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A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Clinical Psychology (DclinPsych)
Coventry University, School of Health and Social Sciences and
University of Warwick, Department of Psychology

POSTTRAUMATIC GROWTH AND RELIGION

by

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Table of Contents

Acknowledgements......v
Declaration......vi
Summary......vii

Chapter 1: Religion, Spirituality and posttraumatic growth......1
1.0Abstract......2
1.1 Introduction......3
1.2 Can trauma lead to more religious beliefs?......5
1.3 Empirical research......6
1.4 Directions for future research......13
1.5 Therapeutic Implications......15
1.6 References......17

Chapter 2: Brief Report: A principal components analysis of Maltby & Day's (1998) amended Quest religious orientation scale......23
2.0 Abstract......24
2.1 Introduction......24
2.2 Method......26
2.2.2Measure......26
2.2.3 Participants......26
2.2.4 Procedure......26
2.3 Results......27
2.3.1 Principal components analysis......27
2.3.2 Reliability associations between subscales...... 28
2.4 Discussion......29
2.5 References......31

Chapter 3: Main Report: Religious orientation and posttraumatic growth: An empirical study......32
3.0 Abstract......33
3.1.Posttraumatic stress disorder and religion: An introduction to the field......33
3.1.1 Introducing PTG and religion......35
3.1.2 What do we know from the empirical research to date?......36
3.2 Method......38
3.2.1 Design......38
3.2.2 Participants......38
3.2.3 Measures......39

Chapter 3: Main Report cont'...

3.2.4 Procedure....42
3.3 Results....43
3.3.1 Mean scores for questionnaire sub-scales for males and females....43
3.3.2 Correlations of all variables with the changes in outlook and posttraumatic growth outcome variables....44
3.3.3 Multiple regression analyses of all highly significant variables onto the outcome variables....45
3.3.4 Correlations of the posttraumatic growth subscales....45
3.3.5 Multiple regression analyses of all highly significant variables onto PTG subscale scores....46
3.4 Discussion....54
3.4.1 Discussion of results....54
3.4.2 Methodological strengths and weaknesses....55
3.4.3 Clinical Implications....57
3.4.4 Directions for future research....58
3.5 References....60

Chapter 4: Research Review: Some reflections on the research process and beyond....66

4.0 Abstract....67
4.1 An overview of the research process....67
4.2. Exploring my personal spirituality....69
4.3 Methodological considerations....71
4.4 Additional information for psychologists and directions for future research....72
4.5 Vicarious PTG for mental health professionals and for the clergy?....73
4.6 Future clinical and research interests sparked by this research....73
4.7 'The End', or just the beginning?....75
4.8 References....76

Appendices....78

Appendix A Submission details for journals: i) Journal of Traumatic stress
ii) Mental Health, Religion and Culture
Appendix B Copy of University ethics form
Appendix C Letter to church and organisation leaders
Appendix D Covering letter to participants and questionnaire battery
Appendix E Supplementary Detail for measures used

List of Tables and Illustrations

Chapter 1
Table 1.1 Summary of empirical studies of posttraumatic growth and religion..............9

Table 1.2 Summary of religion and spirituality factors associated with posttraumatic growth..10

Chapter 2
Table 2.1 Factor loadings from the principal components analysis with oblimin rotation for all of the twelve items......................................27

Fig 2.1 Scree plot illustrating three components model of the Quest scale.................28

Chapter 3
Table 3.1 Mean scores for questionnaire sub-scales for males and females...............48
Table 3.2 Correlations of all variables with the changes in outlook and posttraumatic growth outcome variables...................................49
Table 3.3 Multiple regression analyses of all highly significant variables onto the outcome variables..50
Table 3.4 Correlations of the posttraumatic growth subscales..................................51
Table 3.5 Multiple regression analyses of all highly significant variables onto PTG subscale scores...52
Fig 3.1 An Illustration of how the highly significant religious variables relate to outcome variables in the multiple regressions..............................53

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Declaration

This thesis was carried out under the supervision of Dr Stephen Joseph, Chartered Health Psychologist, who helped to design the study and carry out the statistical analyses. Alex Linley provided helpful comments for the literature review. Other than this support, I conducted all stages of the research process myself and this thesis is my own work. Authorship of any papers from this work will be shared with the above. The thesis has not been submitted for a degree to any other university. The literature review (Shaw, Joseph & Linley, in press) and the brief paper (Shaw & Joseph, in press) have been submitted to *Mental Health, Religion & Culture*. The main paper has been submitted to *Journal of Traumatic Stress* (Shaw & Joseph). The whole thesis is under 20,000 words.

Summary

Chapter one reviews the published literature and studies that reported a link between religion, spirituality, and posttraumatic growth (PTG). A review of eleven key studies, in context, produced three main findings. First that religion and spirituality are usually beneficial to people dealing with the aftermath of trauma. Second, that traumatic experiences often lead to a deepening of religion and spirituality. Third, that positive religious coping, religious openness, readiness to face existential questions, religious participation, and intrinsic religousness are typically associated with posttraumatic growth. Important directions for future research are suggested that centre on the need for more fine-grained analysis of religion and spirituality variables, together with longitudinal designs, that allow more detailed exploration of the links between religion, spirituality, and posttraumatic growth.

Chapter two explored the component structure of the Maltby & Day (1998) amended version of the quest orientation scale. The scale was administered to 286 Christians and churchgoers in the UK. It was then subjected to a principal components analysis followed by oblimin rotation. Analysis revealed a three factor model consistent with that proposed by Maltby & Day (1998) of complexity, doubt and tentativeness.

Chapter three examines relationships between three religious orientations and two posttraumatic growth variables: positive changes in outlook and posttraumatic growth. Other psychosocial variables were included in the analyses. Two hundred and ninety one UK adults returned a questionnaire battery of standardised self-report measures. Firstly, correlational statistics identified all significant relationships between variables. Secondly, multiple regression analyses of just the highly significant correlated variables found that two aspects of religious orientation were important in achieving PTG. Firstly, Intrinsic religion (having a personal faith) was highly associated with the ability to create positive changes in outlook following trauma and to enjoy new possibilities in life. Secondly, the 'extrinsic personal' religion (using religion as a source of comfort) was highly associated with the overall capacity to develop PTG to two of the PTG subscales: personal strength and spiritual change. Extrinsic personal religion is a variable that has not received any attention in the PTG literature to date. A number of methodological weaknesses are discussed. Results are discussed within the context of the current climate of religious coping research and recommendations for future research are made.

Finally, chapter four provides a review of the research process including insights into my own personal faith along with methodological considerations for similar future research.

Chapter 1:

Religion, spirituality, and posttraumatic growth: A review

1.0 Abstract

A search of the published literature identified eleven empirical studies that reported links between religion, spirituality, and posttraumatic growth. A review of these eleven studies produced three main findings. First, that religion and spirituality are usually, although not always, beneficial to people in dealing with the aftermath of trauma. Second, that traumatic experiences often lead to a deepening of religion or spirituality. Third, that positive religious coping, religious openness, readiness to face existential questions, religious participation, and intrinsic religiousness are typically associated with posttraumatic growth. Important directions for future research are suggested that centre on the need for more fine-grained analysis of religion and spirituality variables, together with longitudinal research designs, that allow more detailed exploration of the links between religion, spirituality, and posttraumatic growth.

1.1 Introduction

The aim of this paper is to review what we know about the relationship between religion, spirituality, and posttraumatic growth. The role of traumatic events in psychological distress is well understood (e.g. Joseph, Williams, & Yule, 1997), and now over the last few years, researchers have become interested in how traumatic events can sometimes provide a springboard for people into greater personal growth (Tedeschi, Park, & Calhoun, 1998a). A small body of literature has accumulated and the aim is to review this literature and provide directions for future research. This phenomenon of positive change following trauma has been variously labelled as posttraumatic growth (PTG), stress-related growth, thriving, perceived benefits, benefit finding, blessings, positive by-products, and positive adjustment. The term posttraumatic growth is most often used in the literature, a practice we follow here. The terms 'posttraumatic growth', 'stress-related growth', 'positive growth' 'relig*' and 'spirit*' were entered into PsycINFO in various combinations to obtain the studies we review below.

Individuals struggling to cope with traumatic events may experience a significant change in life priorities, an increased potential to appreciate life and there may be an increased importance given to spiritual and religious issues (Calhoun & Tedeschi, 2000). Positive changes following trauma typically fall into three main areas: perception of self, approach to interpersonal relationships, and philosophy of life (Tedeschi, Park, & Calhoun, 1998b). People may more readily admit their vulnerabilities following trauma, but also may see themselves as stronger. Interpersonal relationships may be improved through valuing loved ones more, being more open

and having more compassion for others. Changes in life philosophy may come about through greater spirituality, more appreciation for each new day, reviewed life priorities and an understanding that life is precious.

The evidence base for the concept of PTG is sound. Empirical research has demonstrated that many people experience PTG after extremely stressful circumstances including bereavement (Calhoun & Tedeschi, 1989-90; Davis, Nolen-Hoeksema, & Larson, 1998), bone marrow transplantation (Fromm, Andrykowski, & Hunt, 1996), breast cancer (Cordova, Cunningham, Carlson, & Andyrkowksi, 2001; Taylor, 1983, Weiss, 2002), childhood sexual abuse (McMillen, Zuravin, & Rideout, 1995), chronic illness (Abraido-Lanza, Guier, & Colon, 1998), disaster (McMillen, Smith, & Fisher, 1997), HIV infection (Updegraff, Taylor, Kemeny, & Wyatt, 2002), military combat (Fontana & Rosenheck, 1998), myocardial infarction (Affleck, Tennen, Croog, & Levine, 1987), parenting a child with leukaemia (Best, Streisand, Catania, & Kazak, 2001), political imprisonment (Maercker & Schutzwohl, 1997), refugee displacement following war (Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003), sexual assault (Frazier, Conlon, & Glaser, 2001) and shipwreck (Joseph, Williams, & Yule, 1993).

However, the concept of PTG is not new. It has existed for millennia in the form of various religious, mythological and philosophical traditions (Aldwin, 1994; Tedeschi & Calhoun, 1995). Most of the world's great religions including Christianity, Hinduism and the Islamic faith view suffering as having an important positive role in our personal development, the development of wisdom (Linley, in press), and in our relationship with a higher being (Tedeschi & Calhoun, 1995; Woodcock, 2001). For example, from the Judeo-Christian tradition, we are advised to... *"...boast in our sufferings, knowing that suffering produces endurance, and endurance produces character, and character produces hope, and hope does not disappoint us."* (The Bible, Romans 5:5,).

There is a vast literature on religion and mental health (see, e.g., Miller & Thoreson, 2003; O'Harrison, Koenig, Hays, Eme-Akwari, & Pargament, 2001; Tix & Frazier, 1998; Worthington, Kurusu, McCullough, & Sandage, 1996). We know that aspects of religious and spiritual behaviours and beliefs are variously related with well being, so it is reasonable to expect that religion and spirituality may also play a role in how people adjust to traumatic events. There are many suggestions within the literature that religious beliefs may be important in growing through trauma (e.g. Hood, Spilka, Hunsberger, & Gorsuch, 1996; McCrae & Costa, 1986; McIntosh, Silver, & Wortman, 1993; Park, Cohen, & Murch, 1996; Pargament, 1997; Pargament, Smith, & Koenig, 1996; Pargament, Smith, Koenig, & Perez, 1998; Tedeschi & Calhoun, 1995, Tedeschi & Calhoun, 1996; Thompson & Vardaman, 1997). The important benefits provided by a religious framework may include having an enhanced meaning of life, increased social support, external locus of control, acceptance of difficulties and having a structured belief system.

1.2 Can trauma lead to more religious beliefs?

First, case study evidence tells us that religious and spiritual beliefs can be experienced as helpful to people in recovering from stressful and traumatic life events (e.g., O'Reilly, 1996; Pargament, 1996; Park et al., 1996; Rudnick, 1997; Rynearson, 1995; Schumaker, 1992). Second, there is evidence that religious and spiritual beliefs can develop subsequent to and as a result of trauma. This is reported in case studies of people who have experienced war (e.g., Khouzam & Kissmeyer, 1997; Khouzam, 2000) illness (Siegel & Schrimshaw, 2000), and in surveys of people's response to major disasters (Schuster et al., 2001), and even in Holocaust survivors (Carmil & Breznitz, 1991). Schuster et al. conducted a national survey in America in the days following the September 11th 2001 terrorist attacks and found that 90% of the sample reported turning to their religious faith. People with

posttraumatic stress disorder were more likely to have turned to their religion compared to those without. Religious beliefs may provide a framework to aid reappraisal of threatening situations as less of a threat and more of a challenge, thereby revealing positive outcomes that can be derived through suffering (Aldwin, 1994; Brandstadter & Renner, 1990).

For many, rebuilding shattered assumptions (Janoff-Bulman, 1992) creates an enhanced sense of meaning in life and a greater existential awareness (Yalom & Lieberman, 1991) which can lead to an enhanced spiritual or religious life. A significant proportion of people who experienced loss reported that their spiritual or religious lives were subsequently more important and meaningful components of their worlds (Calhoun, Tedeschi, & Lincourt, 1992). One empirical study looked at religious conversion, comparing converts and religiously affiliated non-converts on a variety of measures (Ullman, 1982). Converts reported significantly more traumatic events during childhood and tended to describe their childhood and adolescence as less happy. The convert group also reported significantly more relationship problems with their parents. This body of evidence lends support to the idea that traumatic events could play a role in developing one's faith. For others, experiencing loss or trauma can be so devastating that their response is to feel bitter at being forsaken by God (Herman, 1997). Some people experienced greater cynicism and a loss of religious commitment following trauma (Schwartzberg & Janoff-Bulman, 1991), while others reported no change in their religious beliefs (Overcash, Calhoun, Cann, & Tedeschi, 1996).

1.3 Empirical research

Our literature searches identified four qualitative studies and seven quantitative studies that addressed religion, spirituality and posttraumatic growth. The qualitative studies provided idiographic evidence supporting the idea that religious beliefs could serve to catalyse the process of

posttraumatic growth. First, spirituality was an important resource for overcoming trauma in women with multiple trauma and abuse histories (Fallot, 1997). Most women reported their spirituality to be a key aspect in their survival and recovery in various ways, for example, seeing God as a trustworthy refuge. Second, Emmons, Colby, and Kaiser (1998) examined characteristics of personal goals in people who had experienced loss. Those who were more committed to spiritual and religious goals following major trauma were more likely to say that they had both recovered from the trauma and had found meaning in it. This could be an indication of having achieved PTG. Third, Siegel and Schrimshaw (2000) assessed stress-related growth in women from diverse ethnic backgrounds who were either HIV positive or living with AIDS. Spirituality was identified as one of the major domains of positive change. After an initial period of being angry with God for not protecting them from the disease, many believed that their diagnosis had lead to a deepening of their faith and a sense of peace. More African-American and Puerto Rican women reported positive growth experiences in relation to their faith compared with White women, consistent with previous research (Bourjolly, 1998; Musgrave, Allen, & Allen, 2002). Fourth, Parapully, Rosenbaum, van den Daele, and Nzewi (2002) found that spirituality was one of three main personal qualities that had facilitated PTG in parents of murdered children. Spirituality helped all sixteen participants to transform their trauma into a growth experience, with faith in God, belief in an afterlife, praying, and going to church services all being important components. Perhaps surprisingly, the role of forgiveness was found to be one of four resources described as not being important in the transformational process of PTG.

Quantitative research has been encouraged by the development of two measurement tools. The Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1995, 1996) is a multidimensional 21-item measure with five subscales (appreciation of life, relating to others, new possibilities, personal strength, and spiritual change). The Stress-Related Growth Scale (SRGS; Park et al., 1996) is a 50-

item measure, with a single factor interpretation considered most suitable (Cohen, Hettler, & Pane, 1998). A short 15-item version is also available. Of the seven quantitative empirical studies reported to date, three have used the PTGI and four have used the SRGS (see Tables 1.1 and 1.2).

