Attachment to Australia, attachment to God, and quality of life outcomes among African Christian diasporas in New South Wales: A cross-sectional study

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ABSTRACT
This study investigates whether place attachment (PA) in terms of attachment to Australia as a country is associated with QoL and the extent to which this association is related to attachment to God (AG) among African Christian residents in NSW, Australia. Results reveal that the main effects of PA bear a consistent positive association with QoL. A similar positive association was observed in the main effects of AG on QoL. There is not enough evidence to support the interaction between PA and AG on QoL, thus both PA and AG have an impact on QoL individually, rather than collectively.

KEYWORDS
African diaspora QoL; place attachment; attachment to God spirituality; quality of life outcomes

Introduction
Attachment theory (Bowlby, 1973, 1982, 1988) has been shown to provide an explanatory conceptual framework for studying emotion regulation and quality of life (QoL) outcomes among people of different cultural backgrounds (Flannelly & Galek, 2010; Kirkpatrick, 2005). In particular, studies on individual differences in adult attachment processes (Cicirelli, 1991a, 1991b, 2004) have provided evidence for the QoL function of what Bowlby (1982) referred to as the attachment behavioural system and the relevance of adult attachment experiences in negotiating QoL outcomes (Consedine & Magai, 2003; Flannelly & Galek, 2010). Although various studies have positioned attachment as a typology for understanding relationships with important symbolic attachment objects/figures in interpersonal attachment (e.g., Ainsworth et al. 1978; Bowlby, 1973, 1982, 1988; Fraley, Heffernan, Vicary, & Tome, 2011; Fraley & Spieker, 2003), attachment to place (e.g., Rollero & De Piccoli, 2010; Scannell & Gifford, 2017, 2016), and God attachment (e.g., Bradshaw & Kent, 2017; Cicirelli, 2004; Counted, 2017; Counted & Moustafa, 2017; Kirkpatrick, 2005; Miner, Ghobary-Bonab, & Dowson, 2017), little is known about the interaction between place and God attachment; their individual versus collective impact on QoL; and how migrant groups such
as the African diaspora, experience those attachments. Yet there is reason to believe that PA and AG experiences may be associated with QoL outcomes and applicable to the African Christian diaspora who are geographically separated from their loved ones and home countries and may be turning to a sacred or topographical object for significant relationship in the face of place change and forced displacement.

**Adult attachment theory and applications**

Existing literature on adult attachment theory is guided by the premise that the same system of motivational drive that gives rise to the parent–child emotional bond is responsible for the attachment bond formed in adults through emotionally attuned relationships (Fraley et al., 2011). Bowlby’s (1973, 1982, 1988) attachment theory mainly focused on the nature of the parent–child relationship, an experience he believed evinced the human reality from “cradle to grave.” Years after the initial proposition of attachment theory, subsequent researchers have contributed to this theory, focusing on expanding individual differences in attachment process (e.g., Ainsworth et al. 1978), and extending attachment experiences in the context of romantic relationships in adults (e.g., Fraley & Shaver, 2000). These studies have conceptualised attachment theory as a typology that can be used for understanding attachment processes in both the infant years of life and adulthood (Fraley & Spieker, 2003), positing that the emotional bond in adult attachment experiences are partly a function of the same attachment motivational drive that is formed during the early stages of life with a primary caregiver. Fraley and Spieker (2003), along with Hazan and Shaver (1987), have positioned both adult attachment relationship and parent–child relationship experiences to share similar features. First, they argue that individuals in these relationships feel safe and protected when they are in close proximity with their attachment figures. Secondly, the primary goal of an attachment relationship is to seek proximity with an attachment figure through engaging in close, intimate, or imaginary contact. Thirdly, individuals experiencing any of these relationships feel insecure when the attachment figure is unavailable or insensitive to their emotional feelings, such that the experience may lead to a separation anxiety and negative emotional states. Fourthly, the attachment bond serves as a secure base from which the individual explores the world around them, and plays in, and learns from, their environment.

Based on these interesting parallels, several studies have positioned adult attachment as a useful but fluid concept in guiding behavioural activities in close relationships (e.g., Fraley et al., 2011; Fraley & Shaver, 2000), while others (e.g., Granqvist & Kirkpatrick, 2016) have problematized the concept of adult attachment and warned against extending attachment theory beyond
its valid limits. However, contrary to the criticisms, adult attachment theory, like parent–child attachment theory, is a relational–theoretical perspective that sheds light on the normative aspects of attachment processes in adults as observed in lifespan attachment development (Cicirelli, 1991a, 1991b). This form of attachment–theoretical formulation draws attention to the wide-ranging variability and individual differences of relational experiences and behavior in relationships with symbolic objects in the lives of people to whom an attachment is constructed.

**Place attachment**

Low and Altman (1992) have presented place as an example of such an object of attachment among adults in the study of environmental psychology and human geography. The PA thesis emphasizes the existence of a cognitive–emotional bond to meaningful geographic locations across cultures and religions (Lewicka, 2010; Mazumdar & Mazumdar, 2004). Relph (1976) was among the first set of scholars to conceptualize PA as a part of human nature that involves knowledge of significant places. Other studies (e.g., Fried, 2000; Scannell & Gifford, 2014) have demonstrated how PA overlaps with the principles of interpersonal attachment in terms of proximity to place, separation from place, exploration of place, and how a place can serve as a safe haven for many people. For example, Ryan and Ogilvie (2001) reveal that proximity to place may involve taking photographs in an important place or displaying images of objects from such a place, or even buying a home in a geographic location that has the magnetic wand to draw people and change emotional states. Kelly and Hosking (2008) have also proposed that place proximity can involve going on vacation to the same location year after year, or, in a worst case scenario, refusing to leave a place even when such a place is no longer safe (e.g., Billig, 2006; Donovan, Suryanto, & Utami, 2012). These conceptualizations suggest that places can be perceived as less dangerous and havens of safety among those who are attached to them (Brown, Perkins, & Brown, 2003), and loss of attachment to such places through natural disasters, death of a loved one or a primary caregiver may lead to separation anxiety (Cox & Perry, 2011). Other studies (e.g., Feeney & Thrush, 2010; Gustafson, 2001) have shown that perceiving a place as a secure base can promote exploration of the broader environment for individual growth and identity formation.

