CHAPTER - II
LITERATURE REVIEW
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Literature review helps to understand the problem clearly. Therefore literature from various sources is extensively reviewed in the light of the present investigation. In this chapter, various studies directly or indirectly related to the objectives of the present study are reviewed under the following main headings.

- Studies on personality (Big Five).
- Studies on spirituality.
- Studies on religiosity.
- Studies on relationship between NEO-FFI and spirituality.
- Studies on relationship between NEO-FFI and religiosity.
- Studies on relationship between spirituality and religiosity.

STUDIES ON PERSONALITY (BIG FIVE)

Parker, Bagby and Summerfeldt (1993) studied the theoretical parameters of the 5 factor personality model. The factors were assessed by subjecting the 30 sub – scales that comprise the scale to confirmatory factor analysis with a sample of 1000 adults; a poor fit was obtained between the factor structure and the hypothesized dimensions corresponding to the 5 factor model.
Hrebockva, Cermak, and Osceka (2000) investigated the development of the personality structure from adolescents to old age. 930 subjects (aged 14-81 yrs) were classified into seven age groups. Results show a relation between gender and self report in the five examined dimensions of neuroticism, extraversion, openness, agreeableness and conscientiousness. Females tend to score higher in all the five personality dimensions. Younger subjects scored higher on agreeableness and conscientiousness scales. Difference between the age groups suggests that personality dimensions change during development.

Roepke, Adams, Lindamer and Patterson (2001) compared the neuroticism, extraversion, openness to experience, the NEO-PI-R domain and face traits in the middle aged/ young-old Vs Old-Old normal subjects. 38 community dwelling subjects (22 women, 16 men) comprised the sample. The personality profile of the old-old group (85-100 yrs) had lower score on extraversion and 4 of the 30 facet traits (warmth, positive emotions, impulsiveness and order) compared to the middle aged/ young –old group (54-84 yrs).

Costa, Terracciano, and McCrae (2001) examined gender differences in personality traits across 26 cultures (N=23,031). The results suggest that gender differences are small relative to individual variation with gender differences for both college age and adult samples and differences are broadly consistent with gender stereotype. Women reported themselves to be higher on neuroticism, agreeableness, warmth and openness to feelings while men were higher in assertiveness and Openness to Ideas. Contrary to predictions from evolutionary
theory, the magnitude of gender differences varied across cultures. Contrary to predictions from the social role model, gender role differences were most pronounced in European and American cultures in which traditional gender roles were minimized.

Warr, Miles and Platts (2002) examined the personality in a significant sample of British population between 16-64 yrs of age using response to established personality scales. Significant age differences were present for about half of the scales and non-linear patterns occurred in 10% of cases. Older people were found to be more conscientious, traditional and careful about interaction with others and less sociable, outgoing, change oriented and career motivated. No age differences were present for traits such as social confidence, assertiveness, and independence, worrying and critical.

Fernandez and Rodriguenz (2004) examined gender differences in the Big Five personality factors in a sample of 255 Spanish university students (196 women and 59 men) whose mean age was 21.4 yrs (S.D= 3.91). Significant differences were found between men and women on the factors of extraversion, neuroticism and conscientiousness.

Aluja, Gracia, Rousier and Gracia (2005) compared three different short versions of the NEO-PI-R; the NEO-FFI; the NEO-FFI-R and a short version (NEO-60) developed in the present study. A French version of NEO-PI-R was given to 1090 Swiss subjects whereas the Spanish version of the NEO-PI-R was administered to 1006 Spanish subjects. Results indicate that compared to the
NEO-FFI, reliability coefficients and factor structure was enhanced by the NEO-FFI-R and NEO-60 in both samples, although substantial differences were found. The factor structure of the NEO-60 shows the best fit since only three items do not load mainly on their own factor in both samples. Besides the correlation between items and NEO-PI-R domain scores are higher for the item included in the NEO-60 version. On the other hand convergent correlations in the NEO-PI-R dimensions were satisfactory irrespective of the version, and confirmatory factor analysis show slight differences among the different models generated after the third short version.

Rubinstein (2005) studied the big five among 320 Israelis male and female students of natural science, law, social science and art (mean age= 24.03 yrs). Results depicted that neuroticism is negatively related to both conscientiousness and to agreeableness which is positively related to both openness and conscientiousness. The latter one is negatively related to one another. Women are significantly less agreeable and conscientious than men. Law students are significantly less agreeable and open to experience than students of all other faculties and more neurotic than natural sciences students. Female students of the natural science are significantly more agreeable than both male and female counterparts in the science and law students.