Given the multifaceted nature of religion, different dimensions of religion have been used in researcher's attempts to study PTG. Intrinsic and extrinsic religiousness factors are the most widely used variables in the study of religion (Hall, Tisdale & Brokaw, 1994). Intrinsic religion refers to a deep faith in God and a personal relationship with him, while extrinsic religion defines wider social implications of being linked to a church or place of worship. Despite this, only Park et al. (1996) used this dimension in the context of PTG research, reporting a strong association between intrinsic religiousness and PTG as measured by the SRGS at two time points six months apart.

Another dimension of religious orientation given attention in the literature is quest religion. Quest religion refers to "*the degree to which a person's religion involves an open ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life*" (Batson & Ventis, 1982). Calhoun, Cann, Tedeschi, and McMillan (2000) investigated quest religion and PTG and found that two aspects of quest religion were associated with PTG. These were readiness to face existential questions (also known as the complexity dimension) and openness to religious change (also known as the tentativeness dimension). However, the third subscale, experiencing religious doubt as positive, was not significantly linked to PTG. This could be because for PTG to occur, a strong faith in God is necessary, where little doubt about religious beliefs would be present.

Table 1.1. Summary of empirical studies of religion, spirituality, and posttraumatic growth

Study	Event	Gender	Religion	*n*	Measure
Posttraumatic Growth Inventory					
Calhoun, Cann, Tedeschi, & McMillan (2000)	Various	Mixed	Various	54	PTGI
Milam, Ritt-Olson, & Unger (in press)	Various	Mixed	Various	435	PTGI –M
Tedeschi & Calhoun (1996) #2	Various	Mixed	Various	237	PTGI
Stress-Related Growth Scale					
Koenig, Pargament, & Nielsen (1998)	Medical illness	Mixed	Christian	564	SRGS-S
Pargament et al. (1998)	Oklahoma City bombing residents	Mixed	Christian	296	SRGS-S
	Various	Mixed		540	SRGS-S
	Medical illness	Mixed		551	SRGS-S
Pargament, Koenig, & Perez (2000)	Various	Mixed	Christian (Catholic 45% Protestant 41%)	540	SRGS-S
Park, Cohen, & Murch (1996) #3	Various	Male	Various	83	SRGS
		Female		173	SRGS
		Mixed		142	SRGS

Note. PTGI = Posttraumatic Growth Inventory. PTGI – M = Posttraumatic Growth Inventory – Modified version. SRGS = Stress-Related Growth Scale. SRGS – S = Stress-Related Growth Scale – Short form.

Table 1.2. Summary of religion and spirituality factors associated with posttraumatic growth

Study	Religious coping (RCOPE Scale)	Religion and spirituality factors
Calhoun et al. (2000)	n/a	Religious participation (r = -.25, *ns*) Readiness to face existential questions[a] (r = .38*) Openness to religious change[b] (r = .28*) Religious doubt as positive (r = .07, ns)
Koenig et al. (1998)	1) *All 12 Positive religious coping scales* (all βs from .35 to .51***) 2) *Negative religious coping scales* Demonic reappraisal (β = .17***) Passive religious deferral (β = .14***) Marking religious boundaries (β = .26***) Pleading for direct intercession (β = .34***) Reappraisal of God's power (β = -.09*) Self-directed religious coping (β = -.12**)	Church attendance (β = .11**) Importance of religion (β = .21***) Private religious activity (β = .26***)
Milam et al. (in press)	n/a	Religious practice(r=.10*)

Table 1.2. Cont' Summary of religion and spirituality factors associated with posttraumatic growth

Study	Religious coping (RCOPE Scale)	Religion and spirituality factors
Pargament et al. (1998)	Positive religious coping ($r = .38^{***}$ to $r = .60^{***}$) Negative religious coping ($r = .13^{**}$ to $r = .20^{***}$)	Positive religious outcomes ($r = .48^{**}$ to $r = .81^{***}$)
Pargament et al. (2000)	1) All 12 Positive religious coping scales ($r = .15^{**}$ to $r = .41^{**}$) 2) Negative religious coping scales: Pleading for direct intercession ($r = .31^{**}$) Reappraisal of God's power ($r = .17^{**}$) Spiritual discontent ($r = .14^{**}$) Demonic reappraisal ($r = .12^{**}$) Interpersonal religious discontent ($r = .10^{**}$) Punishing God reappraisal ($r = .08$, *ns*) Passive religious deferral ($r = .04$, *ns*)	
Park et al. (1996)		Intrinsic religiousness ($r = .23^{**}$)
Tedeschi & Calhoun (1996)		Religious participation ($r = .25^{**}$)

Note. $^{*}p<.05$. $^{**}p<.01$. $^{***}p<.001$. *ns* = non-significant. [a]Also known as 'complexity quest' [b]Also known as 'tentativeness quest'

Tedeschi and Calhoun (1996) reported that PTG and religious participation were significantly associated in a student sample who had suffered a significant negative life event within the past three years. Milam, Ritt-Olson, & Unger (in press) found that PTG was moderately associated with religious practice in an adolescent sample. However, it should be noted that intrinsic, extrinsic and quest religion, religious participation and religious practice are all examples of global indicators of religion (Sherkat & Reed, 1992). This leaves important questions unanswered about which specific aspects of religion may be important (Hill & Pargament, 2003; Pargament et al., 2000).

To address these limitations, Pargament and his colleagues developed the RCOPE: a clinically and empirically based tool designed to measure both positive and negative aspects of religious coping. Positive religious coping refers to themes such as 'working collaboratively with God', 'accessing social support from God and others' and 'seeing death as a passage to heaven'. Negative religious coping is characterised by 'self-blame', 'questioning religious beliefs', and 'feeling punished by God for one's sins'. This sophisticated tool has enabled researchers to identify which aspects of religious coping may influence the PTG process.

Three studies involving PTG have used the RCOPE. Pargament et al. (1998) found that PTG was associated with both positive and negative religious coping. However, they did not report any breakdowns of which positive and negative subscales were correlated with PTG. Koenig, Pargament, and Nielsen (1998) analysed the correlations between PTG and the RCOPE subscales. They reported that all twelve aspects of positive religious coping (e.g. religious forgiveness) were robustly associated with PTG. In addition to this, six of the nine aspects of negative religious coping (e.g. passive religious deferral) were also associated with PTG. However, these negative religious coping correlations were weaker, less consistent and sometimes negative. Pargament et al.'s (2000) study reported similar results. The negative aspects of religious coping that were linked to PTG in

both studies were pleading for direct intercession (asking for a miracle), reappraisal of God's power (feeling God has limits), demonic reappraisal (problems arising from the devil) and passive religious deferral (waiting for God to control the situation).

In summary, what the evidence shows is that religious and spiritual beliefs and behaviours can develop through the experience of traumatic events, that religious and spiritual beliefs can be helpful to people in their psychological recovery, and in their personal development and growth following trauma. For some, pre-existing religious and spiritual beliefs can be destroyed through the experience of trauma. Conversely, for many, *"religion or spirituality can provide a unifying philosophy of life and serve as an integrating and stabilising force that provides a framework for interpreting life's challenges and provides a resolution to such concerns as suffering, death, tragedy and injustice"* (Emmons et al., 1998, p. 175).

1.4 Directions for future research

In this review we have used the terms religion and spirituality together, but of course these may refer to very different activities. Religious participation does not necessarily include a spiritual component, and spirituality does not necessarily include a religious participation component. Future studies could more carefully distinguish the differences between religion and spirituality. The broadest conceptualisation of religion includes a "*system of beliefs, practices, customs and ceremonies rooted in a culture; a view of the individual's relationship to the universe; a moral and ethical code; and a community of adherents providing social relationships*" (Sacks, 1985, p. 27). On the other hand, spirituality involves striving for "*transcendental values, meaning, experience, and development; for knowledge of an ultimate reality; for a belongingness and relatedness with the moral universe and community; and for union with immanent, supernatural powers that guide people*

and the universe for good or evil" (Siporin, 1985, p. 199).

This distinction between spirituality and religion has not so far been made in the empirical research on PTG, but it may be an important one. For example, the "Spiritual change" subscale of the PTGI consists of two items that specifically address religion - "I have a stronger religious faith" - and spirituality more broadly - "A better understanding of spiritual matters." Clearly, it may be wrong to combine these two elements of religion and spirituality. We can speculate that they may have distinct correlates and patterns of association, and this remains an important focus for future research (cf. Hill & Pargament, 2003). For example, the shattering of specific religious beliefs may be replaced with the acceptance of a broader and more flexible spirituality.

Although religious participation per se seems to have some benefit, perhaps because it may lead to increased social support, what seems to be most important are the more intrinsic aspects of religiosity and spirituality because of the sense of meaning, purpose, and coherence that these may provide for people. It is these aspects that can develop following trauma and which in turn can help people to grow. Calhoun et al.'s (2000) work provides a starting point for researchers to further explore the relationships between PTG and the three subscales of the Quest Scale. It appears that the complexity and tentativeness subscales are related to PTG, but the doubt subscale is not. Further exploration as to why this is the case is warranted.

Future research would benefit from the development of more sophisticated research tools to measure concepts such as "religious participation", "importance of religion", "private religious activity", "religious practice", and "positive religious outcomes". A more fine-grained analysis of the religious and spiritual variables associated with PTG would allow clearer determination of the unique and specific effects of these facets of religious and spiritual activity (cf. Hill & Pargament, 2003). Studies using the RCOPE have begun teasing apart which aspects of religious coping are

significantly associated with PTG. Future research should also further explore the associations between PTG and these aspects of religious coping. Theoretical attention should be given to the associations between religious coping and PTG, together with a consideration of other religious dimensions not assessed to date, such as the importance of worship or the celebration of God's love in the context of PTG. Although for most people religious beliefs and spirituality seem to increase following trauma, an important question remains as to why some people's religious and spiritual beliefs are destroyed by trauma. Finally, further longitudinal work is needed to demonstrate reliable causality within these relationships, and to map changes over time.

1.5 Therapeutic implications

This review demonstrates that although the evidence is relatively sparse, people's religious and spiritual beliefs can be important to them in thriving and growth following trauma. Janoff-Bulman (1992) has discussed how trauma shatters our assumptive world and how the process of recovery from trauma involves building a new assumptive world that is somehow able to incorporate the powerful new trauma-related information about the world and the self. Religion and spirituality in this context can provide an enhanced sense of meaning in life for people, and traumatic events can lead to an enhanced spiritual or religious life.

It is not the agenda of the therapist to promote any particular belief system, but therapists who work with severely traumatised clients need to be comfortable working with clients who raise existential and spiritual issues. Exploring religious and spiritual beliefs can be useful (Sparr & Fergueson, 2001; Tedeschi & Calhoun, 1995). We suggest that therapists who are working with clients who are moving in spiritual and religious directions need to be respectful of these beliefs, whether or not they share them, while also being acceptant of the client's reality (cf. Shafranske,

1996). While we can provide hypotheses about the psychological mechanisms through which religious and spiritual activity may be important following trauma, we must also be mindful that these are belief systems, the reality of which may be beyond the scope of scientific enquiry.

This review integrates the few studies conducted to date in the area of religion, spirituality, and posttraumatic growth. It provides a number of directions for future research, while also indicating how much work remains to be done. Burgeoning interest in posttraumatic growth (Tedeschi, Park, & Calhoun, 1998a), and the links between religion and health (Miller & Thoreson, 2003), provide valuable opportunities for researchers and clinicians to explore issues that are deeply meaningful to many people, while also being clearly warranted and clinically relevant.

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Chapter 2:

Principal Components Analysis of Maltby and Day's (1998) Amended Quest Religious Orientation Scale

2.0 Abstract

The purpose of the present study was to explore the component structure of the Maltby and Day (1998) amended version of the Quest Religious Orientation Scale. The scale was administered to 286 Christians and churchgoers in the UK. It was then subjected to a principal components analysis followed by oblimin rotation. Analysis revealed a three factor model consistent with that proposed by Maltby and Day (1998) of complexity, doubt and tentativeness.

2.1 Introduction

Quest religion is the degree to which a person's religion involves an open-ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life (Batson, 1976; Batson & Ventis, 1982). Religious quest involves continually raising ultimate 'whys' about social structure and the structure of life itself. Batson originally developed a self-report measure of quest religion comprised of three religious factors of complexity, doubt and tentativeness (see, Batson, Scheonrade & Ventis, 1993). These subscales relate to the ability to address existential questions without reducing their complexity, the tendency to perceive self-criticism and religious doubt as positive and a tentativeness or openness to change in religious belief.

The complexity subscale has four items (e.g. 'I was not very interested in religion until I began to ask questions about the meaning and purpose of my life'). The doubt subscale has four items (e.g. 'It might be said that I value my religious doubts and uncertainties'). Finally, the tentativeness subscale also has four items (e.g. 'As I grow and change, I expect my religion also to grow and change'). This three-factor model has commonly been assumed in spite of doubts around this factor structure (Batson & Schoenrade, 1991a, 1991b). Reviewers of instruments designed to measure

religious dimensions have called for further psychometric investigations of the Quest scale (Hall, Tisdale & Fletcher Brokaw, 1994).

In a recent study, Maltby and Day (1998) administered the original version of the Quest scale (Batson & Schroenrade, 1991b) and an amended version, to a large UK sample where levels of religiosity were unknown. Principal Components Analysis of data from this sample revealed that the amended version of the quest scale also suggested a similar three factor model. In addition to this, more participants could complete the amended version compared with the original version.

Although psychometric investigations have been conducted with the original version of the quest scale, no studies to date have further explored the amended version. This study was a replication of Maltby and Day's (1998) study. We aimed to investigate the component structure of the amended version of the Quest scale to see whether the structure replicates the three component model.

2.2 Method

2.2.2 Measure

This study used the Quest religion scale (Maltby & Day, 1998) which is an amended version of the original Quest religion scale (Batson & Schoenrade, 1991a, 1991b). This 12-item tool was developed to assess quest religion (see table 2.1 for items). Respondents are requested to rate each item on a three point scale which is scored accordingly ("no"=1, "don't know" =2, "yes"=3). A higher score indicates greater quest religion.

2.2.3 Participants

Four hundred and fifteen questionnaires were distributed to Christians and /or churchgoers who were connected with one of seven churches and Christian organisations in the UK, as part of a larger study (see Chapter 3, this volume). These were in Warwickshire, Lancashire and Scotland and comprised four churches and three Christian fellowship organisations. Two hundred and eighty six people completed all items of the Quest scale and were included in this study. This gave a good response rate of 69%. Participants comprised 95 men and 189 women. Two did not identify their sex. Ages ranged from 18 to 90 years old (M=47.81, SD= 15.55).

2.2.4 Procedure

Participants completed the quest scale within an overall questionnaire battery and returned it anonymously in a self-addressed envelope over a three-month period. Data were entered into an SPSS datafile (version 10.0) for analysis.

