
THE IMPACT OF CHILD-PARENT ATTACHMENT, ATTACHMENT TO GOD AND RELIGIOUS ORIENTATION ON PSYCHOLOGICAL ADJUSTMENT

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The impact of religion and spirituality on psychological adjustment is a continuing area of concern. This preliminary study attempted to examine the effects of religious orientation, retrospective accounts of child-parent attachment and current accounts of attachment to God on trait anxiety and existential well being, based on questionnaire responses of a sample of 116 adults from Sydney, Australia. Small, significant effects of attachment to God on the prediction of adjustment were found above the effects of child-parent attachments. Intrinsic religious orientation mediated the relationship between attachment to God and adjustment. In addition, groups were formed according to correspondence and compensation routes to secure religious attachment. Results gave preliminary support to a differentiation, rather than a surrogacy, model of compensation. Further work to examine the process whereby attachment to God does or does not compensate for insecure child-parent attachment is needed.

An ongoing issue for the psychology of religion is the complex relationship between religion and psychological adjustment. Psychological adjustment has been described as an umbrella construct with various cognitive and affective dimensions such as life satisfaction, positive affect, happiness, congruence between expected and achieved life goals, absence of symptoms, a pos-

itive sense of well being; appropriate social behaviour; freedom from worry and guilt; personal competence and control; personality unification; open-mindedness and flexibility (Batson & Ventis, 1982; Levin & Chatters, 1998). From these, the absence of symptoms such as anxiety and a positive sense of well-being are often used for economical assessment of objective and subjective aspects of adjustment. One well-researched line of inquiry has been the relationship between religious orientation (exemplifying the facet of religious importance, or commitment) and adjustment.

Religious Orientation and Adjustment

The well-known concept of religious orientation was developed by Allport (1950) who distinguished between intrinsic and extrinsic religiosity. Intrinsically motivated religion is pivotal to life and comprises a life focus that is an end in itself, with other needs being secondary. In contrast, those having an extrinsic commitment use religion for self-focused goals. According to Gorsuch and McPherson (1989) extrinsic religiosity consists of two distinct components, use of religion for personal benefits (extrinsic personal, or Ep) and use of religion for social rewards (extrinsic social, or Es). In addition to the ends (intrinsic) and means (extrinsic) orientations to religion Batson and colleagues proposed the quest orientation (Batson & Ventis, 1982). Quest (Q) comprises a searching for answers to existential questions and has three components: readiness to face existential questions without a corresponding loss of complexity; self-criticism and the perception of religious doubt as positive; and openness to change.

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Religious orientation has been related to psychological adjustment in many studies. Intrinsic religion (I) has been found to correlate negatively with anxiety and positively with well being, amongst other outcomes (Masters, 1991). Watson, Morris and Hood's (1990) review concluded that extrinsic religion was positively correlated with psychological maladjustment, and this held more strongly for extrinsic social (Es) than for extrinsic personal (Ep) forms, especially when depression and anxiety were dependent variables. Quest has been associated with cognitive openness and flexibility (Ventis, 1995) but also with conflict and/or anxiety (Kojetin, McIntosh, Bridges & Spilka, 1987; Nielson & Fultz, 1995). Intrinsic, and to a less extent, extrinsic orientations have been positively correlated with both religious and existential well being (Bassett et al., 1991; Ellison, 1983) although some studies have found extrinsic religion to be negatively correlated with total spiritual well being measures (Ellison & Smith, 1991). This discrepancy may result from a failure to distinguish between Ep and Es orientations.

These results clearly demonstrate the need to differentiate between I, Ep, Es and Q orientations when examining psychological health outcomes. In addition, Kirkpatrick and Hood (1990) argue that religious orientation should not be used alone as a measure of religiosity but supplemented by other measures such as belief, or measures derived from theoretical frameworks found in social and personality psychology, such as attachment theory.