**Attachment to God**

In addition, the AG thesis has also been presented as an aspect of adult attachment spiritual development and a meaningful theological construct for both Christians and Muslims (Miner, Ghobary, Dowson, & Proctor, 2014).
Several psychology of religion studies have interpreted the believer–God relationship in monotheistic religions as an important attachment experience (Counted, 2016b; Kirkpatrick, 1998, 1999; Kirkpatrick & Shaver, 1990; Pargament, 1997) or as a “care-giving faith” (Counted, 2016a; Counted & Miller, 2018) in which the criteria for an attachment in parent–child relationship can be applied to the relationship with God. These studies amplify the religious believers’ perceptions of God as a safe haven, a secure base, a target for proximity, or as a response to separation anxiety or loss. Leading this motion are developmental psychologists Granqvist and Kirkpatrick (2016) who have argued that Christian religion, in particular, teaches followers to maintain a personal relationship with God through Jesus Christ, who is considered as a “wise,” “almighty,” and “loving” figure. The desire to maintain a relationship with God is often satisfied through emotionally attuned communication with God in the form of prayer (e.g., Hood, Spilka, & Hunsberger, 1996; Reed, 1978), reading or quoting religious texts (e.g., Counted, 2016a, 2016b), and participating in religious rituals or services (Counted, 2018b), among others. In a believer–God relationship, particularly in Christianity, God seems to clearly capture the attribute of a protective figure and pictured as always sensitive and available for his people, serving as a source of hope, security, and comfort for those in need. For instance, the bible text in Matthew 11:28 expatiates this attribute: “Then Jesus said, come to me, all of you who are weary and carry heavy burdens, and I will give you rest.” Wenegrat (1989) demonstrated how biblical Psalms nuance this projection of God as a symbolic attachment figure in the way a parent is mentally represented by an infant. Theologian Kaufman (1981) has also conceptualized the idea of God as “the idea of an absolutely adequate attachment figure. … God is thought of as a protective and caring parent who is always reliable and always available to its children when they are in need” (p. 67). Counted (2017) has linked AG theory to religious violence, arguing that when a relationship with a religious figure is threatened, believers and followers of such a divine attachment figure may be predisposed to violent means to defend and protect their source of attachment through demonstrating separation anxiety in the forms of protest, despair, and detachment.

In most monotheistic religious traditions, AG offers the promise of an eschatological life and a reunion with God, and the thought of separation from such union may also cause a separation anxiety. The emotional quality of faith, according to Johnson (1945), is grounded in the assurance that it gives in terms of confidence and security, as opposed to fear and hopelessness. This understanding of faith is reflective of Bowlby’s descriptions of a secure base from where an attached individual develops confidence to explore their environment (Granqvist & Kirkpatrick, 2016).
Place and God as objects of attachment

Given the above underlined conceptual overlaps in key concepts, the possibility that both places and divine entities satisfy similar attachment needs as people do, warrants further inquiry. One might ask how attachment can be developed with geographic objects and divine entities that are not analogous to a prototypical human person, given that Bowlby’s attachment theory involves a physical interaction with another human. Cicirelli (1991a, 1991b) has thrown more light on this adult attachment perspective. Cicirelli (2004), citing Kirkpatrick (1999) and Bretherton (1987), addressed this concern by linking adult attachment development to increased cognitive abilities in adults whom are often satisfied by the visual and verbal contact with a non-observable caregiver (e.g., a parent) who may be far away, and eventually depend on the mere knowledge of the whereabouts of the caregiver. This attachment maturation theory is prevalent among adults, than children, since they have enhanced cognitive abilities and perform tasks related to the processing speed, voluntary response suppression, and working memory, which make it possible for them to develop and maintain attachments through visual and verbal interactions with imaginary objects (Counted, 2018; Counted & Zock, 2018; Luna, Garver, Urban, Lazar, & Sweeney, 2004). The treatment of adult attachment theory in Sroufe and Waters (1977) suggested that maintaining proximity with an object of attachment through verbal and visual contact is undertaken due to the goal of the attachment system: “felt security.” Adults demonstrate this sense of felt security, when they are geographically separated from a parent, through exhibiting attachment behavior such as making phone calls, sending letters, or staying connected with the caregiver via social media sites (Facebook, Twitter, Instagram) in order to maintain proximity with the parent despite the distance between them. The goal of having a sense of felt-security is central in attachment relationships, as the attached individual meets their goal of attachment through emotionally attuned communications with a place, as well as with God.

There are implications for conceptualizing adult attachment theory in terms of people-place and believer-God relationships, though the dissimilarity between the two modeled relationships is a stronger feature than the similarity. First, the same internal working models (IWMs) in relationships with primary caregivers are also in operation in adult attachment developments, which also involve but are not limited to PA and AG developments. However, IWMs may not directly predict people-place relationships since studies have shown that attachment to place development is associated with childhood place memories (e.g., Game, 2001; Morgan, 2010): subjective place experiences that involve “bringing unconscious material to consciousness” (Frosh, 2002, p. 16). In other words, people-place relationships involve the
representation of unconscious materials associated with childhood environments (Bachelard, 1969), which reveal the “unconscious internal working models of place relationships rather than social relationships” (Morgan, 2010, p. 6). The IWM’s link to AG is less contentious than the one that includes PA since several studies (e.g., Cicirelli, 2004; Counted, 2016a, 2016b; Granqvist & Kirkpatrick, 2016) support the IWMs of social relationships serving as predictors of AG development.