2.3 Results

2.3.1 Principal Components Analysis

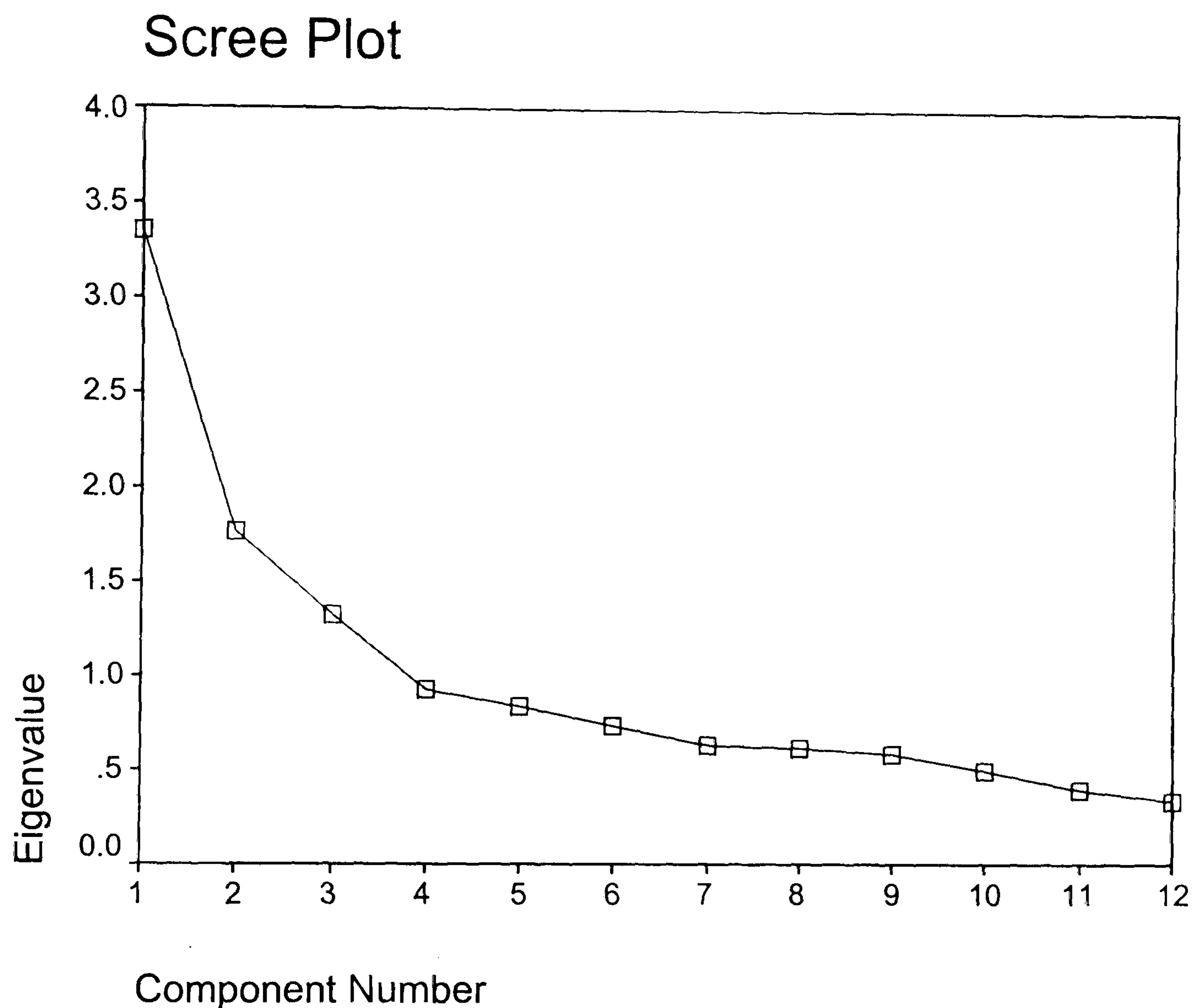
The twelve items from the quest scale were subjected to a Principal Components Analysis, followed by an oblimin rotation. The Eigenvalue (Kaiser, 1970) and Scree test (Cattell, 1978) criteria were used to establish the number of factors to enter into the rotation. Three components were found to have eigenvalues greater than 1.0. These collectively accounted for 53.62% of the variance. Table 2.1 illustrates that item 3 jointly loads onto factors one and two. However, apart from this, the findings reveal a three factor model in line with Maltby and Day's (1998) previous research. Fig 2.1 illustrates the Scree plot.

Table 2.1: Factor loadings from the Principle Components Analysis with Oblimin Rotation for all of the twelve items

	Component		
	1	2	3
1 I was not very interested in religion until I began to ask questions about the meaning and purpose of my life		.82	
2 I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in relation to my world		.63	
3 My life experiences have led me to rethink my religious convictions	.46	.40	
4 God wasn't very important to me until I began to ask questions about the meaning of my own life		.84	
5 It might be said that I value my religious doubts and uncertainties			.80
6 For me doubting is an important part of what it means to be religious			.77
7 I do not find religious doubts upsetting			.55
8 Questions are more central to my religious experience than are answers			.66
9 As I grow and change, I expect my religion also to grow and change	.65		
10 I am constantly questioning my religious beliefs	.53		
11 I expect my religious convictions to change in the next few years	.78		
12 There are many religious issues on which my views are still changing	.79		

N.B. Only correlations above .40 are shown

Fig 2.1: Scree Plot Illustrating Three **Component Model of Quest Scale**



2.3.2 Reliability associations between subscales

Internal consistency reliability coefficients for each of the three subscales were all found to be within acceptable limits. The complexity scale yielded an Alpha coefficient of 0.65 (Mean= 7.19, SD=2.45). The doubt scale yielded an Alpha of 0.69 (Mean=7.44, SD=2.35). Finally, the tentativeness scale yielded an Alpha of 0.70 (Mean=7.54, SD=2.42).

Pearson correlations were computed using two tailed tests. The three subscales were all found to be correlated with one another. Complexity was correlated with doubt ($r=.21$, $p<0.01$) and with

tentativeness (r=.24, p<0.01). Doubt and tentativeness were also found to be correlated (r=.42, p<0.01).

2.4 Discussion

Although a three factor model of complexity, doubt and tentativeness subscales has been supported, one anomaly was apparent. This data demonstrates that item three (*'my life experiences have led me to rethink my religious convictions'*) loads almost equally onto component one (tentativeness) and component two (complexity). It does not load fully onto the complexity factor as suggested by Batson and Schoenrade (1991b). If it is to load more fully onto this, rewording of the item may be necessary. A further research study could investigate this.

These three subscales are correlated with one another. These correlations reached the 0.01 level of statistical significance, which at first appears high. However, the correlations themselves are low and the sample size, large. Thus taking these things into account, the three scales show only weak to moderate associations. This suggests that the three concepts are distinct and thus are measuring different things. This has implications for clinical and research practice. For research purposes, the Quest scale can be broken into its components to obtain scores that could prove useful in correlational and multiple regression type studies, rather than working with an overall quest score (see chapter 3, this volume). This provides a means to investigate which of the subscales are related to which other factors. For example, a recent study has identified a significant positive correlation between quest religion and schizotypy (Joseph, Smith & Diduca, 2002). Further investigation would allow exploration of whether all aspects of quest are equally correlated with schizotypy.

This study analysed the component structure of an amended quest religion scale using a large religious UK sample. The Principal Components Analysis replicated the three factor model. Three

components of doubt, tentativeness, and complexity were identified and found to have acceptable internal consistency reliability.

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Chapter 3:

Posttraumatic Growth and religious orientation:

An Empirical Study

3.0 Abstract

A new focus within the posttraumatic stress literature is posttraumatic growth (PTG). However, to date, religious variables have largely been ignored in the empirical research into posttraumatic growth. The aim of the present study was to examine relationships between three types of religious orientation and two stress-related growth variables: positive changes in outlook and posttraumatic growth. Other psychosocial variables were included in the analyses. Two hundred and thirteen religious UK adults who had suffered a trauma or negative life event in the past year, returned a questionnaire battery of standardised self-report measures. Correlational statistics were firstly used to establish significant relationships. Secondly, multiple regression analyses found that two key aspects of religious orientation were important in achieving PTG. Firstly, 'Intrinsic' religion (personal faith) was highly associated with the ability to create positive changes in outlook following trauma and to enjoy new possibilities in life. Secondly, 'extrinsic personal' religion (gaining comfort from religion) was highly associated with PTG and two of it's subscales: personal strength and spiritual change. Extrinsic personal religion is a variable that has not received any attention in the PTG literature to date. A number of methodological weaknesses are discussed. Results are discussed within the context of the current climate of religious coping research and recommendations for future research are made.

3.1 Posttraumatic Stress disorder and religion: An Introduction to the field

Literature on religion and mental health is vast (O'Harrison, et al, 2001; Tix & Frazier, 1998;

Worthington, Kurusu, McCullough, & Sandage, 1996). Some demonstrates the effectiveness of religiosity on coping with life stress generally (McIntosh, Silver & Wortman, 1993; Pargament, 1996; Park et al, 1996; Schumaker, 1992). However, mixed and contradictory findings between religion and mental health variables have also been observed (Gartner, 1996). Unfortunately, empirical literature surrounding religion and posttraumatic stress disorder (PTSD) or posttraumatic growth (PTG) is scant. However, there is a small body of literature which suggests religion and spirituality may play a role in overcoming symptoms of PTSD and promoting PTG.

Case study evidence suggests that religion has been important in overcoming PTSD symptoms for some individuals (Khouzam, 2000; Khouzam, & Kissmeyer, 1997; O'Reilly, 1996; Rudnick, 1997). Correlational studies are largely consistent in reporting a significant negative correlation between religious beliefs and PTSD symptoms. These have been observed across a variety of populations, such as relatives of murder victims (Sprang & McNeil, 1998), American citizens after '9/11' (Schuster et al, 2001) and refugees (Ferrada-Noli & Sundbom, 1996; Maghir & Raskin, 1999).

However, much of the focus within the PTSD and religion literature has been on extreme trauma such as war experiences (Ferrada-Noli & Sundbom, 1996; Jiminez, 1993; Maghir & Raskin, 1999), traumatic bereavement (Murphy, Johnson, Lohan & Tapper, 2002; Rynearson, 1995; Sprang & McNeil, 1998) or sudden infant death syndrome (McIntosh, Silver & Wortman, 1993). There has been comparatively little focus on religion and PTSD in the context of more everyday occurrences such as bereavement, accidents or divorce (Lauterbach & Vrana, 2001). With such a focus on war related trauma within the PTSD literature, little information has been collected on how women cope with PTSD. This means that there have been few opportunities to explore gender differences (Lauterbach & Vrana, 2001).

3.1.1 Introducing PTG and Religion

Although historically, research into PTSD has focused on the pathological nature of trauma and the devastating effects it can have on individuals, a recent shift in the literature has focused on PTG (Tedeschi, Park & Calhoun, 1998). This is the process whereby people do not merely 'bounce back' from trauma, but use it as a springboard for further individual development or growth (Calhoun & Tedeschi, 1998). Individuals struggling to cope with traumatic events may experience a significant change in life priorities, an increased potential to appreciate life and an increased importance given to spiritual and religious issues (Calhoun & Tedeschi, 2000).

Not everybody can experience PTG. For some, experiencing loss or trauma can be so devastating that their response is to feel bitter at being forsaken by God (Herman, 1997). Some people experience greater cynicism and a loss of religious commitment (Schwartzberg & Jannoff-Bulman, 1991) and others experience no change in religious beliefs following loss or trauma (Overcash, Calhoun, Tedeschi & Cann, 1996). It has also been suggested that highly religious people may simply be more inclined to notice, report or experience positive changes & thus report thriving (Park, 1998).

However, researchers have suggested that, for many, religious beliefs could be important in growing through trauma (Hood, Spilka, Hunsberger & Gorsuch, 1996; McCrae & Costa, 1986; McIntosh, Silver & Wortman, 1993; Pargament, 1996; Pargament, 1997; Pargament et al, 1998; Park Cohen & Murch, 1996; Tedeschi & Calhoun, 1995, Tedeschi & Calhoun, 1996; Thompson & Vardamen, 1997). For many rebuilding shattered assumptions (Janoff-Bulman, 1992) creates an enhanced sense of meaning in life and a greater existential awareness (Yalom & Lieberman, 1991) which can lead to an enhanced spiritual or religious life. Religious beliefs may provide a framework to aid reappraisal of threatening situations as less of a threat and more of a challenge revealing positive

outcomes that can be derived through suffering (Aldwin, 1994; Brandstadter & Renner, 1990). A significant proportion of people who experience loss, report that their spiritual or religious lives are more important and meaningful components of their worlds (Calhoun, Tedeschi & Lincourt, 1992). However, sophisticated research methodologies have rarely been employed in studies addressing religion and PTG.

3.1.2. What do we know from the empirical research to date?

Only a small number of qualitative and quantitative studies have linked PTG to religion. Recent qualitative studies have highlighted the importance of spirituality and religion to women with multiple abuse histories (Fallot, 1997), women with HIV and AIDS (Seigal & Schrimshaw, 2000) and parents of murdered children (Parapully, Rosenbaum, Daele & Nzewi (2002). Unfortunately, qualitative analysis does not lend itself to making any confident conclusions about the relationship between trauma and religion. We can only conclude, that reports by individuals in all these studies, mentioned that religion was important to them in their coping processes towards PTG.

Quantitative studies using religious variables have presented a challenge to applied psychologists because religion is so difficult to quantify. Allport (1959) first separated out 'intrinsic' versus 'extrinsic' religion. Intrinsic religion refers to a personal faith in God and a relationship with him. Extrinsic religion refers to the higher social benefits of being part of a church organisation. Controversy still exists as to whether they are separate or integral concepts. These are the two most widely researched dimensions of religiousness in the empirical study of religiosity (e.g. Donahue, 1985; Genia, 1993; Gorsuch & McPherson, 1989).

Kirkpatrick (1989) first found that the extrinsic scale broke down into two factors: 'extrinsic social' (religion as a social gain) and 'extrinsic personal' (religion as a source of comfort). This factor

structure has also been found by other researchers (Gorsuch & McPherson, 1989; Leong & Zachar, 1990). Another dimension that has received a lot of attention in the literature is quest religion (Batson, 1976) which refers to how much a person's religion is allowed to be challenged by the contradictions and tragedies of life.

To date, these concepts of intrinsic, extrinsic and quest religion have only been linked to the areas of posttraumatic growth in two studies. Firstly, Park, Cohen, & Murch (1996) found a strong association between intrinsic religiousness and PTG. Secondly, Calhoun, Cann, Tedeschi & McMillan (2000) investigated quest religion and PTG and found that two aspects of quest religion were positively associated with PTG. Significant yet moderate associations were noted between PTG and two out of the three quest subscales. These were readiness to face existential questions (also known as the complexity dimension) and openness to religious change (also known as the tentativeness dimension). However, the third subscale of experiencing religious doubt as positive was not significantly linked to PTG. As no other researchers have replicated similar studies of PTG and religious orientation, the accuracy of the findings from these two studies has gone unchallenged. Other studies have investigated PTG in relation to global indicators such as 'religious participation' (Tedeschi & Calhoun, 1996) or specific dimensions of religious coping (Koenig, Pargament & Neilsen, 1998; Pargament, Koenig & Perez, 2000; Pargament, Smith, Koenig & Perez, 1998), yet in doing this they have neglected to collect information on intrinsic, extrinsic and quest religious orientations.

In summary, many studies highlight the importance of religious and spiritual beliefs to individuals struggling with PTSD and also to those who have achieved PTG. The correlational studies have provided preliminary evidence that PTSD and religion are negatively correlated and also that PTG and aspects of religion are positively associated. However, three major oversights appear to be

apparent in the literature to date. Firstly, most research into PTSD has used people who have experienced severe traumas such as war experiences or traumatic bereavements. Little work has been done to evaluate general populations who have experienced more 'ordinary' traumas across a lifespan. Secondly, although just two studies have used the religious variables of intrinsic, extrinsic and quest orientations, no studies have verified these findings. Thirdly, the majority of the research to date on religiosity and well-being has been carried out among American samples. These trends suggests that a well-designed, empirical correlational study investigating religious and personality variables in the context of PTSD and PTG in the UK, would be a timely one. The aim of the present study, therefore was to use an exclusively religious sample to determine which type of religious orientation is associated with more positive changes in outlook and greater PTG. A second aim was to determine which type of religious orientation was associated with different aspects of PTG.