Attachment and Adjustment

Attachment as originally proposed by Bowlby (1969) refers to the relational bond between parent and child. Through repeated experiences with caregivers infants develop internal working models that are cognitive-affective representations of attachment experiences, operating outside conscious awareness and becoming generalised and resistant to sudden change (Bowlby, 1988; Main, Kaplan & Cassidy, 1985). These working models are foundational in the sense that they provide a framework of expectations that shape future relationships (Schneider, 1991; Sroufe & Fleeson, 1986). Secure adult attachment is related to positive models of self and others, whereas insecure attachment is related to negative models of self and/or others (Collins & Read, 1990; Bartholomew & Horowitz, 1991).

As further investigated by Mary Ainsworth (1972, 1973) attachment behaviour is primarily characterised by proximity seeking, the secure base effect, and separation protest. From laboratory research using the Strange Situation Ainsworth identified three styles of attachment behaviour, the secure styles being viewed as developmentally healthy and two insecure styles as developmentally troubled. Secure attachment is marked by seeking proximity to, and finding comfort from, a carer after distress; anxious-resistant attachment is characterised by ambivalent, clinging behaviour by the child; and anxious-avoidant attachment is consistent with the child's self-reliant and self-contained behaviour (Ainsworth, 1972; Sroufe & Waters, 1977).

According to Fonagy (1999) prospective longitudinal research has demonstrated that children with a history of secure attachment are independently rated as more resilient, self-reliant, socially oriented, empathic to distress, and with deeper relationships than those with insecure attachment histories. Insecure attachment has been associated with anxiety, depression and other symptoms of psychopathology (Crowell & Treboux, 1995; Egeland & Erickson, 1987).

Attachment to God and Adjustment

The relationship between a person and God has also been conceptualised as an attachment relationship (Kirkpatrick & Shaver, 1990; Kirkpatrick, 1992, 1997, 1998). One's relationship with God serves many of the functions of attachment, such as providing a safe haven and secure base; additionally, the individual may demonstrate attachment-characteristic behaviours towards God such as proximity seeking and separation anxiety. Kirkpatrick (1997) proposed two primary hypotheses to account for individual differences in one's attachment to God. He postulated that God may serve as an attachment figure in either a compensatory manner such as a substitute for other less than optimal attachment figures (the compensation hypothesis), or as a continuation of other attachment relationships, where there is a correspondence between God and the other significant attachment figures (the correspondence hypothesis).

The correspondence hypothesis postulates internal working models by which prior experiences with attachment figures are applied to new attachments (Kirkpatrick, 1998). It also suggests a direct relationship between childhood attachment styles and

attachment to God. For those with secure parental attachments, religious socialization is a critical determinant of adult religiousness according to Granqvist and Hagekull (1999). There is some empirical support for correspondence between current adult attachment and indicators of attachment to God (Beck & McDonald, 2004; Kirkpatrick, 1997, 1998; Kirkpatrick & Shaver 1990, 1992) and between working models of parental attachment and attachment to God (McDonald, Beck, Allison & Norsworthy, 2005).

The compensation hypothesis relates to those individuals who did not experience secure attachments with their caregivers and thus sought secure attachments elsewhere. Just as Ainsworth (1985) suggested that surrogate parents could compensate for earlier insecure attachments, so Kirkpatrick and Shaver (1990) proposed God could compensate for insecure attachments. Evidence of compensatory attachment relates to those with insecure adult attachments who report sudden and emotionally intense religious conversion experiences (Granqvist 1998, 2002; Granqvist & Hagekull 2003; Granqvist & Kirkpatrick, 2004).

Few studies have directly linked attachment to God with psychological adjustment. Kirkpatrick and Shaver (1992) found individuals with a secure attachment to God reported less anxiety, depression, physical illness and greater life satisfaction, than those with insecure religious attachments. Compensatory attachment to God has been found to regulate distress and other negative emotions (Granqvist & Hagekull, 1999).