Yamagata (2006) examined whether universality of the five factor model of personality operationalized by the revised NEO-PI is due to greater genetic influences that are invariant across nations. Factor analysis was conducted on
matrices of phenotypic, genetic and environmental correlations estimated in a sample of 1209 monozygotic twins and 701 dyzygotic twin pairs from Canada, Germany and Japan. The results indicate high congruence coefficients when phenotypic, genetic and environmental factors were compared across samples and further support that the Five Factor Model has a solid biological basis and may represent a common heritage of the human species.

Terracciano, Costa and Mc Crae (2006) evaluated groups and individual level using longitudinal data from Guilford Zimmerman Survey and the NEO-PIR for 42 years and found the rank order consistency of personality traits increase from childhood to the age of 30 and strengthen the claims that personality predominantly remain stable after the age of 30.

Read, Vogler, Pederson and Johansson (2006) examined the stability and change in the mean levels and sources of variation in personality in a sample of 149 monozygotic and 202 dyzygotic twin pairs over 80 years who were studied three times within a two year interval between measurement occasions. The results indicate a high mean level stability in extraversion and neuroticism. Morality was related to lower scores in extraversion and neuroticism, genetic effects were moderate. Though no genetic contributions emerged over time, significant new environmental effects were found over time. Controlling for morality slightly increased genetic effects in extraversion.

STUDIES ON SPIRITUALITY
Zainuddin (1993) made an attempt towards a humanistic phenomenological study of Spirituality. It is concerned with the relationship between orientation and psychogenic needs. 219 teachers at a Muslim University participated in the study. Factor analysis of needs and multiple regression analysis for exploring the relationship between needs and spirituality were carried out. Autonomy and aggression were the best negative predictors of spirituality. Spirituality could also be predicted by self actualization needs.

Zainuddin (1993) explored the factors of spirituality using nine dimensional test of spirituality with 219 subjects (aged 24-60 yrs). The nine dimensions of spirituality namely Transcendence, Meaning And Purpose in Life, Mission in life, Sacredness of life, Material Values, Altruism, Idealism, Awareness of the tragic and Fruits of spirituality, were found to be the cluster around two factors- the value dimension and the experiential dimension of spirituality.

Rican Pavel (2003) intended to contribute to the clarification of the concept of spirituality as used in the psychology of religion using a sample of 500 churchgoers. As per his study, the origin and development of spirituality is traced from the Christian theology to the modern understanding of the human spirit and the attempts of contemporary psychologists to describe concrete manifestations of spirituality. It is shown by the analysis of the data that while the concept of spirituality “as such” is useful is theorizing at the general level, its concrete description lead to cultural ethnocentrisms in the study of religion, because the de facto western spirituality used to be misinterpreted as rituality “as such”. Current
tendency towards idealization of religion and spirituality is seen as an important cause of this misinterpretation. To improve the definition of spirituality, it is recommended to make full use of the concept of implicit religion and implicit spirituality as its counterparts.

**STUDIES ON RELIGIOSITY**

Felty and Poloma (1991) explores the effect of gender differences and gender role beliefs on 6 dimension using data from R 1998 survey of 584 adult respondents. Findings revealed that (1) gender difference in religiosity are not supported for most of the dimensions of religiosity when other demographic variables are considered. (2) Gender role ideology, while not gender related does improve the explanation of variance in most dimensions of religiosity and (3) Gender is the predictor of closeness of an individual’s relationship to God, while gender role ideology is not stereotype about women being more religious are misleading, and gender role ideology had an important effect on religiosity. However gender is more indicative of the level of religious intimacy, measured by perceived closeness to God.

Chatters, Taylor and James (1992) tested a measurement model of religiosity among 449 Black Americans (aged 55+ yrs), incorporating three correlated dimensions of religious involvement; organizational; non-organizational and subjective religiosity. Findings indicate that antecedent variables (age, gender, marital status, income, education, urbanicity and region) predict religious
involvement exhibiting stronger effects on subjective religiosity than on the two more behavioral dimensions of religiosity.

Francis and Gibson (1993) conducted a study on 3414 pupils (age group, 11-12 and 15-16 years old) using the tool measuring their personal religious practices and attitudes and parental religious practice. Findings demonstrate that parental influence (PRI) was important for both genders and age groups and there was little difference in overall PRI on sons and daughters. The extent of PRI increased rather decreased between the age of 11-12 and 15-16 years. Mother’s practice was a more powerful predictor than father’s practice among both sons and daughters. As far as the comparative influence of father was concerned, it was weaker among daughters than among sons: and the comparative influence of the mother was stronger among daughters than among sons. Parents exerted a more direct influence over their children’s public and more overt religious practice than their private and more covert religious attitude.