3.2 Method

3.2.1 Design

This cross-sectional study used a correlational design. The questionnaire battery assessed variables of personality, religion, anxiety, depression, coping styles, life events, posttraumatic stress disorder, changes in outlook and posttraumatic growth. A within subjects design was used with each participant completing all measures, only once.

3.2.2 Participants

Participants were 213 Christians and /or church goers who had had at least one significant negative life event in the past year. All were connected with one of seven Christian organisations in

the UK. These were in Warwickshire, Lancashire and Scotland and comprised four churches and three Christian fellowship organisations. Seventy-one were male, 133 were female and nine did not identify their gender. Ages ranged from 18 to 90 years old.

3.2.3 Measures

The questionnaire battery (see Appendix D) contained the following scales for completion. A fuller and more explicit description of the measures can be found in Appendix E.

1) Eysenck Personality Questionnaire Revised (Eysenck 1967: 1982)

The 48-item EPQ-R was used to measure three aspects of personality: psychoticism (e.g. '*Do you enjoy co-operating with others*?'), extraversion (e.g. '*Do you like mixing with people*?') and neuroticism (e.g. '*Are you a worrier*?'). It also contains a lie scale to measure social desirability.

2) The Revised Religious Orientation Scale (Maltby and Lewis 1996).

The revised religious orientation scale was used to measure intrinsic, extrinsic-personal and extrinsic-social dimensions of religiosity. There are fifteen items in total: nine intrinsic items (e.g. '*I have often had a strong sense of God's presence'*), three extrinsic-personal items (e.g.'*I pray mainly to get relief and protection'*) and three extrinsic-social items (e.g '*I go to church mainly because I enjoy seeing people I know there'*).

3) The Revised Quest Scale (Maltby & Day, 1998)

This revised 12-item scale was used to measure participant's quest religion. It contains three dimensions. The complexity subscale has four items (e.g. '*I was not very interested in religion until I*

began to ask questions about the meaning and purpose of my life'). The doubt subscale has four items (e.g. *'It might be said that I value my religious doubts and uncertainties'*). Finally, the tentativeness subscale also has four items (e.g. *'As I grow and change, I expect my religion also to grow and change'*).

4) The Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith 1983)

The HADS was used to assess the general mental health dimensions of anxiety and depression. This tool is a 14 item self-report measure widely used to assess anxiety and depression in general and clinical populations. It contains two subscales and uses seven anxiety items (e.g. *'I feel tense or wound up'*) and seven depression items (e.g. *'I have lost interest in my appearance'*).

5) The Brief COPE (Carver, 1997)

This tool is a shortened 28-item version of the standard scale. It's aim is to measure coping in terms of fourteen variables. These are self-distraction, active coping, denial, substance use, use of emotional and instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion and self-blame. There are only two items in each subscale.

6) The Life Events Scale (Brugha, Bebbington, Tennant & Hurry, 1985)

This 12- item tool was used to measure the number of significant negative life events a person had gone through. Examples of the items are *'Have you had a serious illness or injury within the last twelve months?'* and *'Have you had any major financial crises within the past twelve months?'* A twelve month cut off point was decided upon, rather than the typical six months in order to try and include as many participants as possible who were willing to mention their recent life events. Also, an

extra item was added onto the end to cover life events not specified by the standard 12.

7) General Anchoring Questions

At this point in the questionnaire battery, if participants had indicated that they had been through at least one life event in the previous questionnaire scale, they were asked for three pieces of information. The aim of this was to 'anchor' the event in order to evoke the memory to be able to answer questions on it in the coming questionnaire scales. They were asked to write a short description about their most upsetting event, they were asked to rate how upsetting it was at the time, and they were asked how long ago this happened to them.

8) *The Impact of Event Scale (IES) (Horowitz, Wilner, & Alvarez 1979)*

The IES was used to measure current levels of PTSD in the sample. This tool is the most widely used self-report measure of specific responses to trauma. This 15-item scale measures two key elements of PTSD: event-intrusion (7 items, e.g. *'Any reminder bought back feelings about it'*) and event-related avoidance (8 items, e.g. *I tried not to talk about it'*).

9)*The Changes in Outlook Questionnaire (Joseph, Williams and Yule 1993)*

This tool is a 26-item self report measure of positive and negative changes experienced by people following crises. There are eleven items on the positive changes dimension (e.g. '*I am more determined to succeed in life now')* and fifteen items on the negative changes dimension (e.g. *I am less tolerant of others now')*.

10) The Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996)

This is a 21-item scale that measures the degree of reported positive changes experienced in the struggle with major life crises. The scale includes items that assess the degree to which the individual reports specific positive changes attributed to the struggle with trauma. Factor analytic studies have shown that the scale breaks down into five subscales. These are appreciation of life (e.g.*'appreciating each day'*), relating to others (e.g. *'having compassion for others'*), new possibilities (e.g. *'I developed new interests'*), personal strength (e.g. *'knowing I can handle difficulties'*) and spiritual change (e.g. *'I have a stronger religious faith'*).

3.2.4. Procedure

Introductory letters (see Appendix C) were sent out to the ministers and leaders of seven churches and Christian organisations in England and Scotland. All seven organisation leaders accepted for their congregations or group to participate in this study. The researcher then conducted a brief five minute overview of the study at the start of a service or meeting with a brief outline of what participation would involve. The researcher explained that they were investigating how people with religious beliefs handle stress and life events.

After the service or meeting, research packs were handed to people willing to participate. Research packs contained a covering letter with information about the study, a copy of the questionnaire battery and a stamped addressed envelope (See Appendix D). A 'snowball' sample was partly achieved by some who took packs for other Christians they knew. Organisation leaders prompted return of outstanding questionnaires two months later. Participants were asked to write in separately to inform the researcher if they wanted a copy of the results sending to them at a later date. This was to preserve anonymity of all questionnaire batteries.

In total, 415 packs were distributed across a two month period. Of these, 291 usable questionnaires were completed and returned, giving a good response rate of 70%. However, only 213 (73% of this sample) indicated that the person had had at least one significant negative life event *(*see footnote)* in the last year, and were included in this study.

3.3. Results

3.3.1 Mean scores for questionnaire sub-scales for males and females

Table 3.1 shows the descriptive statistics and T-test results. The mean age of the participants was 47.3 years old (SD=16.08, range = 18-90). The mean number of life events suffered by people was 2.4 (SD=1.3, range = 1-7).

A between subjects T-test was used to compare gender differences on the questionnaire. Only minor differences were noted. Men scored higher on psychoticism. Women scored higher on the social desirability scale, the emotional coping scale, and three of the posttraumatic growth sub-scales. This is in line with research on sex differences with these variables. Thus age and sex were partialled out before all analyses were conducted on the entire data set.

* *'significant negative life event' was counted as traumatic.*

3.3.2 Correlations of all variables with the changes in outlook and posttraumatic growth outcome variables

Pearson product moment correlations between all the psychosocial variables and the outcome variables, are shown in Table 3.2. All correlations which reached the 0.05 level of significance are indicated.

People scoring higher on the Positive Changes in Outlook dimension (CIOpos) were typically older. Their personalities were more extraverted. They scored higher on the social desirability scale. Their religious orientations were intrinsic and extrinsic personal. They had coping styles which used more positive reframing and acceptance. They had experienced more life events and more intrusive thoughts typical of PTSD symptoms. They had experienced more PTG. People scoring higher on the positive changes in outlook were also less anxious and less depressed. They reported fewer negative changes in outlook.

People scoring higher on Negative Changes in Outlook dimension (CIOneg) were typically younger and reported themselves to be more neurotic, more anxious and more depressed. Their coping styles were more self-blaming and less likely to involve positive reframing or planning. They had had more significant negative life events. This group also had more intrusive thoughts and used avoidance coping, typical of PTSD symptoms. They were less likely to report positive changes in outlook. It is worthy of note that none of the religious variables are significantly associated with negative changes in outlook.

People scoring higher on the posttraumatic growth dimension (PTGI) also reported themselves to be more extraverted. They reported intrinsic, extrinsic personal and quest types of religious orientation. They used self distraction, denial, instrumental and self blaming coping styles. They had

experienced more life events. This group also reported experiencing more intrusion of thoughts and used more avoidance coping, typical of PTSD symptoms. This group who had experienced more PTG also reported experiencing more positive changes in outlook.

3.3.3 Multiple regression analyses of all highly significant variables onto the outcome variables

In this phase of the analysis, those psychosocial variables which were associated with each outcome measure with a statistical level of 0.01 or above, were selected for inclusion into the multiple regression analysis. The more stringent significance level of 0.01 was chosen to reduce the chances of type 1 errors. A simultaneous multiple regression equation, using the 'enter' method was used. Table 3.3 shows the results. The results show that an older person scoring higher on extraversion, social desirability, intrinsic religion and positive reframing coping, would experience more positive changes in outlook following trauma. A person scoring higher on depression and self blaming coping would be likely to experience more negative changes in outlook following trauma. Finally, a person scoring higher on extraversion and extrinsic personal religion who had been through more life events would be likely to experience more PTG.

3.3.4 Correlations of the Posttraumatic Growth Subscales

Factor analytic studies (e.g.Tedeschi & Calhoun, 1996) have shown that the PTGI breaks down into five subscales (appreciation of life, relating to others, enjoying new possibilities in life, personal strength and spiritual change). Thus the next step of the analysis involved correlating all the psychosocial variables with these five subscales. Table 3.4 shows the Pearson product moment correlations between all the variables and the five subscales of the PTGI. This table shows all

variables correlated at the 0.05 level of significance or above, with all five subscales of the PTGI. Certain psychosocial variables (extraversion, extrinsic personal religion, quest [total, complexity and tentativeness], a self-distraction coping style, a high number of life events and more intrusive thoughts) were correlated with all five subscales of the PTGI. Avoidance of reminders of the trauma was significantly associated with four out of the five PTGI subscales – all but spiritual change. This could indicate that the five subscales are measuring the same thing (*see discussion*).

In addition to this, people who scored higher on Appreciation of Life reported themselves to have a positive reframing coping style, avoid reminders of their trauma and were typically female. People who scored highly on Relating to Others reported using a coping style which was more self blaming. People scoring higher on New Possibilities reported themselves to be more neurotic. Their religious orientations were intrinsic and 'extrinsic social'. Their coping style used denial and self blaming. People scoring higher on Personal Strength reported their religious to be 'extrinsic social'. Their coping style was characterised by instrumental coping and positive reframing. More females than males reported themselves to have more personal strength. Finally, people scoring higher on Spiritual change reported themselves to be more neurotic and anxious. They were more intrinsically religious. Their coping styles were characterised by more denial, more religious coping but less acceptance.

3.3.5 Multiple regression analyses of all highly significant variables onto the PTG Subscales

In the final phase of the analysis, those psychosocial variables which were associated with each PTGI subscale with a statistical level of 0.01 or above, were selected for inclusion into the multiple regression analysis. Table 3.5 shows the results of this simultaneous multiple regression analysis using the 'enter' method. The results show that a person scoring higher on extraversion who had

been through more negative life events would have more appreciation for life. A person scoring higher on extraversion and extrinsic personal religion who had been through more life events would relate better to others. A person scoring higher on intrinsic religion and self blaming coping, who had been through more life events would enjoy more new possibilities in life. Females scoring higher on extraversion and extrinsic personal religion would experience more personal strength. Finally, a person scoring higher on extraversion, neuroticism and extrinsic personal religion, who used self-distraction coping would experience more spiritual change following trauma.

Table 3.1: Mean scores for questionnaire sub-scales for males and females

		Total (n=213)		Male (n=71)		Female (n=133)		t
		Mean	SD	Mean	SD	Mean	SD	
Age		47.35	16.08	49	17	47	16	-0.69
EPQ	Psy	1.8	1.43	2.27	1.56	1.48	1.22	-3.66***
	Ex	6.81	3.62	6.13	3.71	7.13	3.57	1.84
	Neu	5.47	3.24	5.00	3.30	5.77	3.22	1.59
	L	4.66	2.51	3.99	2.35	5.01	2.54	2.76**
Religion	Int	22.65	2.81	22.69	2.71	22.63	2.91	-0.13
	Ext/P	5.85	1.95	5.66	1.84	5.97	2.03	1.06
	Ext/S	3.85	1.36	4.00	1.42	3.76	1.33	-1.19
Quest	Total	22.17	4.87	22.69	4.40	21.84	5.00	-1.19
HADS	Anx	6.70	3.67	6.69	3.47	6.72	3.76	0.06
	Dep	3.42	2.44	3.66	2.18	3.31	2.60	-0.96
COPE	Self	5.16	1.68	4.93	1.74	5.31	1.59	1.57
	Active	4.58	1.01	4.59	1.14	4.59	0.93	0.02
	Denial	2.59	1.04	2.68	1.14	2.55	1.00	-0.79
	Sub/mis	2.66	1.32	2.56	1.22	2.68	1.37	0.62
	Emotion	5.78	1.71	5.08	1.67	6.19	1.61	4.61***
	Instrum	5.72	1.71	5.31	1.64	5.91	1.70	2.43
	Diseng	2.70	1.14	2.73	1.13	2.68	1.16	-0.23
	Vent	4.53	1.54	4.30	1.53	4.71	1.54	1.82
	Positive	5.60	1.54	5.65	1.67	5.58	1.51	-0.27
	Plan	6.49	1.37	6.52	1.35	6.51	1.39	-0.49
	Humour	4.31	1.79	4.46	1.65	4.17	1.85	-1.08
	Accept	6.40	1.42	6.59	1.36	6.26	1.45	-1.57
	Religion	6.86	1.56	6.87	1.49	6.86	1.63	-0.04
	S/Blame	5.08	1.62	5.18	1.63	4.98	1.63	-0.84
Life Events		2.45	1.35	2.45	1.35	2.44	1.38	-0.07
IES	Intrusive	13.69	9.27	13.72	9.60	13.98	9.01	0.18
	Avoidance	10.33	8.26	9.71	8.91	10.85	7.92	0.09
CIO	Positive	45.21	10.38	44.74	9.36	45.31	10.95	0.36
	Negative	27.80	10.97	22.27	10.21	28.21	11.53	0.56
PTG /	Total	45.55	28.02	41.52	27.82	48.87	28.43	1.84
	Appreciate	6.50	4.44	5.55	4.23	7.15	4.53	2.44*
	Relate	16.50	9.94	15.30	10.06	17.45	10.00	1.43
	New Poss	9.27	7.18	8.77	7.12	9.56	7.28	0.73
	Personal	8.82	5.64	7.40	5.63	9.78	5.56	2.85**
	Spiritual	4.67	3.48	3.99	3.46	5.21	3.44	2.37*

* p < 0.05 ** p<0.01 *** p <0.001

Table 3.2: Correlations of all variables with the changes in outlook and posttraumatic growth outcome variables

		ClOpos	ClOneg	PTGI
Sex		-.03	-.04	-.13
Age		.22**	-.19**	-.09
EPQ	Psy	-.02	-.02	-.06
	Ex	.27**	-.08	.24**
	Neu	-.12	.38**	.16*
	Lie	.31**	-.05	.10
Religion -	Intrinsic	.20**	-.06	.17*
	Extrinsic per.	.21**	.03	.21**
	Extrinsic soc.	-.01	.13	.15*
Quest	Total	.02	.07	.25**
	Complexity	.14	.09	.2**
	Doubt	-.02	-.07	.07
	Tentativeness	-.08	.13	.23**
HADS	Anxiety	-.21**	.41**	.11
	Depression	-.19**	.49**	.03
COPE	Self	-.1	.14	.20**
	Active	-.03	-.02	.09
	Denial	.09	.09	.17*
	Sub/mis	-.04	.09	.05
	Emotion	-.01	-.07	.04
	Instrum	.09	-.07	.14*
	Beh' disengage	-.04	.11	.01
	Vent	.01	.06	.10
	Positive	.30**	-.17*	.11
	Plan	.11	-.18*	-.00
	Humour	.10	-.05	.10
	Accept	.16	-.05	-.09
	Religion	.10	-.05	.13
	S/Blame	.02	.26**	.20**
Life Events		.14*	.25**	.28**
IES	Intrusion	.14*	.21**	.24**
	Avoidance	-.00	.24**	.23**
CIO	Positive	1.00	-.15*	.50**
	Negative	-.15*	1.00	.08
PTGi	Total	.50**	.08	1.00