It is not clear whether the two pathways to secure attachment to God, via the compensation or correspondence hypotheses, differentially affect psychological adjustment. On the one hand, God may function as a fully adequate surrogate attachment figure for those whose psychological development had been compromised by insecure parental attachments, and hence *transform* internal working models of self and others (the strong surrogacy position). If this occurs, the compensation and correspondence groups should not differ in levels of psychological adjustment. On the other hand, Collins and Read (1994) suggest the potential for individuals to hold several independent attachment models that are interconnected but with varying degrees of generality. They argue that adults who have experienced positive and negative attachment relationships (as exemplified by the compensation group) would have

highly elaborated and *differentiated* working models that incorporate positive and negative attachment experiences in a complex network. Such a complex working model may be adaptive in cases where positive elements are strongly represented and can be applied in a particular situation, but may be maladaptive if negative elements are strong, central and likely to be activated; unlike the use of the term in family systems theory, differentiation here does not necessarily imply healthy functioning.

Within the differentiation framework attachment to God would not necessarily displace parental attachment models, and behaviours consistent with an insecure attachment relationship may be elicited in some situations. Hence, from this differentiation view of compensation, it is likely that the correspondence group with secure patterns of attachment across different specific relationships will demonstrate better psychological adjustment than the compensation group with mixed patterns in their working models. Preliminary evaluations of the two approaches to compensatory attachments, surrogacy versus differentiation, require studies that examine both child-parent and religious attachments and their combined effects on adjustment.

Linking Child-parent and Religious Attachments and Religious Orientation

No published studies have directly examined links between child-parent and religious attachments and religious orientations. Early work by Kirkpatrick and Shaver used religious orientation as an indicator of adult religiosity in studies of maternal attachment and religiosity (1990) and of adult attachment and religiosity (1992) but did not study associations between attachment to God and religious orientation. Beck (2006) reported negative associations between a Quest dimension, exploration, and insecurity of attachment to God, but neither examined accounts of child-parent attachment, nor I, Es and Ep orientations. Religious orientation and religious attachment may be viewed as two facets of religiosity that may have separate or related effects on psychological adjustment in the context of child-parent attachment relationships. A plausible relationship between religious orientation and attachment would be that religious orientation mediates the effect of religious attachment upon adjustment. If attachment to God is foundational for religious cognitions and affect (by analogy with human attachment—see

Schneider, 1991; Sroufe & Fleeson, 1986), then those with a secure attachment would be able to develop a mature, intrinsically committed religiosity which allows for positive adjustment. Conversely, those with an insecure attachment to God may develop an extrinsic orientation based on personal or social rewards, with subsequent negative adjustment.

Measurement Issues

Early studies of infant-parent attachment were conducted using direct observation and then interviews to determine states of mind with respect to child-parent attachment (Main, Kaplan & Cassidy, 1985). Hazan and Shaver (1987) developed a categorical measure of attachments within adult romantic relationships. Collins and Read (1990) then published an 18-item Adult Attachment Scale from phrases used in the Hazan and Shaver descriptions and from Ainsworth's own descriptions of attachment relationships. They found three underlying dimensions: comfort with closeness, ability to depend on others, and anxiety about abandonment or being unloved, interpreted as dimensions underlying the secure, anxious-ambivalent and avoidant styles. Similarly, a categorical measure of attachment to God was developed by Kirkpatrick and Shaver (1992). In 1998, Proctor modified the dimensional Adult Attachment Scale as an 18-item measure of attachment to God (GAM) across the dimensions of dependence, anxiety and closeness. This was tested in conjunction with a modified version of the Adult Attachment Scale used as a retrospective measure of parent-child attachment (PAM).