Secondly, if place and God are perceived as important objects of attachment, then we should expect to see the same panoply of individual differences in parent–child attachment in people–place and believer–God relationships, though with varied differences in the attachment patterns. Hence, both secure and insecure attachment styles may be developed with places and divine entities as symbolic objects of attachment. Insecure adults are either anxiously attached (worrying over unmet attachment needs or feeling abandoned in close relationships) or avoidantly attached (appearing to be self-reliant and independent) in attachment relationships, while securely attached individuals are confident in the availability of their attachment figures (Ainsworth, 1989). In addition, insecure adults can also develop what Main and Solomon (1990) referred to as a disorganized attachment, in which they display contradictory behavior that is both fearful and dismissal of their close others. Religious believers are likely to experience insecurity in their relationship with God such that it leads to feelings of anxiety and abandonment with God and spiritual struggles (Ano & Pargament, 2013; Counted, 2018b). Similarly, attached individuals can also be predisposed to negative experiences in a place, which affects the way they feel about a particular place, thus leading to withdrawal from place or feeling a sense of place dissatisfaction. Experiences of place insecurity arise due to several reasons such as socio-cultural inequities, language barrier, education–job mismatch among migrants, racism or implicit biases, forced acculturation, among others. Although taking different forms, the individual differences in attachment experiences with places and divine entities may be a partial reflection of affective experiences with imagery objects of attachment, and can be relevant to QoL outcomes and wellbeing in general (e.g., Bradshaw & Kent, 2017; Harris, Werner, Brown, & Ingebritsen, 1995; Marcheschi, Laike, Brunt, Hansson, & Johansson, 2015; Rollero & De Piccoli, 2010).

**Adult attachment and quality of life**

Evidence shows that adult attachment developments are related to QoL (Harris et al., 1995; Kim, Carver, Deci, & Kasser, 2008). QoL describes an individual’s experience of life, well-being, and life satisfaction. It is a broad concept that gauges and covers several aspects of an individual’s needs that require due attention: “physical health, psychological state, level of independence, social
relationships, and their relationship to salient features of their environment” (WHOQOL Group, 1995, p. 1404). An individual’s psychological functioning demonstrates the capacity to attain self-actualization and achieve their own goal in relation to their emotions and attachment foundations (Limbos, Joyce, Chan, & Kesten, 2008). Anokye, Trueman, Green, Pavey, and Taylor (2012) position physical health as a state of well-being in one’s QoL that optimally authenticates the functionality of both internal and external body systems in terms of being physically fit for performing day-to-day activities. Environmental health is also an aspect of individual QoL that has much to do with how the natural and built elements of an environment contribute to individual well-being and life satisfaction (Meyer & Owen, 2008). Umberson and Montez (2010) point to another way of assessing QoL: social relationship experiences. Social relationship QoL examines how the centrality of relationships in an individual’s life, in terms of their social contacts, cohesion, integration, sense of community, among others, contributes to their overall well-being and life satisfaction.

Individuals demonstrating attachment behaviors are likely to secure cognitive-attachment bonds, or mental representations, that convince the self it is worthy of care due to the proximity and availability of the object of attachment. Such feeling of felt attachment security in adults allows the individual to maintain and promote positive emotions that reduce emotional distress and anxiety, whilst negotiating the QoL of the individual (Marganska, Gallagher, & Miranda, 2013; Schore, 2003). Several studies suggest an association between secure attachment styles and higher scores of QoL outcomes, or lower levels of psychological distress (e.g., Bradford & Lyddon, 1994; Feeney, 1999). Alternatively, insecure attachments have also been linked to lower scores of life satisfaction, QoL, and higher psychological distress (e.g., Bethany & Lorne, 2008; Kirkpatrick & Shaver, 1992; Sharon & Wendy., 2009). These findings suggest a primary hypothesis:

**H1:** Adult attachment experiences will be positively associated with, or possibly negatively related to, QoL outcomes.

**Place attachment and quality of life**

PA is one of the most researched topics in environmental psychology and human geography, with most studies focusing on the emotional benefits of having a sense of community and factors contributing to residential or neighborhood attachment (Bonaiuto, Carrus, Martorella, & Bonnes, 2002; Bonaiuto, Fornara, & Bonnes, 2006; Relph, 1976). Despite its importance, the way in which PA is related to QoL remains unclear, even though this relationship has been investigated in a number of studies. Rollero and De
Piccoli (2010) have dealt with this topic from a social support theoretical perspective that positioned perceptions of QoL in places of attachment as the outcome of relational factors. In particular, their study suggests social relationship experiences in terms of social interactions and support from attachment figures as important predictors in PA. Tartaglia (2012) linked the quality of social relations with important relational objects in the experience of PA as an important factor promoting QoL in an urban environment. Gattino and colleagues (2013) corroborate this finding, suggesting that QoL is largely influenced by one’s sense of community, and not by PA in itself. These findings are similar to those of other studies (e.g., Marcheschi et al., 2015; Scannell & Gifford, 2016, 2017) which highlight the association between PA and QoL as the outcome of the social and environmental qualities of a place, afforded by support and proximity to other objects/figures of attachment. This theoretical perspective is well-documented in social support theory (e.g., Cohen & Lakey, 2000), and thus yields an additional study hypothesis:

**H2:** PA will be positively associated with QoL outcomes.

**Attachment to God and quality of life**

Furthermore, research evidence also suggests the health benefits of religious believers’ AG through engaging in proximity-seeking behavior that promotes emotionally attuned communication and spiritual coping in the form of prayer, reading sacred texts, meditation, and religious involvement (e.g., Counted, 2016a, 2016b; Hood et al., 1996; Idler, McLaughlin, & Kasl, 2009; Kirkpatrick & Shaver, 1992; Miller, McConnell, & Klinger, 2007; Reed, 1978; Saffari et al., 2013). Other studies have also found that secure attachment in a believer–God relationship is related to life satisfaction (Bradshaw, Ellison, & Marcum, 2010), better QoL and health status among patients (Saffari et al., 2013), maintaining positive emotions (Schore, 2003), adjustment to stress and less anxiety-related disorders (Ellison, Bradshaw, Flannelly, & Galek, 2014; Marganska et al., 2013), and lower levels of psychological distress (Bradshaw et al., 2010), among others. In addition, secure AG has been presented to moderate the effects of stressful life events and mental health outcomes in two longitudinal studies (e.g., Bradshaw et al., 2010; Ellison, Bradshaw, Kuyel, & Marcum, 2012). On the contrary, some studies have reported no association between AG spirituality and improvements in physical health QoL (e.g., Bradshaw & Kent, 2017; Miller et al., 2007; Nagpal, Heid, Zarit, & Whitlatch, 2014; Nguyen, Grzywacz, Lang, Walkup, & Arcury, 2010; Rohani, Abedi, Omranipour, & Langius-Eklöf, 2015). In a review elsewhere (i.e., Counted, Possamai, & Meade, 2018), we argued that the lack of
association between spirituality and physical health might be due to the illness context since AG spirituality may provide psychological comfort but it may not change the physical health status of the individual. These background results and research suggest the following hypotheses:

**H3a:** Positive/secure AG will be positively associated with better QoL outcomes.

**H3b:** Negative/insecure AG in terms of disappointment and anger with God will be unrelated to QoL, or associated with lower QoL outcomes.

**H3c:** Secure AG will be unrelated to the physical health status of the respondents.

**Place attachment, attachment to God, and quality of life**

In addition, Morgan (2010) has suggested an interaction between PA and other forms of attachment (e.g., interpersonal attachment), arguing that such interplay would arise as a result of the multiple shifting needs of attachment and exploration curiosity. In other words, an individual is likely to be drawn to God as object of their attachment affiliation, experiencing God as a safe haven in times of distress and a secure base to tune when in need of exploration and mastery of the broader environment. Hence, it is also possible to explore place as a potential object of attachment on the basis of an insecure relationship experience with God, especially when the individual experiences spiritual struggles and discontent. Counted and Zock (2018) argue that the relationship between PA and AG can be conceptualized in a *circle of place spirituality* in that it can have a compensatory-attachment outlook (relationship with an object developed on the basis of insecure attachment with another object) or take a correspondence-exploratory position (an exploration of another potential object occurs from a secure base), as shown in Figure 1. Drawing on this proposition, Counted (2018) has conceptualized the interplay between PA and AG as the circle of place spirituality (see Figure 1), showing the extent to which PA may be undertaken on the basis of AG (secure or insecure attachment) and vice versa due to one’s exploration curiosity and need for attachment affiliation. The engagement between the individual’s attachment affiliation and exploration curiosity is likely to help in negotiating their quality of life and the effects of life stressors (Counted, 2018). Hence, given the theoretical and empirical evidence that shows that PA is related to QoL, and AG associated with QoL, additional hypotheses (H4) are thus suggested:
There will be an interaction between PA and secure AG, and the effects will be associated with outcomes of QoL than either PA or AG alone.

**H4b:** PA will be associated with outcomes of QoL for individuals with secure AG.

**Confounding factors and quality of life outcomes**

Overall, there are reasons to believe that demographic background factors may be relevant in the assessment of QoL outcomes. Szatur-Jaworska (2005) suggested that age is a contributing factor in QoL since older people tend to suffer deficiencies in physical and mental conditions. Slavin (2005) and Lindner, Panaszek, and Machaj (2008) presented age as an important factor that affects physical health, particularly among elderly people since physical strength decreases with age. Psychological health was also linked to age difference, with young people having poor emotional functioning than elderly people due to financial strain, mistrust of public institutions, and housing problems (Uchmanowicz, Panaszek, Uchmanowicz, & Rosińczuk, 2016; Watson, Maître, Whelan, & Russell, 2016). Level of education and one's professional status have been presented as factors accounting for environmental health in QoL (Szynekiewicz et al., 2013), given that people with better social status or educational background are likely to have easier access to
resources in the environment than those who are not educated and have no elite social status. Other studies (e.g., Szynkiewicz et al., 2013) argue that marital status and being in a relationship may affect perception of QoL due to the psychological benefits that come with having a significant other. A number of studies have also found place of residence and region of origin as possible confounding factors influencing perceptions of QoL (e.g., Anton & Lawrence, 2014; Heleniak, 2009). On the contrary, Szynkiewicz et al. (2013) have also found that place of residence does not influence the assessment of QoL. These background studies suggest socio-demographic factors as important covariates for the examination of QoL.

Method

Participants

To test the aforementioned study hypotheses, we investigated cross-sectional data from a sample of 261 African Christian diaspora in New South Wales, Australia. The participants were African migrants between 16 and 70 years of age with an average mean of 37 years, and with an almost equal gender divide of 54% female and 46% male. Approximately 81% of the sample had a tertiary education degree. Relationship status was reported as married (62%), single (32%), and divorced, widowed, or separated (6%). Most of the participants (70%) had been residents of New South Wales for more than five years, while 30% of them had been residents for less than five years.