* $p < 0.05$ ** $p < 0.01$ (2 tailed test)

Table 3.3: Multiple Regression Analyses of all highly significant variables onto the outcome Variables

Positive Changes in Outlook (n=175)	B	Standard Error	B	
Factor 1 - Age	.11	.05	.16*	
Factor 2 - Extraversion	.52	.21	.18*	
Factor 3 - Social desirability	.75	.31	.18*	
Factor 4 - Intrinsic religion	.57	.25	.16*	
Factor 5 - Extrinsic personal religion	.69	.37	.13	
Factor 6 - Anxiety	-.13	.22	-.05	R^2 = .28
Factor 7 - Depression	.00	.34	-.00	Adj R^2 = .24
Factor 8 - Positive reframing coping	1.31	.48	.20**	R = .53
Negative Changes in Outlook (n=170)				
Factor 1 - Age	.00	.05	-.10	
Factor 2 - Neuroticism	.00	.33	.03	
Factor 3 - Anxiety	.42	.28	.14	
Factor 4 - Depression	1.38	.35	.31***	R^2 = .34
Factor 5 - Self blame coping	.98	.47	.15*	Adj R^2 = .31
Factor 6 - Number of Life events	1.01	.56	.12	R = .58
Factor 7 - Intrusive thoughts	.11	.09	.10	
Factor 8 - Avoidance coping	.00	.11	.00	
Posttraumatic Growth (n=175)				
Factor 1 - Extraversion	1.49	0.54	0.19**	
Factor 2 -Extrinsic Personal Religion	2.20	1.00	0.16*	
Factor 3 - Quest complexity	1.48	0.84	0.13	R^2 = .24
Factor 4 - Quest Tentativeness	1.20	0.84	0.10	Adj R^2 = .20
Factor 5 - Self-Distraction coping	1.53	1.26	0.09	R = .49
Factor 6 - Self blame Coping	1.98	1.20	0.12	
Factor 7 - Number of Life Events	3.61	1.50	0.18*	
Factor 8 - Intrusive Thoughts	0.29	0.26	0.09	
Factor 9 - Avoidance Coping	0.00	0.30	-0.02	

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 3.4: Correlation Table Showing Breakdown of Posttraumatic Growth Scale

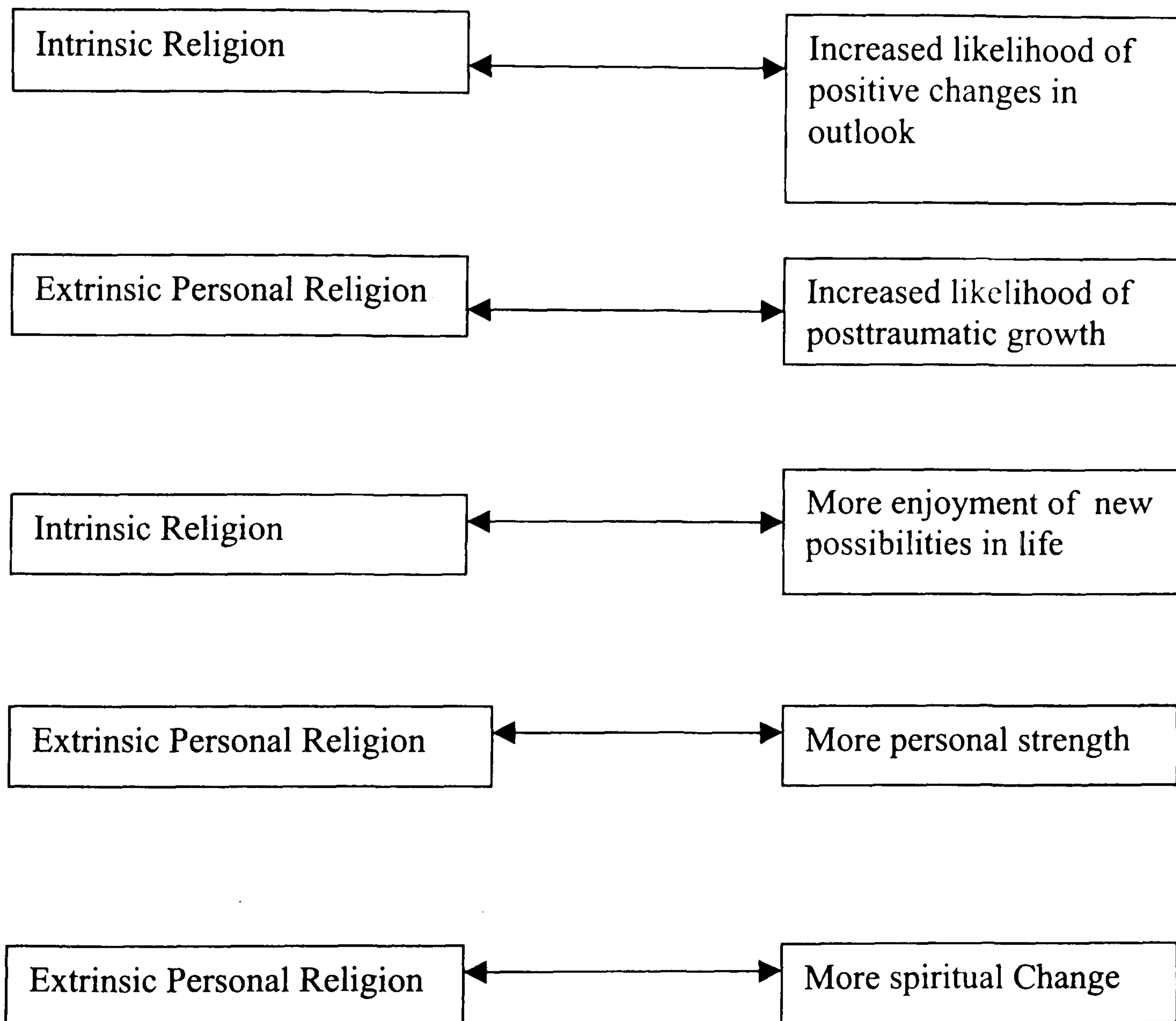
		App. of life	Relating to others	New Possibilities	Personal Strength	Spiritual change
Sex		-.17*	-.10	-.05	-.20**	-.17*
Age		-.04	-.07	-.09	-.60	-.04
EPQ	Psy	-.11	-.05	-.04	-.06	-.01
	Ex	.22**	.28**	.19**	.23**	.20**
	Neu	.13	.10	.18*	.12	.21**
	Lie	.89	.11	.13	.07	.05
Religion	Intrinsic	.12	.11	.19**	.10	.24**
	Ext. per.	.15*	.21**	.19**	.20**	.23**
	Ext. soc.	.08	.11	.19**	.16*	.11
Quest	Total	.16*	.23**	.25**	.25**	.17*
	Complexity	.16*	.18**	.2**	.16*	.21**
	Doubt	.03	.08	.07	.1	-.02
	Tentative	.15*	.2*	.25**	.25**	.14*
HADS	Anxiety	.06	.09	.11	.06	.15*
	Depression	-.01	.02	.06	-.03	.06
COPE	Self	.18**	.14*	.2**	.21**	.19**
	Active	.01	.06	.9	.08	.11
	Denial	.11	.12	.17*	.13	.17*
	Sub/mis	-.03	.05	.05	.05	.03
	Emotion	-.01	.06	-.00	.04	.02
	Instrum	.12	.13	.11	.15*	.12
	Beh' dis	-.04	.01	.00	-.02	.03
	Vent	.02	.11	.08	.07	.11
	Positive	.14*	.05	.12	.15*	.09
	Plan	-.03	-.02	-.00	.01	.02
	Humour	.07	.11	.08	.13	-.01
	Accept	-.07	-.10	-.02	-.06	-.14*
	Religion	.08	.11	.09	.05	.23**
	S/Blame	.17	.19**	.25**	.12	.09
Life Events		.24**	.26**	.29**	.22**	.21**
IES	Intrusion	.15*	.2**	.25**	.21**	.19**
	Avoidance	.16*	.16*	.25**	.22**	.14

$p < 0.05$ level ** $p<0.01$ level (2 tailed test)

Table 3.5: Multiple Regression Analyses of all highly significant variables onto the PTG Sub-Scales * p< 0.05 **p <0.01 *** p < 0.001

	B	Standard Error	*B*	
Appreciation of Life (n=201)				
Factor 1 – Extraversion	.22	.08	.18**	R2 = .12
Factor 2 – Self distraction coping	.27	.19	.10	Adj R2 = .10
Factor 3 –Number of Life events	.78	.22	.24***	R = .34
Relating to Others (n=188)				
Factor 1 –Extraversion	.73	.18	.26***	
Factor 2 –Extrinsic Personal Religion	.81	.34	.16*	
Factor 3– Quest Complexity	.48	.29	.12	R2 = .24
Factor 4 – Quest Tentativeness	.35	.28	.03	Adj R2 = .21
Factor 5 –Self-Blame Coping	.75	.41	.12	R = .49
Factor 6 – Number of Life Events	1.54	.50	.21**	
Factor 7- Intrusive Thoughts	.00	.08	.02	
New Possibilities (n=178)				
Factor 1 –Extraversion	.17	.14	.08	
Factor 2 –Intrinsic Religion	.43	.17	.17*	
Factor 3 –Extrinsic Personal Religion	.39	.25	.11	R2 = .27
Factor 4 – Extrinsic Social Religion	.13	.37	.03	Adj R2 = .23
Factor 5 – Quest Complexity	.38	.21	.13	R = .52
Factor 6 – Quest Tentativeness	.41	.21	.14	
Factor 7 – Self Distraction Coping	.31	.32	.07	
Factor 8 – Self Blame Coping	.78	.30	.18*	
Factor 9 – Number of Life Events	.88	.38	.17*	
Factor 10 – Intrusive Thoughts	.11	.06	.14	
Factor 11 – Avoidance Coping	.00	.07	-.04	
Personal Strength (N=174)				
Factor 1- Gender	-2.04	.83	-.17*	
Factor 2 - Extraversion	.26	.11	.16*	
Factor 3 - Extrinsic Personal Religion	.51	.20	.18*	R2 = .22
Factor 4 - Quest Tentativeness	.30	.17	.13	Adj R2 = .18
Factor 5 – Self Distraction Coping	.36	.26	.10	R = .46
Factor 6 – Number of Life Events	.46	.31	.11	
Factor 7 – Intrusive Thoughts	.00	.05	.11	
Factor 8 – Avoidance Coping	.00	.06	.00	
Spiritual Change (N=186)				
Factor 1 – Extraversion	.17	.06	.18**	
Factor 2 – Neuroticism	.16	.08	.15*	
Factor 3 – Intrinsic Religion	.16	.11	.13	R2 = .28
Factor 4 – Extrinsic Personal Religion	.24	.12	.14*	Adj R2 = .24
Factor 5 – Quest Complexity	.20	.10	.13	R = .53
Factor 6 – Self Distraction Coping	.33	.15	.15*	
Factor 7 – Religious Coping	.36	.19	.17	
Factor 8 – Number of Life Events	.34	.18	.14	
Factor 9 – Intrusive Thoughts	.00	.03	.02	

Fig 3.1: An illustration of how the highly significant religious variables relate to outcome variables in the multiple regressions



3.4 Discussion

The aim of this study was to examine how religious orientation variables related to changes in outlook and posttraumatic growth. Although a number of significant correlations were observed, only the highly significantly correlated variables were used for the multiple regression analyses to avoid type 1 errors. This study found that the religious variables most highly associated with positive changes in outlook after trauma and PTG, were intrinsic religion (having a personal relationship with God) and extrinsic personal religion (using religion as a source of comfort). These associations are summarised in Fig 1.

3.4.1. Discussion of Results

Intrinsic religion, was highly associated with positive changes in outlook following trauma and also enjoying New Possibilities in life. This finding lends support to Park et al's study which found that intrinsic religion was related to PTG. However, as they did not examine the PTGI subscales, it is difficult to compare all findings.

Extrinsic personal religion was found to be highly associated with PTG and also with two of it's subscales: Personal Strength and Spiritual Change following trauma. This is the first time that extrinsic personal religion has been found to be empirically linked to PTG and it's components.

Complexity quest (also known as 'readiness to face existential questions') and tentativeness quest (also known as 'openness to religious change') were associated with PTG. However, the doubt subscale (experiencing religious doubt as positive) was not related to PTG. These findings fully support those from the only other study which has measured these variables (Calhoun et al, 2000). However, although these variables were highly significant in the correlation tables (tables 3. 2 & 3.4),

and thus were entered into the multiple regression analyses, none of the quest religion variables came up as significant in the multiple regression analyses.

Looking at the PTGI subscales (table 3.4), eight psychosocial variables from a variety of measures are strongly associated with all five subscales of the PTGI. This suggests all subscales could be measuring the same thing. This questions the five factor solution suggested by Tedeschi and Calhoun (1996). Further factor analytic studies of this scale would help verify it's factor structure. Other studies have also called into question whether the PTGI is actually best used as a one factor solution (Linley, 2003) like it's counterpart, the Stress-related Growth Scale (SSRG; Park et al, 1996).

The fact that women scored higher on three PTGI subscales suggests that there may be a gender difference here. It suggests that women may experience more PTG than men in this religious sample. However, researchers warn that much of the literature on gender differences in PTG is mixed and contradictory (Tennen & Affleck, 1998).

3.4.2 Methodological Strengths and Weaknesses

This study was novel in design. It attempted to make a valuable contribution to the empirical study of posttraumatic growth by including religious variables. The large sample size obtained from four counties of England and Scotland is a strength of the study. However, its methodology suffered from six weaknesses. Firstly, the cross-sectional and correlational nature of the design means that we cannot infer direction of relationships: only that a number of variables were linked. Secondly, all the data were collected using self-report measures, therefore external validation of information could not be obtained.

Thirdly, the selection of church and organisation leaders and thus potential participants was

limited to the personal contacts of the researcher. Although this bias could have been partly balanced by a large sample size, a more rigorous and randomised approach to inclusion criteria could be observed in future studies. Thus while the study sample may add to our understanding of how Christians and church goers in the UK may overcome PTSD and achieve growth, the these findings should only be generalised to wider populations with caution because of a possible bias with participant recruitment.

Fourthly, despite recommendations by previous researchers to collect specific information about the faith of participants (Ferrada-Noli & Sundbom, 1996), this study did not ask people to specify any information about their faith, beyond that achieved by the covering letter which was designed to screen out non-Christians and non-church goers. Future studies could address the fact that our society is increasingly multi-cultural by expanding the research design to include people of other faiths. They could also develop and use religion scales that could be administered across faiths (Hall, Tisdale & Brokaw, 1994). The researcher did not seek to include a balance of faiths within the recruitment process of this study because of limitations of time and resources. Similar research designs could use a balance of denominations or look at Christian and Non-Christian groups to assess any significant differences in levels of PTSD and growth across this divide. Fifthly, some found the questionnaire battery was frustrating to fill out. For some, the items were meaningless, for others they could not dissect the enormity of their personal faith into 'tick boxes'. This suggests that qualitative methods of enquiry may be more suitable to get a richer idea of how people's faith helped them to cope with trauma and achieve growth. Finally, not all the scales had been previously assessed as having good records of reliability and validity. For example, the Quest scale has come under scrutiny in the past for not achieving its aims (Hall, Tisdale & Brokaw, 1994). This throws doubt upon the usefulness of these specific results within the analysis.