For the present test of the compensation and correspondence hypotheses it was important to have consistent and direct measures across childhood and God attachment domains. Given the serious difficulties with the categorical measures (noted by Collins & Read, 1990), and since the study was conducted prior to the publication of the Attachment to God Inventory (Beck & MacDonald, 2004), it was decided to use Proctor's (1998) dimensional measures of religious and child-parent attachments (GAM and PAM) in two ways. First, scores on each of the three dimensions were calculated by summing items related to closeness, dependency and anxiety; then, after checks for reliability, they were entered into regression equations. Second, since the research questions related to security versus insecurity of attachments rather than distinguishing attachment styles (anxious-ambivalent,

avoidant, and secure), scores on anxiety were reversed and then summed with scores of closeness and dependency to form a total score indicating overall security of attachment. Use of a total score requires the assumption that security-insecurity of attachment lies on a continuum that can be represented by a linear combination of closeness, anxiety and dependency components. This is a reasonable working assumption since calculation of such a linear combination for two samples described in the Collins and Read (1990) study of adult attachment results in three clearly differentiated groups, with the highest mean score for the secure group, followed by the avoidant group, and then the anxious-ambivalent group. The distance between the secure and avoidant group means is greater than the distance between the avoidant and anxious-ambivalent group means. Hence, it is reasonable to assume that adding the subscales after reversing scores on anxiety would broadly distinguish those with secure attachments (high scores) from those with insecure attachments (low scores). Since no theoretical cut-off points are available, or indications from previous research as to what score would distinguish overall security from insecurity of parental and religious attachments, it was decided to use a median split for exploratory analysis in the present study.

Aims of the Present Study

This study examines the effects of child-parent and religious attachments and religious orientation on two aspects of psychological adjustment, levels of anxiety and existential well being, in participants who identify themselves as religious and/or spiritual.

H1: Secure parent-child attachment (as measured retrospectively via high PAM score) and secure religious attachment (high GAM score) will each predict psychological adjustment (low levels of anxiety and high levels of well being).

RQ1: Are patterns of anxiety and well being scores consistent with the correspondence and compensation hypotheses? Highest adjustment should be evident in the correspondence positive group (secure child-parent and secure religious attachment) on the basis of consistency of attachment models (Collins & Read, 1994) and by extrapolation from cited research into the effects of current secure religious attachment. Lowest adjustment should occur in the correspondence negative group (insecure child-parent and insecure religious attachment) using the same considerations. There is no prediction for the negative dis-

continuity group with secure child-parent attachments and insecure religious attachments; they may be at an intermediate level of adjustment due to inconsistency of attachment models but there is no relevant empirical evidence. According to the surrogacy notion, the compensation group (insecure child-parent and secure religious attachment) should have levels of adjustment similar to the correspondence positive group. However, if inconsistent working models are held concurrently (the differentiation view) then a low or intermediate level of adjustment should be found for this group.

RQ2: Does religious orientation mediate the effects of attachment to God in predicting anxiety and well being?

METHOD

Participants

The sample comprised 116 participants (66 females and 50 males). Ages ranged from 18 to 66 years (mean age = 32.0, $SD = 12.0$). It constituted a convenience sample from religious organizations in Sydney, Australia and first year psychology students at the University of Western Sydney. All identified themselves as being religious or spiritual and experiencing some kind of relationship with God according to an initial screening question.

Measures

Anxiety was measured using the trait anxiety scale of Spielberger's (1983) *State-Trait Anxiety Questionnaire*. It comprises 20 items and reliability as indicated by coefficient alpha was .93 in the present study.

The *Existential Well Being Scale* (EWB) is a sub-scale of Bufford, Paloutzian and Ellison's (1991) *Spiritual Well Being Scale*. It is a 10 item, self report measure of existential well being with an obtained coefficient alpha of .91.

Religious orientation was measured by two scales: the *Revised Intrinsic-Extrinsic Scale* (I-E/R, Gorsuch & McPherson, 1989), a 14 item measure of personal religious orientation and commitment, and the Altemeyer and Hunsberger (1992) *Quest Scale*, a 16 item measure of questing as a religious orientation. Alpha reliabilites for each of the sub-scales of religious orientation in the present study were as follows: Intrinsic (.75), Ep (.68). Es (.79) and Q (.78).