In a demographic analysis of the emerging settlement groups in New South Wales, Capuano (2011) noted the rising number of permanent settlers in New South Wales most of whom were skilled and humanitarian migrants from sub-Saharan Africa. According to a recent report from the Australian Bureau of Statistics (2016), New South Wales has one of the fastest growing populations of African diasporas ($n = 37,735$) after Victoria ($n = 43,429$), with many of them identifying themselves as Christians. Hence, due to the cultural similarities and shared religious orientations, the population for this study was limited to both skilled and humanitarian Christian migrants from sub-Saharan Africa who reside in New South Wales, Australia.

Procedure

Prior to data collection, the study was approved by the Human Research Ethics Committee, Western Sydney University. Data collection was conducted using the snowball sampling technique, an approach recommended for studying hard-to-reach population due to their numeric disadvantage (Gillies, 2002; Renzaho, Bilal, & Marks, 2013). A snowball method is a nonprobability sampling strategy based on recruiting study subjects from
existing community structures and among their acquaintances (Council of Europe, 1997). Participants were part of religious and cultural communities were they regularly held their weekly meetings. Leaders of these communities were contacted by the first author and asked to inform members about the study. The communities were told that the study was looking at how their relationship experiences with God and important people in their lives are related to QoL. The first author was invited by the group leaders to talk to their community about the study, after which they were invited to complete the study questionnaires. Around 450 volunteers responded to the initial invitation at the community meetings and church events, most of whom collected copies of the questionnaires, but only 261 returned their completed forms, either on the spot, the following week, or by mail. Participants completed self-report questionnaires that contained measures of our key concepts: quality of life, PA, and AG.

**Measures**

**Dependent variables: quality of life outcomes**

**Quality of life.** Four domains of QoL were examined using the 26-item WHOQoL–Bref, or World Health Organisation Quality of Life–BREF (The WHOQOL Group, 1998): physical health, psychological functioning, social relationships, and environmental health. Items ranged from 1 (not at all) to 5 (completely) and were scored on a 5-point Likert scale. The physical health domain included statements that measure the level of fitness and functional capacity of participants and to what extent they experience poor physical health. The scale measuring psychological functioning captures subjective well-being experiences, such as positive emotions, self-image, self-esteem, absence of sadness, learning ability, and memory concentration of the participants. The social relationships QoL domain examines the quality of close relationship interactions with friends, family, and community, and the extent to which participants feel supported, self-reliant, independent, and loved. QoL in terms of the environment examines participants’ assessment of the Australian landscape and how it meets their basic social and health-related needs, and provides easy mobility and opportunities for them. Higher scores in each of the domains suggest better QoL, whereas lower scores reflect poor QoL. The measures demonstrated satisfactory Cronbach’s alpha consistency across all domains: psychological health (α = .76), environmental health (α = .79), physical health (α = .77), and social relationships (α = .71).

**Key independent variables: PA and AG**

**Place attachment (PA)** was measured with modified items from the Sense of Place Scale (Jorgensen & Stedman, 2001) which assesses the strength of participants’ attachment to place (i.e., attachment to their new abode in
Australia): “I feel relaxed when I’m in Australia,” “I feel happiest when I’m in Australia,” “This place is my favorite place to be,” and “I really miss Australia when I’m away for too long.” Higher scores suggest significant psychological connection and strong attachment to Australia and the extent to which place serves as an object of attachment among the participants. Responses were rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The four items adapted for measuring PA demonstrated satisfactory Cronbach’s alpha reliability (α = .81).

**Secure AG** was adapted from integrating all four existing scales of the 16-item Attachment to God Measure (Sim & Loh, 2003). Secure AG gauges the extent to which participants perceive God as an attachment figure who provides the function of a safe haven (e.g., When I am afraid or anxious, I know that God is there for me), secure base (e.g., My relationship with God gives me the courage to face new challenges), proximity (e.g., I seek to be close to God), and turn to God as a response to separation anxiety (e.g., I cannot bear to think of life without God). Scale ratings ranged from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating the strength of participants’ secure AG. The Secure AG scale demonstrated excellent reliability, α .89.

**Insecure AG.** This measure was adapted from existing scale of negative attitudes toward God, examining the extent to which participants experience anger and disappointment with God (Wood, Worthington, Exline, & Yali, 2010). Responses were measured on a 10-point scale (1 = not at all to 10 = extremely). Insecure AG was measured with the following four items: “I feel angry at God,” “I feel that God has let me down,” “I view God as unkind,” and “I feel abandoned by God.” The Cronbach’s alpha for the scale of insecure AG demonstrated satisfactory internal consistency value (α .71).

**Covariates**

**Socio-demographic background factors.** Analyses were controlled for several covariates that could confound the relationships between PA, AG, and QoL outcomes among African Christian diasporas in New South Wales. Age is included as a covariate in this study, even though it was coded as a continuous variable with a range of 16 to 71 years. Other covariates include: length of residence in Australia (1 = less than 5 years; 2 = over 5 years), region of origin/birth (1 = central Africa; 2 = eastern Africa; 3 = western Africa; 4 = southern Africa), gender differences (1 = male; 2 = female), relationship status (1 = single; 2 = married; 3 = divorced/widowed/separated), and education background (1 = high school or less; 2 = tertiary education).
**Statistical analysis**

Data analyses were conducted using SPSS, version 21.0, and done in three steps. First, (a) descriptive statistics were calculated for study variables. Secondly, (b) bivariate analysis was estimated using the Pearson product-moment correlation coefficient to verify H1, H2a, H2b, H3a, H3b, and H3c. This was followed by (c) multivariate analyses using hierarchical multiple regression models to test H4. The models included both the main and interactive effects of PA and AG on QoL outcomes. All covariates with a $p$-value < .10 were entered in the models, with significance set at $p < .05$. To minimize the effects of multicollinearity, perpendicular terms were mean-centered prior to generating the cross-product terms for the interaction effects for both PA and secure AG, and PA and insecure AG respectively. Study results are presented in Tables 1–6.