3.4.3 Clinical Implications

The clinical implications of the research findings are fourfold. Most importantly, clinicians working in the area of trauma and growth need to be aware that clients may appreciate the opportunity to talk through their own religious or spiritual beliefs in a therapeutic setting. Research has shown that many clinical psychologist are, themselves, not religious or spiritual (Shafranske, 1996). This means that they may not be comfortable with such topics being introduced into the therapy room, regardless of the area of difficulty. Naturally, this may well be picked up by clients who may feel unable to talk about this area of their life. By asking the client who has been through trauma, about their religious or spiritual lives and whether this has changed since the trauma, clinicians can demonstrate their openness in this area and encourage discussion if this feels right. If a clinician feels they have a block in this area, personal therapy may offer an opportunity to explore this, to minimise the risk of this negatively impacting on their clinical work. As intrinsic and extrinsic personal religion in particular were found to be linked to growth, the clinician has the opportunity to explain what these terms mean to clients, using ordinary language to make sense of them and how they may be relevant.

Secondly, closer collaboration between clinical psychologists and church leaders could prove useful (Weaver, Koenig, and Ochberg, 1996). This is because people may be more likely to approach a clergy member following trauma. Clergy members may be more informal and accessible, they are skilled and supportive professionals and there are less time delays compared to accessing a clinical psychologists through standard N.H.S. procedures. Evidence suggests we could learn from the skill base and working styles of one another.

Thirdly, perhaps we should offer clients following trauma, the choice of whether to be seen by a Christian or non-Christian therapist in the light of these findings. It may be common practice to offer

clients a choice of a male or female therapist in cases such as survivors of sexual abuse, where gender may be a crucial factor. As religion and spirituality have been found to be important in achieving growth, there may be an argument for suggesting that clients should have the right to work through their trauma with someone who is either open to these things or shares the same beliefs. This may create practical difficulties however, such as asking or expecting therapists to define themselves by their religious beliefs, which they may be reluctant to do. Also, therapists may feel that by disclosing their personal religious beliefs to clients, this may be overstepping the therapeutic boundary. Another concern is that this self-disclosure could may lead the therapy in a certain direction which may not be the agenda of the client.

Finally, the finding that extrinsic-personal religion is important in the growth process has clinical implications. Prayer is linked to extrinsic-personal religion. Personal prayer has been found to be the most important aspect of religious behaviour in general well-being in a recent study (Maltby et al, 1999). Research findings about the importance and effectiveness of personal prayer could be shared with clients. Also, it may be important for a clinician to explore a religious client's prayer activity to see if this could be utilised in helping to overcome trauma and achieve some growth. Alternatively, a client could be referred to a church organisation for help with prayer as an adjunct to receiving therapeutic services from clinical psychology.

3.4.4 Directions for Future Research

The key finding that extrinsic personal religion is highly associated with PTG and two of it's subscales (assuming they exist) is a new one. Similar research designs using trauma and non-trauma populations, / highly religious and general populations could be conducted to see if comparable results were found. Further studies could verify how intrinsic religion differs from extrinsic personal religion. At this stage, it is not clear how having a personal relationship with God is separate

from using religion as a source of comfort. These concepts could be linked. Could it be that only two scales exist: firstly, the intrinsic items with the extrinsic personal and secondly, the extrinsic social items? More factor analytic studies looking at the breakdown of the religious orientations scale (e.g. Maltby & Lewis, 1996) could be done. Measures of religious dimensions may need to be further clarified before we can progress with PTG research in this area. Similarly, more factor analytic studies of the PTGI scale may be useful to determine whether a five factor solution or indeed a one factor solution is the most suitable. This could provide clarity for future researchers.

Finally, researchers could examine the usefulness of measuring religious orientations (e.g. intrinsic religion) in relation to PTG, versus measuring aspects of religious coping (e.g. seeking support from clergy members) in relation to PTG (Koenig et al, 1998; Pargament et al, 1998; Pargament et al, 2000). At the moment, this remains unclear.

This study has taken the empirical research of PTG and religion forward by assessing the religious orientation of individuals. The new finding that extrinsic personal religion (as well as intrinsic religion) is instrumental in encouraging PTG is an exciting one. Hopefully this study will inspire others to further examine this aspect of religion in the context of PTG.

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Chapter 4:

Research Review

Some Reflections on the Research process and Beyond

4.0 Abstract

Client: (5year old little boy): 'What's that around your neck?' *(reaches out and touches the gold crucifix attached to a chain on my neck)*

Therapist: (me, surprised): 'Oh! That's my cross'

Client: "No! I mean who's that bloke on it?"

Ever since this encounter during my first assistant psychologist post, I knew that being a Christian clinical psychologist was not going to be easy! Firstly, this paper provides an overview of the research process. It then comments on my personal spirituality and its link with my research. Next, methodological concerns are highlighted as well as some suggestions for other psychologists researching similar areas. Vicarious posttraumatic growth is briefly addressed. Future clinical and research interests sparked by this research are discussed. Finally, some thoughts are raised about nearing the end of my training phase. This paper represents the end of a long research process and the end of being a trainee clinical psychologist. However, it also represents the transition towards the start of my career as a clinical psychologist.

4.1 An overview of the Research Process

The research process has not been an easy or straightforward one. On starting training, I had a negative attitude to the research component of the course. However, my attitude towards research has changed through compiling my thesis. Half way through the process, I was starting to see how the research thesis was important in preparing me to be a clinical psychologist. This was something I had previously doubted. Personal benefits of conducting

this piece of work are essentially that my skills as a researcher and my experience of doing research have both improved a great deal. By doing research using Christian participants I could combine my personal faith system and social groups with a major area of my job. This was a satisfying experience. My change in attitude is reflected in a recent job application for a post involving a strong research component.

Conversations with participants and the speed at which the questionnaire packs were distributed and returned, gave me reason to think that some felt pleased at having the opportunity to participate in this piece of research. Eight people have requested a copy of the results once the research is completed.

It is worthy of note that not a single participant requested the sheet for further help should the questionnaire battery have been upsetting to them. One of two conclusions seems likely. Either the research battery was indeed not upsetting to any participants or it was upsetting to some participants, but they did not request the information sheet. A likely reason could be that they already have family and friends with whom to talk through the trauma, or by contrast, are using avoidance coping and would not want to talk about it to a paid professional. This raises clinical concerns although it is difficult to know how to overcome them in the light of this study being anonymous. If I were conducting a similar piece of research in the future, I might add a simple rating scale to ask participants how stressful or upsetting the process of completing the questionnaire battery had been. To ensure that help was more accessible, I could also enclose the sheet of counselling organisations in with the research pack so participants could contact them directly if needed. This would overcome the problem of a participant having to go through me to obtain it, which could interfere with client confidentiality. It is difficult to know how many of the research packs that were not returned, reached people who did not want to participate or people who would have been too distressed to participate.

4.2 Exploring my Personal Spirituality

As a Christian, I believe that God has supported me through this piece of work. This is why it was important for me to include God in my acknowledgements section. I can understand this may seem strange to people with no faith. However, I believe the crux of effective psychological services is to be working within the client's belief system. As the researcher, I am awarding myself the same benefits I offer my clients! The greatest evidence of spiritual support was obtaining almost three hundred completed surveys back through the post at a time when many colleagues were struggling to get participants. Although I believe that this was partly achieved through good planning and organisation, I did not expect such a high response rate. This piece of work was supported by a lot of prayer from family and friends, as well as my 'cell group' (small group from the church congregation). I started many study days with prayers for efficiency of time, guidance with decision making and understanding of technical points. In fact, some studies have shown that it is the personal prayer element which lies at the crux of the psychological well-being of the Christian, rather that other religious dimensions (Maltby, Lewis & Day, 1999).

A source of frustration to me has been that no authors of studies I have come across within the religious coping literature have made explicit their own personal belief systems. However, Lowenthal (2000) noted that Jews are heavily represented in the psychiatric and psychological professions and that much writing around the psychology of religion is by Jews. This bias could mean that there are fewer Christian researchers who publish in the field.

By choosing to conduct my research in the area of religion and spirituality, I quickly became aware of the possible futility of psychologists trying to place the enormity and might of God into

psychological models, testing procedures and scientific approaches to human enquiry. Some would argue that this may make a mockery of both religion and science. This brought me to a very uncomfortable position at the start of the research. My personal faith was developing rapidly. I was going to Christian seminars, services, hearing personal testimonies about healing, reconciliation of relationships and forgiveness of long standing hurts. This greatly contrasted with study days filled with giving people scores for their 'religiosity'. Reflections of this nature were stated by some participants at the end in a 'free dialogue' box. These mirrored my own thoughts.

Discussions with my tutor explored this tension and yet it was difficult to resolve. This was the point at which I most wanted to change projects, after concluding that no psychologist, statistician or scientist could predict the way God works, in spite of the development of scales and attempts to research people's faith systems. The use of the term 'religiosity' within the literature was another irritation to me. Religion, to me, means to do something 'religiously'. This could apply to sticking to a diet, study, or exercise regime. The meaning of this word does not nearly describe experiencing a personal relationship with God and yet this was the area in which I was most interested. I felt constrained by the limited tools available to study religion.

Meetings with my research supervisor have stimulated much debate about some of the clashes between my personal faith and my work as a clinical psychologist. It is during these meetings that much reflection and feedback between us has taken place. Reflection gave way to heated debate more recently, when my supervisor expressed the opinion that being a Christian clinical psychologist is a contradiction in terms! This is because he views the work of a clinical psychologist as being within the traditional 'scientist-practitioner' role. He also views evidence for Christianity being the truth to be somewhat scant! After some thought and reflection on problems in the workplace, I have heard about from other young Christians, I

believe that all Christians will have many more conflicts in the workplace than non-Christians for a whole variety of reasons. This is connected to the fact that our view of the world and what is important is very different from that of non-Christians. This became clear during conversations about work with other young Christians I have met through a '20's and 30's' group at our church. As Britain is the most secular society on earth second only to Japan (Pawson, 2002), being a Christian in Britain could prove problematic for anyone involved in working with people.

4.3 Methodological Considerations

The single most important methodological concern, as mentioned, is that this research attempts to measure religion under the remit of the 'scientist practitioner' central to clinical psychology. This revealed itself to be extremely difficult, logistically. It seemed that by asking clients to reduce their experiences of God's grace and power to numbers on a rating scale, proved very difficult and unnatural. Although I had a hunch about this, and many conversations about this with my tutor beforehand, comments in the 'free dialogue box' suggested my concerns were real.

I discovered too late that measures do exist to assess personal experiences of God (Rizzuto, 1979; Lawrence, 1991; Saur & Saur, 1993). Had I found these sooner I would have used these scales as well as or instead of, the other religion scales to collect this additional information. A 'personal experiences of God' measure may have balanced the psychometric nature of the study with more scope for creative expression. Alternatively, qualitative methods of enquiry appear more suitable for investigating people's personal faith systems because the

researcher would be unconstrained by the limitations of quantitative approaches. Quantitative approaches were only favoured in these studies because of strict time limitations.

Other methodological concerns are relatively minor. Questionnaire batteries were all printed out in the same order, which did nothing to counter-balance order effects. Future research could ensure the order of the questionnaires is mixed. Participants were restricted to those that could be reached via the researchers personal contacts. A more sophisticated sampling strategy could be employed in future research.

4.4 Additional Information for Psychologists and Directions for Future Research

While the final literature review became a narrow and well-defined area, the general area surrounding the themes of religion, religious coping and negative life events, is huge. Studies of religious coping have increased dramatically over the past few years (Lowenthal, 2000; O'Harrison et al, 2001). However, one recent systematic review of religion within the psychiatric research, revealed only a tiny number (1.2%) of empirical studies which used a religious variable (Weaver, Samford, Larson, Lucas & Patrick, 1998). To the author's knowledge, the empirical literature review contained in this volume is the first attempt to pull together the literature around posttraumatic growth and religion. I hope that this publication will stimulate debate and further reviews in the near future.

The finding that extrinsic personal religion appears to lead to more posttraumatic growth is an important and exciting finding. No empirical work to date has been conducted focusing solely on this concept to the author's knowledge. This means that future studies addressing the longitudinal nature of PTG in relation to extrinsic personal religion may be an important

area of enquiry. More UK studies across the whole banner of research into religion would add to the many studies from the U.S.A.

4.5 Vicarious PTG for Mental Health Professionals and for Clergy?

A body of literature is emerging about how the therapist can experience vicarious PTSD as a consequence of working with traumatised clients (Bennett-Baker, 1999; Everett, 1997). Is it possible then that therapists could experience PTG through this work indirectly? It has been suggested that therapists can be inspired by such clients, re-evaluate their own life priorities and enjoy better relationships with others (Calhoun & Tedeschi, 1999). In line with these suggestions, perhaps research could be done into how religious leaders may be experiencing PTSD or PTG vicariously, as Christians may well approach these people rather than a mental health professional. Because of this, closer collaboration between clergy and mental health professionals has been suggested (Grame, Tortorici, Healey, Dillingham & Winklebaur, 1999; Weaver, Koenig & Ochberg, 1996).

4.6 Future Clinical and Research Interests sparked by this Research

I have reflected on how my research interests link with my clinical interests after recently thinking about and applying for jobs. At first, it was difficult to see how research into traumatic growth and spirituality was at all linked to my interest in working with children. However, after some time it became clear that during my child assistants post and my child core and specialist placements, I have encountered many children and their parents who have been through trauma.

One such example was when I worked with a 15 year old Albanian refugee whose brother was murdered in gang warfare. Instead of the family being informed of this event, the police simply knocked on the door of the family and tipped the body of the young man onto their doorstep, without explanation. The family quickly moved to England to escape any harm coming to the other two sons, leaving behind all their family and an affluent lifestyle. Unfortunately, missed appointments and the language barrier prevented much exploration of his spiritual framework, even though he wore some jewellery items containing religious symbols. However, it prompted me to think about the impact of traumatic bereavement on a child, in relation to a family surviving such an event.

Similarly, a person with learning disabilities who is also a Christian talked for the first time recently about how his faith helps him cope with his learning disabilities resulting from physical abuse from his mother as a child. Here again, trauma and spirituality have become linked via a clinical case. These clients illustrate the importance of these issues in the therapy room.

In addition to this, the research has whetted my appetite to find out more about posttraumatic growth (Tedeschi, Park & Calhoun, 1998), loss and trauma (Harvey & Miller, 2000), pastoral care for posttraumatic stress disorder (Fuller Rogers, 2002), psychological aspects of religion (Lowenthal, 2000), and traumatic bereavement and loss (McIntosh, Cohen-Silver & Wortman, 1993; Parapully et al, 2002).

It has also sparked an interest in issues around reconstructing the meaning of events such as trauma and loss (Neimeyer, 2002). This links to my interest in the Personal Construct Psychology model (Kelly, 1955, Kelly, 1991). Another area of interest that sprang from this research is that of spirituality at the time of death, for the person and their loved ones (Davis, 2001; Richards, 2001). A key qualitative study about bereavement issues following losing a partner to AIDS (Richards, 2001), highlighted how one partner organised a special three hour

ceremony on the evening that his partner passed away. His friends all came around and formed a circle around the body as '*various rituals and blessings*' were administered. This study highlights that many people may have a strong sense of spirituality when losing a loved one even though this may not be connected to a God concept, or indeed any formalised religion. As a close family member is a Christian undertaker, this topic has generated a lot of discussion between us. Again, some of these specialist areas seem to be very relevant to clinical work.