The *Parent Attachment Measure* (PAM) is an 18 item retrospective self report measure of attach-

ment to parents with three dimensions: closeness, anxiety and dependence. It is a modification by Proctor (1998) of Collins and Read's (1990) *Adult Attachment Measure* and reflects a generalised report of attachment to both mother and father. Sample items include: I found it relatively easy to get close to my parents (closeness); I often worried that my parents did not really love me (anxiety); and My parents were never there when I needed them (dependence). The scale formed by all 18 items with anxiety scores reversed was found to have reliability measured by coefficient alpha of .84.

The *God Attachment Measure* (GAM) is also a modification by Proctor (1998) of Collins and Read's (1990) *Adult Attachment Measure* with three dimensions. It has 18 items and uses self-report. Sample items include: I find it relatively easy to get close to God (closeness); I often worry that God will not want to stay with me (anxiety); and I find it difficult to allow myself to depend on God (dependence). The scale formed by all 18 items with anxiety scores reversed was found to have reliability measured by coefficient alpha of .82.

Procedure

Participants, contacted through the university and churches, received no compensation for volunteering. They were provided with an information sheet giving instructions for completing the set of measures. Confidentiality was stressed in order to ensure comfort with privacy and to minimize social desirability effects.

Analysis of Data

Data were analysed by means of product moment correlations, multivariate analysis of variance and multiple regression analysis. Mediation was tested using the method of Baron and Kenny (1986) in which three regression analyses were conducted for the proposed mediation relationship. First, the mediator (Intrinsic Orientation) was regressed on the independent variable (attachment to God). Second, each of the dependent variables (anxiety and existential well being) was regressed on the independent variable. Finally, each of the dependent variables was regressed onto both the independent variable and mediator. If the independent variable (attachment to God) has a reduced effect in the third equation then mediation holds, and if it has no effect in the third equation then perfect mediation holds.

TABLE 1

Hierarchical multiple regression analyses of parental attachment and attachment to God total scores, as predictors of anxiety and existential well being

Step/Predictor	B at step	β at step	<i>t</i>	R ² change
<u>Anxiety</u> ^a				
1. PAM	-.37	-.47	-5.82**	.24
2. GAM	-.18	-.19	-2.39*	.04
<u>Existential well being</u> ^b				
1. Gender	-4.08	-.21	-2.59*	
PAM	.33	.45	5.38**	.18
2. GAM	.19	.23	2.77*	.05

^a *Df* = 2,113 *R* = .52 *R*² = .28 Adj *R*² = .27 **p* < .05 ***p* < .001

^b *Df* = 3,113 *R* = .52 *R*² = .27 Adj *R*² = .24 **p* < .05 ***p* < .001

PAM – Attachment to Parents

GAM – Attachment to God

RESULTS

Relationships Between Child-Parent Attachment, Religious Attachment and Adjustment

Pearson product moment correlation coefficients indicated that the total score on PAM was correlated positively with EWB ($r = .44, p < .01$) and negatively with anxiety ($r = -.47, p < .01$). Similarly, the total score on GAM was correlated positively with EWB ($r = .27, p < .01$) and negatively with anxiety ($r = -.21, p < .05$). Age was unrelated to anxiety and EWB, but gender was associated with EWB such that males were more likely to have lower EWB than females ($r = -.22, p < .01$).

After checking the data to remove outliers on anxiety and well being two hierarchical multiple regression analyses were performed in two steps for anxiety, then existential well being as the criterion variables in each analysis, with predictor variables total PAM and GAM scores. PAM was entered at step 1, GAM at step 2. The planned entry of age as a step 1 variable was omitted and gender was entered at Step 1 in analyses relating to EWB.

Support was obtained for Hypothesis 1. Both total childhood and religious attachment scores significantly predicted anxiety and existential well being. Greater security of attachment is associated with decreased anxiety and increased well being. Further, religious attachment scores have a small but significant additive effect above parental attachment when predicting well being and anxiety.

