is a valuable predictor of later satisfaction as well. In addition, longitudinal research of this nature could potentially allow re-examination of communication as a potential mediator of the self-regulation/satisfaction association. In the current research, communication did not mediate this association; however, the current study was

cross-sectional and involved couples in the early stages of their relationship, when communication is often not a significant correlate of satisfaction (Karney & Bradbury, 1997). Assessing both self-regulation and communication skills over time would allow the possible mediating role of communication to be investigated.

A second avenue for future research concerns the association between wisdom and satisfaction. Study 1 showed that wisdom was not a significant correlate of satisfaction in a sample of long-term married couples. However, this result might be an artefact of how wisdom was measured. Although the well-established wisdom assessment developed by Baltes and colleagues (Baltes & Staudinger, 2000; Staudinger & Baltes, 1996) was used, wisdom variables showed little variability and mean scores were very low. It may be that some of the skills which the wisdom tasks were trying to assess could be better assessed using a different measure, such as a broad-ranging social knowledge test.

Social knowledge tests have already been used within clinical settings. For example, work with schizophrenic patients has shown that these patients often lack basic knowledge of core social processes (e.g., knowing how to lodge a tax refund, set up a bank account, etc.) (Cutting & Murphy, 1990). In their work with these patients, Cutting and Murphy developed a social knowledge test to gauge a patient's knowledge of standard social processes. In a sense, the wisdom measurement used in the current research was attempting to tap knowledge of social processes, norms and interpersonal strategies at very high levels. For example, some of the wisdom criteria specifically related to deep procedural or strategic knowledge about life situations and tasks. One option for future research would be therefore to develop and validate a social knowledge test incorporating some of the criteria originally suggested by Baltes and his colleagues (e.g., Baltes & Staudinger, 2000). A test which could accurately

and validly assess middle-level and high-level social knowledge, as well as low-level knowledge, would be a major contribution to wisdom research.

A third avenue for future research concerns the times at which higher levels of self-regulation are likely to be most useful. There is some evidence that the effects of couple interaction may interact with negative life events in some variables. For example, Cohan and Bradbury (1997) examined the role of partner support during stressful life events. They found that partner support was most beneficial to individual adjustment during stressful life events, but that it was less important at other times. While these findings need to be replicated, they raise the question of whether skills such as relationship self-regulation are always effective in promoting higher satisfaction, or whether they are more effective only at particular time points. Examples of potentially stressful times when self-regulation skills may be valuable include a couple's transition to parenthood, a partner's job loss, a partner's diagnosis with serious illness or a partner's alcohol or tobacco cessation. It is already well established that during stressful events, partner support is particularly important for successful coping (e.g., Lichtenstein, Andrews, Barckley, Akers, & Severson, 2002; Sormanti & Kayser, 2000; Walsh & Jackson, 1995). Future research could examine whether self-regulation skills are also important at these times, or whether the beneficial effects of self-regulation on satisfaction are constant across life situations.

A final avenue for future research concerns the origins of self-regulation skills, and the ability to predict which partners are likely to be better at self-regulating than others. At this point, it is still unclear how self-regulation skills are obtained. The work of Wilson et al. (2003) and the findings of Study 1 here suggest that self-regulation is unrelated to personality or intelligence variables, making it unlikely that people with particular dispositions or high levels of intelligence tend to self-regulate more than others.

An alternative view is that partners may learn basic self-regulatory skills within their family of origin, or may be exposed to alternative models demonstrating self-regulation skills throughout their lives, or may have experiences leading them to develop self-regulatory skills. This model is consistent with Riggs' and O'Leary's (Riggs & O'Leary, 1989; Riggs & O'Leary, 1996) framework for the development of aggressive tendencies in partners. This framework suggests that partners with aggressive tendencies tend to be exposed to aggression within their family of origin, which is likely to predispose them to be aggressive. Exposure to alternative models or positive personal experiences may reduce the tendency for aggression throughout life, although exposure through aggregation with like-minded people or negative personal experiences may further increase aggression. A similar framework may be useful in understanding the development of self-regulation skills in adult relationship partners. One possibility is that a partner's self-regulation skills are likely to be impacted by the extent to which he/she saw his/her parents engaging in self-regulatory actions. A partner may also develop self-regulation skills by being exposed to others modelling those skills during his/her life, or may have positive experiences which promoted the use of self-regulation skills (e.g., he/she may have been in a relationship with a partner who worked on the relationship). It would therefore be useful for future research to explore the origins of self-regulation skills. This would also potentially assist in identifying how self-regulation skills could be taught to others.

This program of research was concerned with couple relationships, and how we can predict partners' relationship satisfaction. In particular, this thesis focused on the role of wisdom about relationships, and the role of partners' effort in their relationship, referred to as relationship self-regulation. The current research shows that self-regulation is an important correlate of satisfaction in relationships, and this association cannot be fully accounted for by communication or by attributions. In

contrast, wisdom does not seem to be related to couple satisfaction. Taken together, it seems that couples do not have to be exceptionally wise or knowledgeable about relationships to be satisfied, but they probably do need to make an effort. The importance of self-regulation has key implications for research and approaches to couple therapy. We now need to move on from what we currently know, and consider why self-regulation is important and what we can do to develop it, in order to maximise the health, happiness and longevity of couple relationships.

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