Since conducting this research, I believe I am more methodologically minded in the following ways. Firstly, I have had the experience of conducting a large scale study, inputting data into SPSS and using many of the statistical functions to obtain the results and make sense of them. Secondly, I have thought more thoroughly about the application of such research approaches to clinical as opposed to general populations.

4.7 The End or Just the Beginning?

In the first year of training I was told by a local clinical psychologist that in the third year, I would be 'living and breathing' my thesis. At the time, I thought this was a ridiculous prospect! Unfortunately, he was proved right. However, the learning process has been swift and interesting. My major reaction on handing this thesis in will be relief. However, I am also inspired to do research in the future. I hope that the literature review and the two empirical papers will be published to disseminate the findings to as wide an audience as possible. Research within this thesis may have made an important contribution to the rapidly developing research agendas of religion and posttraumatic growth. This has given me a strong sense of achievement.

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Appendicies

Appendix A: Instruction to Authors

i) Mental Health, Religion, & Culture

ii) Journal of Traumatic Stress

Appendix B: university ethics approval sheet

Appendix C: Letter to church and Christian organisation leaders

Appendix D: Covering letter to participants and questionnaire battery

Appendix E: Further Details of all measures used

Appendix A

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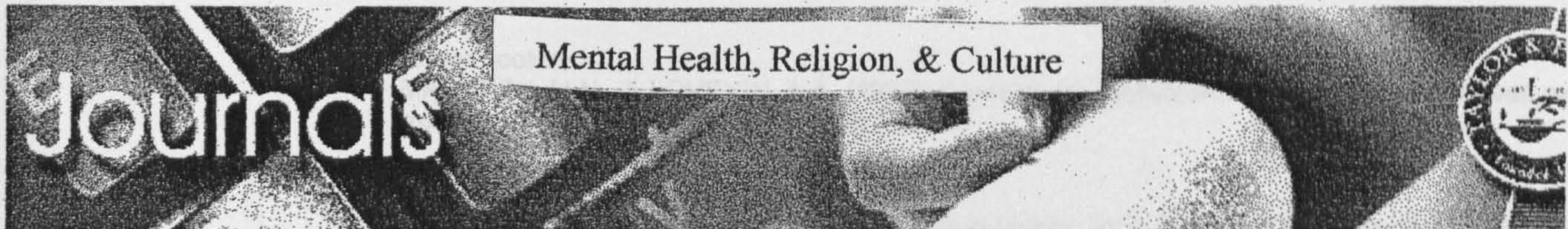

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2. **Course:** CLINICAL PSYCHO DOCTORATE COURSE (UNIVERSI OF COVENTRY & WARWICK)

3. **Title of project:** THE RELATIONSHIPS BETWEEN RELIGIOSITY, PERSONALITY, EXPOSURE TO TRAUMATIC EVENTS AND POSTTRAUMATIC STRESS

4. **Summary of the project in jargon-free language and in not more than 120 words:**

Sample: GENERAL POPULATION OVER THE AGE OF 18 YRS OLD: [CHRISTIANS AND NON-CHRISTIANS]

Research site: COVENTRY & WARWICKSHIRE and churches in U.K and Scotland (K.G.)

Design (eg experimental): QUANTITATIVE: SELF-REPORT CORRELATIONAL METHOD

Methods of data collection: PARTICIPANTS WHO AGREE TO TAKE PART IN THIS STUDY WILL BE ASKED TO FILL IN A NUMBER OF QUESTIONNAIRES. THESE WILL MEASURE PERSONALITY TRAITS, POSTTRAUMATIC SYMPTOMS, TRAUMATIC LIFE EVENTS, RELIGIOUS ORIENTATION AND CHANGES IN ONE'S OUTLOOK TO LIFE. THE QUESTIONNAIRES SHOULD TAKE APPROXIMATE 45 MINUTES TO COMPLETE IN TOTAL. I WILL THEN COLLECT BACK COMPLETED QUESTIONNAIRES TOGETHER IN SUCH A WAY THAT MAINTAINS ANONYMITY AND CONFIDENTIALITY. HOWEVER, PARTICIPANTS MAY BE ASKED TO PROVIDE BASIC DEMOGRAPHIC INFORMATION.

Access arrangements (if applicable): N/A.

	Question	Yes	No
5.	Will the project involve patients(clients) and/or patient(client) data?	Yes [ ]	No [✓]
6.	Will any invasive procedures be employed in the research?	Yes [ ]	No [✓]
7.	Is there a risk of physical discomfort to those taking part?	Yes [ ]	No [✓]
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9.	Will specific individuals or institutions (other than the University) be identifiable through data published or otherwise made available?	Yes [ ]	No [✓]
10.	Is it intended to seek informed consent from each participant (or from his or her parent or guardian)?	Yes [✓]	No [ ]

Student's signature: Annick Gavaghan

Supervisor's signature: K.A. Ganey

Date: 24/01/02

FOR COMMITTEE USE:

Immediate approval [✓]
Referral to local Hospital Ethics Committee [ ]
Referral to full School Committee [ ]
Decision pending receipt of further information (specify below) [ ]

Committee Member's signature: David Giles

Date: 25/1/02

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19th Aug 2002

Dear *(name of church / organization leader)*,

I am about to undertake a major research project as part of my thesis for my Clinical Psychology Doctorate course. I am researching how Christians cope with life events and will need as many Christians as possible over the age of 18 to take part. I am currently identifying a handful of churches and organizations that I have personal links with, to ask if I could announce the study to the congregation or group in an attempt to recruit them as participants to the study. I would very much like to include *(name of church)* in this study, if you were agreeable to this.

The questionnaire, which will take about 20 minutes to complete, is now ready for distribution. I am enclosing a copy for you to check whether you have any objection to any of the material which your parishoners will be asked to do. If you are in agreement with *(name of church)* participating, I would briefly announce the study one Sunday *(or meeting)*, hand out questionnaires at the end of the service *(or meeting)* with pre-paid envelopes and if necessary, do a follow up reminder announcement a few weeks later.

Thank you for considering this request and I look forward to hearing from you soon.

Yours sincerely,

Annick Shaw
Clinical Psychologist in Training

Thank you for taking part in the survey. First, some general questions. Remember, the questionnaires are anonymous and cannot be traced back to you

Sex: (please circle) Male Female

Age: (please state) ______________________

Thank you. Now, the following questionnaire is about the type of person you are and has some general questions about you. Please answer each question by putting a circle around the 'yes' or 'no' following the question. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the questions. PLEASE REMEMBER TO ANSWER EACH QUESTION.

	Statement	**Yes**	**No**
1	Does your mood often go up and down?	Yes	No
2	Do you take much notice of what people think?	Yes	No
3	Are you a talkative person?	Yes	No
4	If you say you will do something, do you always keep your promise no matter how inconvenient it might be?	Yes	No
5	Do you ever feel 'just miserable' for no reason?	Yes	No
6	Would being in debt worry you?	Yes	No
7	Are you rather lively?	Yes	No
8	Were you ever greedy by helping yourself to more than your fair share of anything?	Yes	No
9	Are you an irritable person?	Yes	No
10	Would you take drugs which may have strange or dangerous effects?	Yes	No
11	Do you enjoy meeting new people?	Yes	No
12	Have you ever blamed someone for doing something you knew was really your fault?	Yes	No
13	Are your feelings easily hurt?	Yes	No
14	Do you prefer to go your own way rather than act by the rules?	Yes	No
15	Can you usually let yourself go and enjoy yourself at a lively party?	Yes	No
16	Are all your habits good and desirable ones?	Yes	No
17	Do you often feel 'fed up'?	Yes	No
18	Do good manners and cleanliness matter much to you?	Yes	No
19	Do you usually take the initiative in making new friends?	Yes	No
20	Have you even taken anything (even a pin or a button) that belonged to someone else?	Yes	No
21	Would you call yourself a nervous person?	Yes	No
22	Do you think marriage is old fashioned and should be done away with?	Yes	No
23	Can you easily get some life into a rather dull party?	Yes	No
24	Have you ever broken or lost something belonging to someone else?	Yes	No
25	Are you a worrier?	Yes	No

26	Do you enjoy cooperating with others?	Yes	No
27	Do you tend to keep in the background on social occasions?	Yes	No
28	Does it worry you if you know there are mistakes in your work?	Yes	No
29	Have you ever said anything bad or nasty about anyone?	Yes	No
30	Would you call yourself tense or 'highly strung'?	Yes	No
31	Do you think people spend too much time safe guarding their future with savings and insurance?	Yes	No
32	Do you like mixing with people?	Yes	No
33	As a child, were you ever cheeky to your parents?	Yes	No
34	Do you worry too long after an embarrassing experience?	Yes	No
35	Do you try not to be rude to people?	Yes	No
36	Do you like plenty of bustle and excitement around you?	Yes	No
37	Have you ever cheated at a game?	Yes	No
38	Do you suffer from 'nerves'?	Yes	No
39	Would you like other people to be afraid of you?	Yes	No
40	Have you ever taken advantage of someone?	Yes	No
41	Are you mostly quiet when you are with other people?	Yes	No
42	Do you often feel lonely?	Yes	No
43	Is it better to follow society's rules than go your own way?	Yes	No
44	Do other people think of you as being rather lively?	Yes	No
45	Do you always practice what you preach?	Yes	No
46	Are you often troubled about feelings of guilt?	Yes	No
47	Do you sometimes put off until tomorrow what you ought to do today?	Yes	No
48	Can you get a party going?	Yes	No

This next questionnaire asks you about your religious and spiritual beliefs. Think about each item carefully, then ask yourself 'does the attitude or behaviour described in the statement apply to me?' Circle the number that best fits your response.

1 = No
2= Not certain
3=Yes

	Statement	1 (N)	2	3 (Y)
1	I try hard to live my life according to my religious beliefs	1	2	3
2	I go to church mostly to spend time with my friends	1	2	3
3	I have often had a strong sense of God's presence	1	2	3
4	I enjoy reading about my religion	1	2	3
5	It is important to me to spend time in private thought and prayer	1	2	3
6	I go to church mainly because I enjoy seeing people I know there	1	2	3
7	My religion is important because it answers many questions about the meaning of life	1	2	3
8	My religious beliefs lie behind my whole approach to life	1	2	3
9	Prayers I say when I'm alone are as important as those I say in church	1	2	3
10	What religion offers me most is comfort in times of trouble and sorrow	1	2	3
11	Prayer is for peace and happiness	1	2	3
12	I pray mainly to gain relief and protection	1	2	3
13	I go to church because it helps me make friends	1	2	3
14	I would prefer to go to Church more than once a week	1	2	3
15	It doesn't much matter what I believe so long as I am good	1	2	3

This next questionnaire also asks you about some aspects of your religious or spiritual views. Think carefully about each item and ask yourself 'does the attitude or behaviour described in the statement apply to me?' Circle the number to indicate how much the statement applies to you.

1=No
2=Not certain
3=Yes

	Statement	1 (N)	2	3 (Y)
1	I was not very interested in religion until I began to ask questions about the meaning and purpose of my life	1	2	3
2	I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in relation to my world	1	2	3
3	My life experiences have led me to rethink my religious convictions	1	2	3
4	God wasn't very important to me until I began to ask questions about the meaning of my own life	1	2	3
5	It might be said that I value my religious doubts and uncertainties	1	2	3
6	For me, doubting is an important part of what it means to be religious	1	2	3
7	I do not find religious doubts upsetting	1	2	3
8	Questions are more central to my religious experience than are answers	1	2	3
9	As I grow and change, I expect my religion also to grow and change	1	2	3
10	I am constantly questioning my religious beliefs	1	2	3
11	I expect my religious convictions to change in the next few years	1	2	3
12	There are many religious issues on which my views are still changing	1	2	3

This questionnaire is designed to find out how you feel. Read each item and circle the reply that comes closest to how you have been feeling <u>in the past week</u>. Don't take too long over your replies; your immediate reaction to each item will probably be more accurate than a long thought-out response.

	Statement				
1	I feel tense or 'wound up'	*Most of the time*	*A lot of the time*	*From time to time / occasionally*	*Not at all*
2	I still enjoy the things I used to enjoy	*Definitely as much*	*Not quite so much*	*Only a little*	*Hardly at all*
3	I get a sort of frightened feeling as if something awful is about to happen	*Very definitely and quite badly*	*Yes but not too badly*	*A little but it doesn't worry me*	*Not at all*
4	I can laugh and see the funny side of things	*As much as I always could*	*Not quite so much now*	*Definitely not so much now*	*Not at all*
5	Worrying thoughts go through my mind	*A great deal of the time*	*A lot of the time*	*From time to time but not too often*	*Only occasionally*
6	I feel cheerful	*Not at all*	*Not often*	*Sometimes*	*Most of the time*
7	I can sit at ease and feel relaxed	*Definitely*	*Usually*	*Not often*	*Not at all*
8	I feel as if I am slowed down	*Nearly all the time*	*Very often*	*Sometimes*	*Not at all*
9	I get a sort of frightened feeling like 'butterflies' in the stomach	*Not at all*	*Occasionally*	*Quite often*	*Very often*
10	I have lost interest in my appearance	*Definitely*	*I don't take as much care as I should*	*I may not take quite as much care*	*I take just as much care as ever*
11	I feel restless as if I have to be on the move	*Very much indeed*	*Quite a lot*	*Not very much*	*Not at all*
12	I look forward with enjoyment to things	*As much as ever I did*	*Rather less then I used to*	*Definitely less than I used to*	*Hardly at all*
13	I get sudden feelings of panic	*Very Often indeed*	*Quite often*	*Not very often*	*Not at all*
14	I can enjoy a good book or radio or TV programme	*Often*	*Sometimes*	*Not often*	*Very seldom*

This questionnaire is interested in how you cope with difficult or stressful events in your life. There are lots of ways to try and deal with stress. The following questionnaire asks you about what you generally do and feel when you experience stressful events. Think about what you usually do when you are under stress.
Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

1 = I usually don't do this at all
2= I usually do this a little bit
3= I usually do this a medium amount
4= I usually do this a lot

	Statement	X			✓
		1	**2**	**3**	**4**
1	I turn to work or other activities to take my mind off things.	1	2	3	4
2	I concentrate my efforts on doing something about the situation I'm in.	1	2	3	4
3	I say to myself "this isn't real".	1	2	3	4
4	I use alcohol or drugs to make myself feel better.	1	2	3	4
5	I get emotional support from others.	1	2	3	4
6	I give up trying to deal with it	1	2	3	4
7	I take action to try to make the situation better.	1	2	3	4
8	I've been refusing to believe that it has happened.	1	2	3	4
9	I say things to let my unpleasant feelings escape.	1	2	3	4
10	I get help and advice from other people	1	2	3	4
11	I use alcohol or other drugs to help me get through it.	1	2	3	4
12	I try to see it in a different light, to make it seem more positive.	1	2	3	4
13	I criticize myself.	1	2	3	4
14	I try to come up with a strategy about what to do	1	2	3	4
15	I get comfort and understanding from someone.	1	2	3	4

16	I give up the attempt to cope.	1	2	3	4
17	I look for something good in what is happening	1	2	3	4
18	I make jokes about it.	1	2	3	4
19	I do something to think about it less, such as going to the cinema, watching T.V., reading, daydreaming, sleeping or shopping.	1	2	3	4
20	I accept the reality of the fact that it has happened	1	2	3	4
21	I express my negative feelings	1	2	3	4
22	I try to find comfort in my religion or spiritual beliefs	1	2	3	4
23	I try to get advice or help from other people about what to do.	1	2	3	4
24	I learn to live with it.	1	2	3	4
25	I think hard about what steps to take.	1	2	3	4
26	I blame myself for things that happened.	1	2	3	4
27	I pray or meditate.	1	2	3	4
28	I make fun of the situation	1	2	3	4

This questionnaire is about things that have happened to you recently. Please read each of the thirteen statements below and indicate that they apply to you by ticking the box marked 'yes' or that they do not apply to you by ticking the box marked 'no'. You may find that none of these statements apply to you or you may find that only some of them apply.