Combined Child-God Attachment Groups and Adjustment

Four groups were formed by splitting GAM and PAM scores into high and low at the median and examining the combinations: *Correspondence positive* ($N = 33$) had high scores on both PAM and GAM, thus reporting secure attachment to parents and God. *Compensation* ($N = 28$) had low scores on PAM but high scores on GAM, thus suggesting that a secure God attachment was compensating for insecure attachment to parents. *Correspondence negative* ($N = 30$) had low scores on PAM and GAM, thus reporting insecure attachment to parents and God. The *negative discontinuity group* ($N = 25$) had high scores on PAM but low scores on GAM, indicating secure parental attachment but insecure attachment to God.

Multivariate analysis of variance was performed on anxiety and existential well being as the dependent variables with attachment group as the independent variable. Means and standard deviations for each group are given in Table 2. From the multivariate test of significance for attachment groups the Pillai-Bartlett Trace yielded a significant difference: $F(6, 224) = 4.51, p < .001$. Univariate tests were also significant. For anxiety, a significant effect for group was obtained ($F(3,112) = 8.35, p < .001$) and a significant group effect was also found for existential well being ($F(3,112) = 8.69, p < .001$). Post hoc analyses used the Scheffe method because of unequal group

TABLE 2

Mean and standard deviation scores on anxiety and existential well being for levels of combined parent-God attachment (N=116)

Group	N	Anxiety M(SD)	Existential well being M(SD)
Correspondence +	33	31.52 (5.95) ^a	54.48 (4.79) ^a
Negative Discontinuity	25	35.48 (5.80) ^{ab}	50.92 (6.35) ^{ab}
Correspondence -	30	42.07 (11.67) ^b	44.40 (9.61) ^b
Compensation	28	41.54 (13.18) ^b	46.10 (12.18) ^b

NB: Column means with different superscripts differ at $p < .05$

Correspondence positive – secure attachment to parents and God

Negative discontinuity – secure attachment to parents and insecure attachment to God

Correspondence negative – insecure attachment to parents and God

Compensation – insecure attachment to parents and secure attachment to God

sizes. With respect to anxiety the correspondence positive group was significantly less anxious than the compensation and correspondence negative groups but did not differ significantly from the negative discontinuity group. With respect to existential well being the correspondence positive group reported significantly greater existential well being than the correspondence negative and compensation groups, but did not differ significantly from the negative discontinuity group.

Consistent with the correspondence hypothesis the correspondence positive group evidenced high adjustment and the correspondence negative group evidenced low adjustment. However, the adjustment of the compensation group was neither similar to that of the correspondence positive group, nor intermediate between the correspondence positive and correspondence negative groups. The reported adjustment of the compensation group was, in fact, similar to the adjustment of the correspondence negative and negative discontinuity groups.

Relationship Between Religious Orientation, GAM and Adjustment

If religious orientation is a mediator of the relationship between attachment to God and psychological adjustment, then at least one of Intrinsic, Extrinsic Personal, Extrinsic Social and Quest Orientation must be significantly associated with attachment to God (Equation 1). The only significant results were a positive relationship between Intrinsic Orientation and GAM ($r = .577, p < .001$) and a negative relationship between Quest and GAM ($r = -.451, p < .001$).

However, Quest was not significantly associated with either anxiety ($r = -.005$) or existential well being ($r = -.088$) and thus was not considered a potential candidate as a mediator. Hence the next analyses were conducted to test Intrinsic Orientation as a mediator between GAM and anxiety, and GAM and existential well being.

The second multiple regression analysis indicated that GAM was a significant predictor of both anxiety and existential well being, after controlling for the effects of gender ($\beta = -.207, p < .05$ and $\beta = .235, p < .05$ respectively – See Table 3, Mediation Equation 2). The final multiple regression analysis indicated that GAM was no longer a significant predictor of anxiety and existential well being, once gender and intrinsic orientation were entered into the equation ($\beta = -.162$ and $\beta = .084$ respectively – see Table 3, Mediation Equation 3).

Together, the results of the mediation analysis indicate that Intrinsic Orientation mediates the relationship between attachment to God and psychological adjustment.