Lewin and Taylor (1993) examined gender and age differences in over a dozen religious indicators using cross sectional data from a National Survey of Black Americans (aged 17-111yrs). Although both genders manifest moderate to high levels of organizational, non-organizational and subjective religiosity. Black women significantly exceeded black men in levels of religiosity at all ages even when controlling for the effects of education, marital and employment status, region and health satisfaction.
Krause (1993) developed and tested a multidimensional measurement model of late life religiosity that is composed of 3-major components – organizational religiosity, subjective religiosity and religious beliefs. The religious belief dimension is assessed in part with items that ask about belief in the Ten Commandments. Alternative ways of specifying the relationship among these dimensions are explored, including 1st and 2nd order factor models. Findings that are derived from estimating these confirmatory factor models are supplemented with additional analysis that examines the differential impact of the religiosity factors on an external criterion measure (i.e. life satisfaction). Ss included 936 subjects (aged 55+ yrs). Data indicate that it may be best to use a 2nd order factor satisfaction when examining the impact of the religiosity on feeling of life satisfaction among older adults.

Lewis and Joseph (1994) presents findings on racial and gender differences in religiosity among old adults based on four national surveys. Fairly consistent racial and gender differences in religiosity were seen among old subjects. Higher level of religiosity was reported by black relative to whites, and by female relative to males. Every statistically significant main effect for race or gender at the gross level remained significant after controlling for effects of known predictors of religiosity.

Loewenthal (2002) investigated the gender differences regarding religious involvement by comparing 4 religious cultural groups in the UK. Subjects were 230 Christian, 56 Hindus, and 157 Jewish and 87 Muslim study volunteers. All
Subjects self defined religious affiliation. Results indicate women (n= 302) described themselves as significantly less religiously active as did men (n= 226) but this effect was confined to non-Christian groups. It is suggested that the general conclusion that women are more religious than men is culture specific and contingent on the measurement methods used.
STUDIES ON RELATIONSHIP BETWEEN PERSONALITY (BIG FIVE) AND SPIRITUALITY

Mc Donald (2000) focused on the development and measurement of factor model of the expression of Spirituality. Study one (N=543) involved the use of factor analysis to examine the latent factor structure in a sample of 11 measures of spiritual constructs. Study two (N= 936) focused on the replication of study one results. The results indicate that there are at least 5 robust dimensions of Spirituality- Cognitive Orientation towards Spirituality (COS), Experiential Phenomenological Dimension (EPD), Existential Well Being (EWB), Paranormal beliefs (PAR), Religiousness (REL). Examination of the relationship of spirituality to personality to the Five Factor Model as measured by the NEO-PI-R revealed that the dimension of the Five Factor Model appear to differentially related to the major elements of spirituality but are nevertheless conceptually unique, pointing to the possible existence of major aspects of personality not represented in the Five Factor Model.

Kosek (2000) investigated personality traits of Roman Catholic seminarians characterized by a high or low level of prayerful desire for God with 121 Roman Catholic seminarians (age 20-33 yrs). Subjects reported their desire for God attained higher scores concerning agreeableness and conscientiousness than others. Findings suggest that the five personality domains explained that 11% variance of Ss desire to abide with God.
Maltby and Day (2001) examined the relationship between spirituality and the Eysenck’s Personality dimension among 179 adults (age 18-56 yrs) from a non-student population using the Spiritual Involvement and Belief scale and the abbreviated form of EPQ-R. The results indicate that extraversion is related to spirituality. Moreover, Eysenck personality dimension which underpins these beliefs i.e. psychoticism underpins religiosity and extraversion underpins spirituality.

Maltby and Day (2001) examined the relationship between Eysenck personality dimension and four indices of spirituality using a sample of 300 undergraduate students (aged 18-53 yrs). The results suggest that extraversion accounts for most variance (between 9% and 14%) in spirituality scores.

Maltby and Day (2001) examined the relationship between four indices of spirituality and Eysenck personality dimensions in a sample of 300 undergraduates, 140 males and 160 females. Results indicate that extraversion rather than psychoticism accounts for more variance in spirituality scores.