	Statement	Yes	No
1	Have you had a serious illness or injury within the last 12 months?		
2	Has a close relative had a serious illness or injury within the last 12 months?		
3	Has there been a death in your close family within the past 12 months? (mother, father, brother, sister, wife, husband, son, daughter)?		
4	Has there been the death of a close friend, uncle, aunt or cousin within the past 12 months?		
5	Have you had a separation due to marital difficulties within the past 12 months?		
6	Have you broken off a steady relationship within the past 12 months?		
7	Have you had a serious problem with a close friend, neighbour or relative within the past 12 months?		
8	Within the past 12 months, has there been any period during which you were unemployed and seeking work for more than one month?		
9	Within the past 12 months have you been sacked from your job?		
10	Have you had any major financial crises within the past 12 months?		
11	Have you had any problems with the police or have you had a court appearance within the past 12 months?		
12	Have you had any valuables lost or stolen within the past 12 months?		
13	Are there any other stressful or upsetting events which have occurred in your life over the last year that are not included in the above list?		

If you said no to all of the questions above, please go to page 13. Otherwise, please proceed to page 10.

Thinking about the events you have experienced in the past year, please write a short description of the event that was most upsetting to you at the time.

____

____

____

____

How upsetting was it at the time? (please circle)

0 1 2 3 4 5 6 7 8 9 10
not upsetting quite upsetting extremely upsetting

How many months ago did this happen to you?

0 1 2 3 4 5 6 7 8 9 10 11 12 (please circle)

Now, thinking about that event, below is a list of comments made by people after stressful life events. Please tick each item indicating how frequently these comments were true for you <u>during the past seven days</u>. If they did not occur during that time, please mark the 'not at all' column.

	Statement	Frequency			
		Not at all	Rarely	Sometimes	Often
1	I thought about it when I didn't mean to				
2	I avoided letting myself get upset when I thought about it or was reminded of it				
3	I tried to remove it from my memory				
4	I had trouble falling asleep or staying asleep, because of the pictures or thoughts about it that came into my mind				
5	I had waves of strong feelings about it				
6	I had dreams about it				
7	I stayed away from reminders of it				
8	I felt as if it hadn't happened or it wasn't real				
9	I tried not to talk about it				
10	Pictures about it popped into my mind				
11	Other things kept making me think about it				
12	I was aware that I still had a lot of feelings about it, but I didn't deal with them				
13	I tried not to think about it				
14	Any reminder bought back feelings about it				
15	My feelings about it were kind of numb				

Below is a list of comments made by people after stressful life events about some of the changes in outlook that may have resulted from their life events. Please read each statement below and indicate, by circling one of the numbers next to it, how much you agree or disagree with it at the present time, <u>in relation to the most difficult event you identified:</u>

1 = Strongly disagree
2= Disagree
3= Disagree a little
4 =Agree a little
5 = Agree
6= Strongly agree

		SD					SA
1	I don't take life for granted any more	1	2	3	4	5	6
2	I value my relationships much more now	1	2	3	4	5	6
3	I feel more experienced about life now	1	2	3	4	5	6
4	I don't worry about death at all any more	1	2	3	4	5	6
5	I live everyday to the full now	1	2	3	4	5	6
6	I look upon each day as a bonus	1	2	3	4	5	6
7	I'm a more understanding and tolerant person now	1	2	3	4	5	6
8	I have greater faith in human nature now	1	2	3	4	5	6
9	I no longer take people or things for granted	1	2	3	4	5	6
10	I value other people more now	1	2	3	4	5	6
11	I am more determined to succeed in life now	1	2	3	4	5	6
12	I don't look forward to the future any more	1	2	3	4	5	6
13	My life has no meaning any more	1	2	3	4	5	6
14	I no longer feel able to cope with things	1	2	3	4	5	6
15	I fear death very much now	1	2	3	4	5	6
16	I feel as if something bad is just waiting around the corner to happen	1	2	3	4	5	6
17	I desperately wish I could turn the clock back to before it happened	1	2	3	4	5	6
18	I sometimes think it's not worth being a good person	1	2	3	4	5	6
19	I have very little trust in other people now	1	2	3	4	5	6
20	I feel very much as if I'm in limbo	1	2	3	4	5	6
21	I have very little trust in myself now	1	2	3	4	5	6
22	I feel harder towards other people	1	2	3	4	5	6
23	I am less tolerant of others now	1	2	3	4	5	6
24	I am much less able to communicate with other people	1	2	3	4	5	6
25	Nothing makes me happy any more	1	2	3	4	5	6
26	I feel as if I'm dead from the neck downwards	1	2	3	4	5	6

Finally, still thinking about the event you described and how it has affected you, below are a number of statements. Please read each statement carefully and circle the number that best describes how you feel.

0 = I did **not change** as a result of the event I described above
1 = I changed to a **very small** degree as a result of the event I described above
2 = I changed to a **small** degree as a result of the event I described above
3 = I changed to a **moderate** degree as a result of the event I described above
4 = I changed to a **great** degree as a result of the event I described above
5 = I changed to a **very great** degree as a result of the event I described above

	Statement	**X**					**✓**
		0	**1**	**2**	**3**	**4**	**5**
1	My priorities about what is important in life	0	1	2	3	4	5
2	An appreciation for the value of my own life	0	1	2	3	4	5
3	I developed new interests	0	1	2	3	4	5
4	A feeling of self-reliance	0	1	2	3	4	5
5	A better understanding of spiritual matters	0	1	2	3	4	5
6	Knowing that I can count on people in times of trouble	0	1	2	3	4	5
7	I established a new path for my life	0	1	2	3	4	5
8	A sense of closeness with others	0	1	2	3	4	5
9	A willingness to express my emotions	0	1	2	3	4	5
10	Knowing I can handle difficulties	0	1	2	3	4	5
11	I am able to do better things with my life	0	1	2	3	4	5
12	Being able to accept the way things work out	0	1	2	3	4	5
13	Appreciating each day	0	1	2	3	4	5
14	New opportunities are available which wouldn't have been otherwise	0	1	2	3	4	5
15	Having compassion for others	0	1	2	3	4	5
16	Putting effort into my relationships	0	1	2	3	4	5
17	I'm more likely to change things which need changing	0	1	2	3	4	5
18	I have a stronger religious faith	0	1	2	3	4	5
19	I discovered that I'm stronger than I thought I was	0	1	2	3	4	5
20	I learned a great deal about how wonderful people are	0	1	2	3	4	5
21	I accept needing others	0	1	2	3	4	5

You are now at the end of the questionnaires. Please check that you have completed them all. If there is anything else you would like to tell us about your life, please use the box below. Thank you. Your time is very much appreciated. Now please return the completed pack to me. Should you wish to have a copy of the completed study, you may request this by writing to me at the address below. However, please use a separate envelope for this to ensure your questionnaire remains anonymous.

Annick Shaw

Any further Information:

Thank you very much!

Measures / Main

1) Eysenck Personality Questionnaire Revised (Eysenck 1967: 1982)

The 48 item EPQ-R was used to measure a number of personality dimensions. It was created as an amended scale of the full original version of 106 items and it was designed for use when time is short. It has 48 items and uses a 'yes no' response format. Some items are reverse scored. It assesses three aspects of personality: psychoticism, extraversion and neuroticism and also contains a lie scale. Each scale has a total score of 12, with higher scores indicating higher levels of the personality trait. An example of a psychoticism item is '*Do you enjoy co-operating with others*?' An example of an extraversion item is '*Do you like mixing with people*?' An example of a neuroticism item is '*Are you a worrier*?' An example of a lie item is '*Are all your habits good and desirable ones*?' Reliability and validity data on the EPQ-R are estimated to be good (Eysenck, Eysenck & Barrett 1985).

2) The Revised Religious Orientation Scale (Maltby and Lewis 1996).

The revised religious orientation scale was used to measure intrinsic and extrinsic dimensions of religiosity. The original version of this scale simply measured intrinsic and extrinsic religiosity (Allport & Ross, 1967). However, it has gone through three main developments since it's creation (Maltby, Lewis & Day, 1999). Firstly, there have been amendments to items that use simplified language (Gorsuch & Venable 1983). Secondly, factor analytic studies revealed that intrinsic and extrinsic orientations actually represent three religious dimensions. It was suggested that intrinsic orientation is one domain but that the extrinsic dimension becomes split into 'extrinsic personal' and 'extrinsic-social' (Kirkpatrick 1989; Leong and Zachar 1990). Thirdly, the response formats of the scales have been changed to account for a previously unclear measurement of the intrinsic-extrinsic religious orientation (Maltby and Lewis 1996). There are fifteen items in total: nine intrinsic items, three extrinsic personal items and three extrinsic social items. An example of an intrinsic religiousness item is '*I have often had a strong sense of God's presence*'. An example of an extrinsic personal item is '*I pray mainly to get relief and protection*'. An example of an extrinsic social item is '*I go to church mainly because I enjoy seeing people I know there*'. Reliability and validity of this scale were found to be satisfactory. Higher Chronbach's alpha coefficients were noted for this revised scale compared to the original (Maltby & Lewis, 1996).

3) The Revised Quest Scale (Maltby & Day, 1998)

This revised twelve item scale was used to measure participant's quest religion. It incorporates some amendments to the original response format (Batson and Schoenrade 1991a & 1991b). The original scale breaks down into three subscales. The complexity subscale has four items (e.g. '*I was not very interested in religion until I began to ask questions about the meaning and purpose of my life*'). The doubt subscale has four items (e.g '*It might be said that I value my religious doubts and uncertainties*'). Finally, the tentativeness subscale also has four items (e.g. '*As I grow and change, I expect my religion also to grow and change*'). This revised version rewords two of the items, making it easier to complete (Maltby and Day 1998). Respondents are requested to rate each item on a three point scale which is scored accordingly ('no=1, 'don't know'=2, 'yes'=3). A higher score indicates greater quest religion. Although the reliability and validity of the original scale has been questioned by reviewers of psychometric tools (Hall, Tisdale & Brokaw, 1994), these were found to be higher in the amended version (Maltby & Day, 1998).

4) The Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith 1983)

The HADS was used to assess the general mental health dimensions of anxiety and depression. This tool is a 14 item self-report measure widely used to assess anxiety and depression in general and clinical populations. It contains two subscales which use seven anxiety items (e.g. *'I feel tense or wound up'*) and seven depression items (e.g. *'I have lost interest in my appearance'*). Participants are required to indicate a response on a Likert type scale and is scored accordingly (most of the time =3, a lot of the time=2, from time to time or occasionally =1, not at all=0). The items are weighted such a direction that a higher score on each dimension means higher levels of anxiety or depression. The validity and reliability of the HADS was reviewed by Clark & Fallowfield (1986) and found to be satisfactory.

5) The Brief COPE (Carver, 1997)

This tool is a shortened 28 item scale of the standard version. It's aim is to measure coping in terms of fourteen variables. These are self-distraction, active coping, denial, substance use, use of emotional and instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion and self-blame. Fourteen subscales exist with only two items in each.

An example of a self-distraction item is *'I turn to work or other activities to take my mind off things'*. An example of an active coping item is *'I take action to try to make the situation better'*. An example of denial coping is *'I say to myself, this isn't real'*. An example of substance misuse coping is *'I use alcohol or drugs to make myself feel better'*. An example of a using emotional support item is *'I get emotional support from others'*. An example of a use of instrumental support item is *'I get help and advice from other people'*. An example of a behavioural disengagement item is *'I give up trying to deal with it'*. An example of a venting item is *'I say things to let my unpleasant feelings escape'*. An example of a positive reframing item is *'I look for something good in what is happening'*. An example of a planning item is *'I think hard about what steps to take'*. An example of a humour item is *'I make fun of the situation'*. An example of an acceptance item is *'I learn to live with it'*. An example of a religion item is *'I pray or meditate'*. Finally, an example of a self-blame item is *'I criticise myself'*.

Each item is scored on a four point scale accordingly ('I usually don't do this at all'=1, 'I usually do this a little bit'=2, 'I usually do this a medium amount'=3and 'I usually do this a lot' =4). An overall COPE score is thus obtained with a range from 14 to 112. Each subscale has a range from 2 to 8 giving information about participants coping styles. Validity and internal reliability are acceptable (Carver 1997).

6) The Life Events Scale (Brugha, Bebbington, Tennant & Hurry, 1985)

This twelve item tool was used to measure the number of significant negative life events a person had gone through. Examples of the items are *'Have you had a serious illness or injury within the last twelve months?'* and *'Have you had any major financial crises within the past twelve months?'* A twelve month cut off point was decided upon, rather than the typical six months in order to try and include as many participants as possible who were willing to mention their recent life events. One point is scored per life event indicated on this scale.

7) General Anchoring Questions

At this point in the questionnaire battery, if participants had indicated that they had been through at least one life event in the previous questionnaire scale, they were asked for three

pieces of information. The aim of this was to 'anchor' the event in order to evoke the memory to be able to answer questions on it in the coming questionnaire scales. They were asked to write a short description about their most upsetting event, they were asked to rate how upsetting it was at the time, from 0 (not upsetting) to 10 (extremely upsetting) and they were asked how long ago this happened to them from 0 to 12 months ago.

8) The Impact of Events Scale (IES) (Horovitz, Wilner, & Alvarez 1979)

The IES was used to measure current levels of PTSD in the sample. This tool is the most widely used self-report measure of specific responses to trauma. This 15 item scale measures two key elements of PTSD: event-intrusion (7items) and event-related avoidance (8 items) (Horowitz, Wilner, & Alvarez, 1979). An example of an intrusion item is *'Any reminder bought back feelings about it'*. An example of an avoidance item is *'I tried not to talk about it'*. Scores for the total IES range from 0 to 75 and higher scores denote higher levels of distress. As well as a global distress score, intrusion and avoidance subscale means can be calculated. Internal consistencies range from 0.78 to 0.91 (Horovitz et al, 1979; Zilberg, Weiss, & Horovitz, 1982). Research has shown the reliability and validity of the scale to be adequate (Weiss & Marmar, 1997).

9)The Changes in Outlook Questionnaire (Joseph, Williams and Yule 1993)

This tool is a 26 item self report measure of positive and negative changes experienced by people following crises. There are eleven items on the positive changes dimension and fifteen items on the negative changes dimension. An example of a positive change item is *'I am more determined to succeed in life now'*. An example of a negative change item is *'I am less tolerant of others now'*. Participants are asked to rate these items on a six point Likert scale which is scored accordingly (strongly disagree=1 to strongly agree=6). From this data, overall positive and negative change scores are calculated. Scores range from 11 to 66 on the positive dimension and from 15 to 90 on the negative dimension. Chronbach's Alpha for the positive changes in outlook scale was found to be .83 and for the negative scale, .90. These were found to be acceptable. The correlation between the two subscales was found to be $r=-.12$. which indicates that the scales are not associated with each other and are likely to be measuring different things. The negative subscale correlates well with the General Health Questionnaire and the Impact of Events Scale, demonstrating good convergent validity.

10) The Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996)

This is a 21 item scale that measures the degree of reported positive changes experienced in the struggle with major life crises. The scale includes items that assess the degree to which the individual reports specific positive changes attributed to the struggle with trauma. Factor analytic studies have shown that the scale breaks down into five subscales. These are appreciation of life (e.g.*'Appreciating each day'*), relating to others (e.g. *Having compassion for others*), new possibilities (e.g. *'I developed new interests'*), personal strength (e.g. *'Knowing I can handle difficulties'*) and spiritual change (e.g. *'I have a stronger religious faith'*). The inventory has acceptable construct validity, internal consistency (0.90), and test-retest reliability over a two month interval (0.71).