DISCUSSION

Multiple regression analysis indicates the degree of security of one's attachment to God has a small, significant association with well being and anxiety once the reported security of parental attachments is taken into account. This finding points to the relevance of considering one's spiritual attachment as an influence on psychological adjustment, beyond the effects of parental attachment.

TABLE 3

Multiple regression analyses of religious orientation and GAM as predictors of existential well being and anxiety: Tests of intrinsic orientation as a mediator (N=116)

Outcome		Final B	Final β	<i>t</i>
Mediation equation/ Predictor				
Anxiety				
2, ^a	Gender	.583	.027	.291
	GAM	-.199	-.207	-2.186*
3, ^a	Gender	.699	.033	.347
	Intrinsic	-.104	-.075	-.654
	GAM	-.155	-.162	-1.378
Existential well being				
2, ^b	Gender	-3.407	-.179	-1.959
	GAM	.202	.235	2.557*
3, ^b	Gender	-3.772	-.198	-2.217*
	Intrinsic	.314	.252	2.343*
	GAM	.072	.084	.770

2^a *Df* = 2,112 *R* = .21 *R*² = .05 *Adj R*² = .02 *F* = 1.777 *ns*

3^a *Df* = 3,112 *R* = .22 *R*² = .05 *Adj R*² = .02 *F* = 1.433 *ns*

2^b *Df* = 2,112 *R* = .32 *R*² = .10 *Adj R*² = .08 *F* = 4.173 *p* < .01

3^b *Df* = 3,112 *R* = .37 *R*² = .14 *Adj R*² = .12 *F* = 6.20 *p* < .01

With respect to Research Question 1 the correspondence positive group functioned as expected from Kirkpatrick’s theory of attachment to God. Those with reportedly secure attachments as children and currently with God scored highest on existential well being and lowest on anxiety. In conjunction with results of the multiple regression analysis this suggests that for people who view themselves as religious and/or spiritual, the quality of relationships with parents and God contributes to psychological well being. Similarly, the correspondence negative group functioned as expected from attachment theory: those with insecure attachments to parents and God scored equal highest on anxiety and equal lowest on existential well being.

The compensation group, with insecure parental attachment but secure religious attachment, did not function as expected from the strong surrogacy model. Their anxiety scores were significantly higher than those of the correspondence positive group, their well being scores were significantly lower, and

they did not differ from the correspondence negative group on either measure of adjustment. This result is more consistent with the differentiated working models theory of Collins and Read (1994). That is, although people in the compensation group may hold positive working models as a result of their attachment to God, more negative working models arising from insecure child-parent attachment appear to be dominating their current levels of psychological adjustment. The finding is consistent with a conclusion drawn from the literature by Beck (2006):

Currently, the research appears to suggest that seeking out a relationship with God (e.g., conversion) may have compensatory motives (Granqvist, 1998; Kirkpatrick, 1997, 1998). However, once the relationship with God is established, prior attachment styles may begin to exert themselves in this new, albeit supernatural, relationship. (p. 125)

Preliminary findings related to combined parental and God attachment groups (and especially the compensation group) merit replication using larger samples. It appears that compensation as a

process of changing an array of mental models requires much more analysis. The surrogacy model with its language of relinquishing one attachment figure for another could imply an immediate replacement of mental models. In contrast, the differentiated working models view of compensation suggests that mental models relating to God may operate initially in an independent domain, with the possibility of forming connections with other attachment models and hence, over time, contributing to more generalized attachment relationships (Collins and Read, 1994). The nature and effects of these compensatory processes are unclear. The differentiated model suggests that a number of factors may be important in enhancing the availability and potency of working models pertaining to God. These include: the frequency of positive experiences of God, together with associated constructions and explanations of the experience; beliefs, attitudes and expectations regarding one's relationship with God; the intensity of attachment needs and goals; development of strategies for accessing the desired degree of relatedness to God in the presence of emotional distress; and the consistency between one's knowledge and experiences of God. A thorough investigation of these hypothesised components of God-related working models is needed.