**Results**

**Descriptive statistics**

Descriptive statistics for study variables are presented in Table 1, with the participants’ average age of 36.9 ($SD = 11.7$). Study data indicated high levels of QoL among study participants, the highest being social relationship ($M = 4.03$, $SD = 0.77$) followed by environmental health ($M = 3.98$, $SD = 0.57$), physical health ($M = 3.77$, $SD = 0.69$), and psychological functioning ($M = 3.71$, $SD = 0.47$). PA was in a mid range with a mean average of 3.61 ($SD = 0.77$) while AG average score was quite high ($M = 5.69$, $SD = 0.46$) and low for angry and disappointed with God ($M = 1.54$, $SD = 1.35$).

<table>
<thead>
<tr>
<th>Table 1. Basic descriptive statistics for the total sample ($N = 261$).</th>
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<tbody>
<tr>
<td>Variable descriptors</td>
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<td><strong>Dependent variables (QoL)</strong></td>
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<td>Psychological health</td>
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<td>Environmental health</td>
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<td>Physical health</td>
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<td>Social relationships</td>
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<td><strong>Independent variables (Attachment)</strong></td>
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<td>PA</td>
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<td>Secure AG</td>
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<td>Insecure AG</td>
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<td><strong>Covariates (Demographics)</strong></td>
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<td>Residents less than 5 years$^a$</td>
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<td>Central Africa$^b$</td>
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<td>Age</td>
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<td>Female$^c$</td>
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<td>Single$^d$</td>
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<td>High school or less$^e$</td>
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$^a$Ref. = over 5 years, 70%. $^b$Ref. = Eastern Africa, 2.4%; Western Africa, 58.4%; Southern Africa, 38.8%.
$^c$Ref. = male, 46%. $^d$Ref. = married, 62%; widowed/divorced/separated, 6%. $^e$Ref. = tertiary education, 81%.
Table 2. Correlations coefficients (Pearson’s r) among scales of place attachment, attachment to God, and quality of life outcomes.

<table>
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<th>Variables</th>
<th>PA</th>
<th>Secure AG</th>
<th>Insecure AG</th>
<th>Physical QoL</th>
<th>Psychological QoL</th>
<th>Social relationship QoL</th>
<th>Environmental QoL</th>
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<td>−.244***</td>
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<td>−.031</td>
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Note. PA = place attachment; AG = attachment to God; QoL = quality of life.
*p < .05. **p < .01. ***p < .001.
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<td><strong>PA × Secure AG</strong></td>
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Note. PA = place attachment; AG = attachment to God; QoL = quality of life. PA and secure AG were centered at their means.

*p < .05. **p < .01. ***p < .001.
Table 4. Summary of hierarchical regression analysis for place attachment and attachment to God predicting environmental health quality of life (N = 261).

<table>
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<th>Variable</th>
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<th>Model 4</th>
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Note. PA = place attachment; AG = attachment to God; QoL = quality of life. PA and secure AG were centered at their means.
*p < .05. **p < .01. ***p < .001.
Table 5. Summary of hierarchical regression analysis for place attachment and attachment to God predicting physical health quality of life (N = 261).

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Note. PA = place attachment; AG = attachment to God; QoL = quality of life. PA and secure AG were centered at their means.

*p < .05. **p < .01. ***p < .001.
Table 6. Summary of hierarchical regression analysis for place attachment and attachment to God predicting quality of life psychological functioning ($N = 261$).

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<td>$\beta$</td>
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<td>$B$</td>
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Note. PA = place attachment; AG = attachment to God; QoL = quality of life. PA and secure AG were centered at their means.

*p < .05. **p < .01. ***p < .001.
**Bivariate correlations**

Table 2 presents the results of bivariate correlations between scales of PA, secure AG, insecure AG, and QoL domains, testing for H1, H2a, H2b, H3a, H3b, H3c, and H4c. These hypotheses were also tested in the hierarchical multiple regression analyses shown in Tables 3–6. Several notable, but expected, relationships emerge from the bivariate correlations in Table 2. As our primary hypothesis (H1), we expected that adult attachment experiences (conceptualized in two folds: PA and AG) would be positively associated with, or even negatively related to, QoL. The findings shown in Table 2 provide partial support for several study hypotheses. PA was positively correlated with all QoL domains, with Pearson’s r ranging from 0.353 (physical health) to 0.198 (Social relationships; all p < .000). Adult attachment in secure AG was also positively associated with all QoL domains: psychological functioning, r = .207, p < .001; physical health, r = .165, p < .008; environmental health, r = .239, p < .000; social relationships, r = .281, p < .000. These findings provide substantial support for H2 (PA was positively associated with better QoL) and H3a (secure AG was related to better QoL). In support of H3b, there was no correlation between QoL and insecure AG in terms of being angry and disappointed with God. In addition, PA was inversely related to insecure AG (r = −.123, p < .05), insecure AG negatively correlated with secure AG (r = −.244, p < .001), and all QoL measures were positively correlated with each other. Furthermore, bivariate correlations showed a positive relationship between secure AG and physical health QoL. Nonetheless, these bivariate correlations could be indications of an association between adult attachment experiences in PA and AG and QoL outcomes, as will be further examined in the regression models shown in Tables 3–6.