Maltby and Day (2001) studied the relationship between Eysenck personality dimension and spirituality in a non-student group of 174 adults (84 men; 95 women) with mean age of 38.22 yrs. Results support the fact that extraversion is related to spirituality and psychoticism is related to religiosity.

Kaldor, Francis and Fisher (2002) investigated a random sample of 1033 adults to study the relationship between psychoticism and spirituality while prayer
was associated with low psychoticism scores; Meditation was associated with high psychoticism scores.

Lucia Adamonava and Michael Strizenec (2002) investigated a sample of 116 persons (mean age 22 yrs) of low, average and high cognitive orientation to spirituality. Results indicate that cognitive orientation is positively associated with extraversion, openness to experience and agreeableness.

Jahoda (2005) investigated a sample of 341 college going students to study the relationship between personality and spirituality. Results indicate that openness is the factor of personality which is positively related to spirituality.

Wilkinson (2008) studied the relationship between NEO-FFI and spirituality in a sample of 1000 old age persons. Results support the fact that openness to experience is positively related to spirituality.

Warr (2009) found the correlation between spirituality and personality using NEO-FFI and spirituality assessment scale in a sample of 500 church goers. Results reveal that there exists a positive correlation between openness, conscientiousness and spirituality. However no relationship was found between neuroticism, extraversion and agreeableness and spirituality.

STUDIES ON RELATIONSHIP BETWEEN PERSONALITY (BIG-FIVE) AND SPIRITUALITY

Ken and Ronald (1980) compared personal profiles of the male and female Canadian freshmen across religious orientation and religious affiliation. It was
hypothesized that the profiles of extrinsically religious and non-religious subjects would correlate significantly with intrinsically religious subjects. The personality variables for which the hypothesis was supported included super-ego strength, emotional sensitivity and liberalism. Differences were also found across religious affiliation for certain personality variables. Intrinsically religious subjects tended to have a greater concern for moral standards, conscientiousness, discipline, responsibility and consistency than those who are extrinsically religious or non-religious. Intrinsically religious subjects also appear to be more sensitive, dependent, empathetic and open to their emotions. In addition they tended to reflect more conservative and traditional attitude. Although these characteristics have positive features, they can degenerate pathological rigidity which might lead to a neurotic style of living such as obsessive complexity.

Francis and Pearson (1983) found that the correlations between religiosity and the three scales of extraversion decreased in the predictive direction. The strongest correlation was with the Junior Eysenck Personality Inventory, there was no significant correlation with the Eysenck Personality Questionnaire and the Junior Eysenck Personality Questionnaire occupied a midway position. The difference can be accounted for in terms of variation in the impulsivity content of the extraversion scales.

Francis, Pearson, Carter and Kay (1981) reported that a significant negative correlation between religiosity and extraversion. This is consistent with the Eysenck (1954) theory of relationship between personality and social attributes
that predicts that introverts will be more religious on the grounds that they condition more easily.

Chaudhery (1989) administered Eysenck’s Modesly Personality Inventory and Deka’s Religiosity scale to a group of volunteer of 90 Delhi university college students, both male and female, in order to examine two conflicting psychological accounts of relationship between neuroticism and religiosity. The main findings are -- there is no relationship between religiosity and neuroticism.

Francis, Lankshear and Pearson (1989) administered short form of Junior Eysenck Personality Questionnaire and a scale of attitude towards Christianity to 421, 4th year junior pupils. Results indicate negative correlation between religiosity and psychoticism, a positive correlation between religiosity and lie scale and lack of significant correlation between neuroticism and religiosity.

Francis and Pearson (1991) administered 6- neuroticism measures including Eysenck Scales and a scale assessing attitude towards Christianity to 114 females and 63 males, 15- 16 years old. Findings support that inspite of the different levels of gender related content, the 6 measures of personality, neuroticism show functional equivalence. Moreover, neuroticism and religiosity are uncorrelated variables as per the results which also suggest that the gender related and gender free components of neuroticism function similarly, even in relation to another gender related variables like religiosity.

Francis and Katz (1992) administered Hebrew version of EPQ and Katz scale of religiosity to 190 female trainee teachers from Israel to examine the
relationship between Eysenckian dimensions and religiosity. The data suggest that religiosity (i) is associated with neither neuroticism nor emotional Stability ( ii) is associated with neither introversion nor extraversion ( iii) has a positive correlation with tender mindedness and a negative correlation with tough mindedness and psychoticism and ( iv) is positively related to lie scale.