With respect to Research Question 2, the finding that the intrinsic religious orientation mediates the impact of attachment to God on existential well being and anxiety suggests that the security of one's attachment to God promotes an orientation to religion as an end in itself, which in turn is predictive of existential well being and lowered anxiety. Attachment to God, then, is a foundation for positive adjustment because it allows for a healthy, committed religious orientation. Similarly, the effect of attachment to God on adjustment was found to be mediated by spiritual coping (Belavich & Pargament, 2002). Hence, security of attachment to God may be fundamental to a number of pathways to healthy adjustment, and other religious and personality variables could be examined as potential mediators of the attachment-adjustment relationship.

On the other hand, holding an extrinsic social orientation did not mediate the relationship between spiritual attachment and adjustment, despite our finding a direct relationship between extrinsic social orientation and higher anxiety (consistent with Watson, Morris & Hood, 1990) and lower existential well being. It was expected that an

insecure attachment to God would foster a less adaptive extrinsic orientation and thence poorer adjustment. However, the extrinsic social orientation may be related positively to some styles of insecure attachment to God (such as the ambivalent style), and negatively to other styles (such as dismissing). If this is the case, then tests for moderation should be conducted with larger samples and using measures of attachment that allow for accurate classification into insecure sub-groups.

This article focuses on the important function of attachment to God, as mental representations of a spiritual relationship, in promoting psychological adjustment through intrinsic religious commitment. Results also suggest that attachment to God has unique components that are not found in attachment to parents. Theoretical reflection and empirical work are needed to specify how spiritual and human attachments are both similar and different, and thence how attachment to God might have important psychological and spiritual consequences beyond the effects of other spiritual and personality variables.

The findings must be interpreted in the light of measurement difficulties. Attachment to God was measured by a continuous scale that was identical in form to the measure of parental attachment. This was chosen in order to minimise differences caused by discrepant methods or discrepant underlying theories and to address the main problem of categorical measures, namely a forced choice between categories having multiple components. A further aim was to form groups reflecting correspondence and compensation using a continuous measure, not a categorical measure that included disparate facets in each description. Yet to form the groups it was necessary to dichotomise the sample. The median split technique is a convenient method when cut-off points are not known, but it is arbitrary and blurs distinctions between different styles of insecure attachment. It is likely to over-estimate the size of the insecure groups and under-estimate the size of the secure group. If reliable and valid categorical measures of attachment to God were developed they might clarify the relationship between insecure styles, extrinsic social orientation and adjustment. The current results thus point to the need for further work on the concept and measurement of attachment to God. In particular, continuous and categorical measures that allow for comparisons with child-parent attachments and distinctions among the insecure group are needed.

Another measurement concern is whether the retrospective measure of attachment to parents (the PAM) actually reflects attachment organization, or internal working models, rather than experiences with parents in relation to attachment issues. It is quite possible that actual models of child-parent relationships around safety and security are not only screened by defensive processes but also modified by later relationships that affect generalised working models. However, conceptually coherent associations have been found between ratings of early parental spirituality and parental attachment, and reported attachment to God (McDonald et al., 2005), suggesting that some meaningful conclusions may be drawn from retrospective accounts. Ideally, longitudinal studies are needed to assess internal working models in childhood and their subsequent reorganization if religious conversion is experienced. Future cross-sectional studies would benefit from larger sample sizes that could provide sufficient statistical power for more extensive data modelling. Further, in larger samples the effect of religious affiliation as a moderator of the attachment-well being relation should be examined. Effects of religious and attachment variables upon adjustment should also be examined after controlling for personality factors, as suggested by Golden, Piedmont, Ciarrocchi & Rodgers (2004).

Overall, this study examined the effects of religious orientation and parental and religious attachment upon two aspects of psychological adjustment: anxiety and existential well being. Findings point to the need to refine concepts and measures of attachment to God, to examine the additive and interactive effects of religion conceptualised multidimensionally, as well as considering the effects of child-parent and Divine attachments together for a better understanding of current psychological well being.

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