**Multivariate analyses**

Tables 3–6 present the results of multivariate analyses. With the exception of psychological health (no significant covariate), for each QoL outcome, four hierarchical regression models are presented: (a) covariates with p-values < .10 were entered at Step 1 (Model 1), PA (centered) was added at Step 2 (Model 2), Secure AG (centered) is added at Step 3 (Model 3), and the interaction between centered PA and centered Secure AG scores is added at Step 4 (Model 4). Before calculating for statistical interactions, items were mean-centered to minimize the effects of multicollinearity with product terms (Aiken & West, 1991). In addition, we only entered statistically significant covariates which were up to p-value < .10 in the models.

The main effects results for our multivariate analyses are as follows (Tables 3–6). As predicted in H1, H2, and H3a, results show significant associations between PA and QoL, and between AG and QoL. PA and AG both independently bear consistent positive associations with QoL outcomes. In Steps 2, 3,
and 4 respectively, PA was associated with social relationship QoL (B = .216, 95%CI: [.10, .34], p < .001; B = .194, 95%CI: [.08, .31], p < .001; B = .202, 95%CI: [.08, .32], p < .001), environmental health (B = .218, 95%CI: .13, .31, p < .000; B = .204, 95%CI: .12, .29, p < .000; B = .203, 95%CI: .12, .29, p < .000), psychological health (B = .228, 95%CI: [.10, .25], p < .000; B = .268, 95%CI: [.09, .24], p < .000; B = .267, 95%CI: [.09, .24], p < .000), and physical health (B = .362, 95%CI: [.22, .43], p < .000; B = .319, 95%CI: [.22, .42], p < .000; B = .310, 95%CI: [.20, .42], p < .000). The main effects sizes for PA are stronger for environmental and physical health outcomes, with standardized β scaling from 0.273 to 0.293 (environmental health, Table 4) and 0.344 to 0.362 (physical health, Table 5) respectively, and these effects values were statistically significant at p < .001.

In entering secure AG in Steps 3 and 4, respectively, AG was associated with social relationship QoL (B = .426, 95%CI: [.23, .62], p < .000; B = .408, 95%CI: [.21, .61], p < .000), environmental health (B = .262, 95%CI: [.12, .41], p < .000; B = .263, 95%CI: [.12, .41], p < .000), and psychological health (B = .187, 95%CI: [.07, .31], p < .002; B = .189, 95%CI: [.07, .32], p < .002). As estimated in H3c, and contrary to the bivariate correlation results, no association was found between physical health and AG.

Furthermore, it was predicted in the interactive model (H4a and H4b) that the interaction between PA and AG would significantly affect QoL outcomes, especially for individuals with secure AG. Results for this hypothesis are presented in Tables 3–6. Contrary to expectation, there was no evidence to support the hypothesis for the interaction between PA and AG; even when secure AG was replaced with insecure AG, the interaction effects remained insignificant, even though PA was inversely related to insecure AG in the correlation analysis. PA and AG retained their independent positive significance in all models, despite their lack of interaction effects.

We also calculated the statistical significance between outcomes of QoL and participants’ demographic background factors. Length of residence and age differences were predictive of physical health. When PA was entered in Model 2 (Table 5), length of residence lost its significance but was regained when AG was entered in Model 3, suggesting a possible link between participants’ length of residence and AG. Age on the other hand was negatively associated with physical health, even for all models, suggesting that younger participants had better outcomes of physical health compared to older adults.

In summary, these results position both PA and AG, as strong independent predictors of QoL outcomes among the African Christian diaspora, regardless of socio-demographic background factors. In addition, the interaction effects between PA and AG on QoL outcomes were reduced to nonsignificance, suggesting that adult attachment experiences in terms of PA and AG are independent of each other for our study sample.
Discussion

The aim of this study was to examine the health-related dynamics that are involved in experiences of place and its connections to spirituality in terms of its attachment-religion aspects. It is hypothesized that the association between adult attachment experiences in terms of PA and AG would be significantly associated with QoL outcomes. It is further estimated that these associations were to be expected since emotional connections with objects of attachment, such as place or God, may fulfill the attachment relationship role in addition to, or instead of, human figures (Kirkpatrick, 2005; Scannell & Gifford, 2014). More importantly to the aims of this study is the assumption that the effects of PA on QoL outcomes are contingent upon AG, such that African Christians who are drawn to Australia (place) will also maintain a religious attachment that has significant health benefits. This was proposed on the basis that both people-place bonds and believer-God relationships may have unique, albeit different, interactive attributes that have positive affective functions and influence QoL, given the relationship between PA and (insecure) AG in the correlational analysis. This has been well-articulated in environmental psychology (e.g., Low & Altman, 1992; Marcheschi et al., 2015; Morgan, 2010; Rollero & De Piccoli, 2010; Scannell & Gifford, 2016, 2017) and psychology of religion literatures (e.g., Bradshaw & Kent, 2017; Cicirelli, 2004; Counted, 2016a, 2016b; Counted & Moustafa, 2017; Ellison et al., 2014; Granqvist & Kirkpatrick, 2016; Miner et al., 2017). This interaction is also well-documented in the circle of place spirituality theory (Counted, 2018; Counted & Watts, 2017; Counted & Zock, 2018).