Francis (1992) administered the psychoticism scales of EPQ and Junior EPQ, the Francis scale of attitude towards Christianity and a questionnaire about frequency of church attendance to 1374 subjects, 14-16 years old. The results demonstrate a significant correlation between both measures of psychoticism and both measures of religiosity for both genders.

Francis (1992) administered the short form, revised EPQ and Francis scale of Attitude towards Christianity to 92 male and 20 female clergy (aged late 20’s to late 60’s). The findings revealed the inverse relationship between psychoticism and religious attitude and confirmed the view that neuroticism scores are also implicated in predicting the religious attitude among the religiously committed.

Francis and Pearson (1993) conducted a study on 881 students (528 males and 353 females) using EPQ after attending church services. Results revealed that male church goers had lower extraversion scores and lower psychoticism scores than the normative population. Female church goers had lower lie scale scores than normative female population but did not differ on the dimensions of extraversion, neuroticism or psychoticism.
Francis (1993) used the short form of the Revised EPQ with 126 undergraduate along with a scale of attitude towards Christianity. According the findings, there is an inverse relationship between psychoticism and religiosity, while neuroticism and extraversion are neither positively nor negatively related to religiosity.

Francis and Wilcox (1994) explored the relationship between personality and public and personal religiosity among 230, 16-18 year old girls. The findings revealed that psychoticism rather than extraversion or neuroticism, is fundamental to religiosity.

Tamminen (1994) investigated the religious experience of 3000 Finish children and adolescents (aged 7-20 years) from 2 points of view; experience of God’s closeness and guidance. Findings reveal that talking about God’s guidance was more difficult than talking about God’s nearness; Girls were generally at all ages more religiously committed than boys; religious experience were relatively general and religious experiences decreased as the pupils moved from childhood to adolescence.

Lewis and Maltby (1995) examined the relationship between personality and religiosity in a sample of 58 male and 106 female adults who completed the revised form of the EPQ and attitude towards Christianity scale. The data demonstrated that greater religiosity was associated with lower scores on psychoticism in males and with lower scores on psychoticism and higher scores on
the lie scale in females. No association was found with neuroticism or extraversion for either males or females.

Francis and Wilcox (1996) studied a sample of 236 Ss, 16-19 years old female A level students, who completed the revised EPQ together with the indices of prayer and church attendance. The data support the view that psychoticism is related to self-reported church attendance (r= -0.15) and to self-reported prayer (r= -0.15) while neither extraversion nor neuroticism are correlated with their individual religiosity.

Francis, Jones and Martinar (1996) in a sample of 923 church goers who completed the abbreviated form of EPQ and rated the extent to which fun and humor contributed for their experience of good worship. The data demonstrated that an appreciation of fun and humor in worship is positively related to extraversion and negatively related to lie scale but unrelated to neuroticism and psychoticism.

Mc Carter, Kay and Francis (1996) conducted a study on a sample of 29 male and 32 female highly committed Christians who completed the Francis scale of Attitude towards Christianity together with the abbreviated form of the Revised EPQ. The data confirm that psychoticism is a dimension of personality fundamental to individual differences in attitude towards religiosity.

Francis and Wilcox (1996) studied a sample of 236 females (aged 16-19) studying in England who completed the short form of Revised EPQ and indices of prayer and church attendance. Data confirm the findings that scores on
psychoticism, but not scores on extraversion or neuroticism, were associated with self reported church attendance and self reported prayer.

Francis and Astley (1996) conducted a study accounting for individual differences in the practice of personal prayer. A sample of 398 adult church goers completed the abbreviated form of EPQ-R, along with an index of frequency of personal prayer. No significant relationship was found between the personal prayer and extraversion, neuroticism and psychoticism.

Smith (1996) administered the short form of junior EPQ together with indices of private prayer and public worship habits on a sample of 191 subjects, 11-15 yrs old adolescents. The data confirm the view that psychoticism is the dimension fundamental to individual religiosity.

Michael (1997) evaluated the theory that psychoticism is fundamental to religiosity while neuroticism, extraversion and lie scale are not consistently found to be associated with religious beliefs and behaviors. 6463 Anglican, other protestant and catholic Australian twins aged (17-18 yrs) men and women completed the EPQ on two separate occasions. Results clearly indicate that men and women who attended church regularly had low psychoticism and low neuroticism scores. As 8yrs follow up of 4993 people revealed that those who attended church frequently at one time, but who stopped going to church regularly by 2nd time had higher neuroticism scores than people who maintained a stable pattern of frequent attendance. Neuroticism may be more important than psychoticism for the long term stability of frequent religious practice.
Francis (1997) examined the relationship between personality and church attendance and prayer among 305 male and 819 female college students using EPQ together with indices of church attendance and personal prayer. The data confirm that psychoticism is fundamental to individual differences in religiosity, whereas both public and private expression of religion is independent of extraversion and neuroticism.