Consistent with the findings in other studies (e.g., Bradshaw & Kent, 2017; Cicirelli, 2004; Ellison et al., 2014; Gattino et al., 2013; Marcheschi et al., 2015; Rollero & De Piccoli, 2010; Scannell & Gifford, 2016, 2017; Tartaglia, 2012), this study found several significant associations between PA, AG, and QoL outcomes. For example, the main effects of PA bear a strong positive association with all outcomes of QoL, even when controlled for socio-demographic variables, AG, and the interactive terms. The main effects of AG were also strongly associated with three QoL outcomes, while indicating no meaningful relationship with physical health, since AG may not resolve the reality of physical illness even though it could bring about comfort (Nagpal et al., 2014). Physical health was negatively associated with age differences and significantly higher among African Christian diasporas who have been residents in Australia for more than 5 years. There was no evidence that AG moderates the association between PA and QoL outcomes in the interaction models. Hence, the findings provide empirical support for several, but not all, hypotheses.

These findings provide one key direction: both PA and AG have an impact on QoL, but individually rather than collectively since the effects of PA are
not contingent upon AG. Thus, both PA and AG experiences independently affect QoL outcomes regardless of other factors. Based on study results, we are not sure whether individuals who are attached to God and to place simultaneously are experiencing better QoL outcomes since there is no control group. However, what is clear about the study result is that African Christian diasporas who are attached to place, and also, those who look to God as their symbolic attachment figure, are very much likely to have better QoL due to the positive functions of these relationships (Kirkpatrick, 2005; Scannell & Gifford, 2016, 2017). This is an interesting finding since Counted and Watts (2017) argued for the interplay of PA and AG in the light of biblical place events and the Judeo-Christian faith, where the relationship with Jehovah God aroused the need to draw close to significant places in the bible. According to Counted and Watts, the experience led to a healthy understanding of religious and national life among the Israelites and early Christians in biblical history. On the contrary, present data show that AG among African Christian diasporas in Australia did not directly affect their attachment with Australia, the place. Though the participants are drawn to Australia as a place, this attachment may not have affected their religious AG. Therefore, there are reasons to believe that the lack of interactive relationship between PA and AG could be due to the context in which the study was conducted (e.g., cultural differences, lived experiences, secularization), which are not clear at this point. Secondly, the lack of interaction between AG and PA could also mean that our background theory (i.e., the circle of place spirituality) needs further revising. Thirdly, and most importantly, since the notion of Bowlby’s parent–child bond has been expanded to other adult relational contexts which include the notion of people–place and believer–God relationships, this may mean that our data only speak to the independence of a safe connection to place, and to God, as independent objects of attachment. Thus, it is probable to argue that these two relational domains may not be connected by the same attachment motivational system. These differences deserve further investigation.

By fitting the current findings into the rubric of attachment theory, we reason that PA and AG independently affect QoL outcomes, serving as unique adult attachment experiences with health benefits. This theoretical perspective demonstrates how maintaining proximity with objects of attachment (e.g., geographic places and divine entities), via a variety of attachment behaviors, can enable the attached individual to experience the objects as secure bases from which to survive and explore the world of danger. The individual can also experience such objects as safe havens with the panoply of parental attachment quality to which they can turn for protection, support, and care. Attachment behaviors promote positive adjustment to stress and help adjust the individual's desirable level of psychological or physical proximity to the object of attachment (Fraley & Shaver, 2000; Marganska et al.,
Thus contributing to better QoL and health benefits (Bradshaw et al., 2010). The results of this study lend weight to the relevance of attachment theory by shedding light on the links between adult attachment connections (i.e., people-place and believer-God relationships) and QoL (e.g., Bradshaw et al., 2010; Ellison et al., 2014), and the important role played by objects of attachment as attachment surrogates shaping the emotional outcomes of QoL.

As expected, physical health and age were negatively associated with each other in the study, suggesting that younger participants had stronger physical health compared to older participants. This corroborates with the findings in other studies (e.g., Lindner et al., 2008; Slavin, 2005; Szatur-Jaworska, 2005) which position age as a determinant factor in terms of QoL, especially among older adults who may who have physical health problems. Another demographic-background factor that emerged as a predictor of physical health is length of residence. Our findings suggest that participants who had been residents in Australia for more than five years were physically healthier than those who have been residents for less than five years.

In addition, study results strengthen the dialogue between psychology of religion and environmental psychology in terms of estimating the interactive effects of PA and AG on QoL, moving beyond investigating the main effects models to testing the interactions between the variables. Several studies have demonstrated these examples (e.g., Bradshaw & Kent, 2017; Ellison et al., 2014; Kent, Bradshaw, & Uecker, 2017), suggesting that psychological well-being outcomes can be interpreted based on several interactive models between domains of human experience, religious belief, and adult attachment developments. Although study data did not support the interaction effects of PA and AG, it still suggests that there might be more linkages beyond the direct association between PA and QoL. Future studies examining other possible religious-related moderators of PA and interactions may warrant additional investigation, even though we are not able to support this claim at this point.

A number of study limitations are worth mentioning. For example, the study is cross-sectional which makes it difficult to make firm predictions about causality, contains narrow sample and self-reports, and there are no comparison groups. However, despite these limitations the study has several merits. For instance, the study has made an original contribution to PA, AG, and QoL, and is one of the first set of studies that looks at African transnational dynamics in terms of religion and place from an attachment perspective. Further studies expanding on the previously discussed topics would cast additional insight on the ambiguities related to the interplay of place, spirituality, and quality of life.
Conclusion

Study findings provide interesting interdisciplinary insights on how PA and AG are directly associated with QoL outcomes, and the extent to which the relationship between PA and QoL is dependent on AG spirituality in a sample of African Christian diaspora in New South Wales, Australia. The study results reveal that both PA and AG are independently associated with QoL outcomes, rather than collectively. These findings shed more light on the complex relationship between PA, AG, and QoL outcomes, showing that the variation in QoL among African Christian diasporas may be contingent upon their PA experience, and to some extent, their AG.

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References