Francis and Bogler (1997) examined a sample of 50 retired civil servants in their 50’s, 60’s and 70’s who completed the abbreviated revised EPQ together with indices of frequency of church attendance and frequency of personal prayer. The data demonstrate that both measures of religiosity are inversely related to psychoticism and independent of extraversion and neuroticism.

John (1997) examined the relationship between measures of personal religiosity (religious attitude, frequency of personal prayer), a measure of public religiosity (church attendance) and the abbreviated form of Revised EPQ among 216 adults of Republic of Ireland. A significant negative correlation was found between scores on psychoticism and on the three measures of religiosity among men and women. No significant relationship was found between any of the religiosity measures and the other measures contained within the Eysenck scores.

Wilde, Alex and Stephen (1997) investigated the relationship between religiosity and Eysenck personality scale scores in a Moslem population. 50 Moslem undergraduates completed the Revised Eysenck Personality Scale and Moslem Attitude towards religiosity scale. The results clearly indicate the negative
association between religiosity and psychoticism and positive association between religiosity and lie scores in Moslem context.

Orchard and Francis (1998) studied a sample of 241 church goers using Revised EPQ with Francis scale of Attitude towards Christianity. The findings indicate that among religiously committed samples, there is an inverse relationship between neuroticism and strength of positive attitude towards Christianity.

John (1997) studied a sample 213 university students in England and 172 students in Northern Ireland who completed an amended version of the “Age-Universal” I-E scale and the abbreviated version of the EPQ. The results suggest that psychoticism is significantly negatively related to an intrinsic orientation towards religion.

Francis and Wiron (1999) investigated a sample of 725 secondary school pupils in Germany using the short form of EPQ and Francis scale of Attitude towards Christianity. The findings show that there is an inverse relationship between psychoticism and religiosity while extraversion is neither positively nor negatively related to religiosity.

Robert (1999) adapted the FFM of personality to investigate the personality correlates of religious constructs for 104 middle school students (mean age= 14.63 yrs) in Warsaw. The Polish Adjective List was used to assess the personality factors and Polish version of Swedish Religious Orientation was used to assess intrinsic, extrinsic and quest religious orientation. Intrinsic religiosity and quest religious orientations correlate with the FFM traits of agreeableness and
conscientiousness whereas extrinsic religiosity is associated with extraversion. Overall findings of the hierarchical analysis suggest that FFM domains explain 4% of variance in relationship to God whereas religious orientation accounts for an additional 35% of variance in relationship with God.

Taylor, Andrew and Mc Donald (1999) examined the relationship between religiosity, defined in terms of religious affiliation, religious involvement and religious orientation, to the Five Factor Model of personality as measured by the NEO-PI-R, using a religiously heterogeneous sample of 1,129 Canadian university students. Results indicate that NEO-PIR-R, agreeableness and conscientiousness domains were significantly related to and affected by religion, though some gender differences were observed. Neuroticism was found to differ as a function of religious affiliation with persons particularly females, reporting no religion obtaining significantly higher scores than those persons reporting a formal religious institution for their affiliation. Moreover, Extraversion did not significantly relate to any form of religion. Openness was found to be largely associated with religion except for a significant negative correlation with a measure of extrinsic religious orientation.

Bourke, Rosamund and Francis (2000) investigated the personality profile of a group of 422 music students (mean age= 22.6 yrs) using the short form of Revised EPQ together with the Francis scale of Attitude towards Christianity and
measures of prayer and church attendance. The data confirm that psychoticism is the dimension of personality fundamental to individual differences in religiosity.

Saroglou Vallis (2002) noted that an impression based on a vote counting method of reviewing studies on religion and personality is that religiosity is related to low psychoticism (or high agreeableness and conscientiousness) while unrelated to the other Eysenck’s and the Big Five Factors. The meta analytic view of studies on religion and the Five Factor Model reveals that in addition to agreeableness and conscientiousness, Religiosity is related to extraversion. Moreover while openness is negatively related to religious fundamentalism and to some extent, intrinsic general religiosity, it is positively related to measures of open or matures spirituality and religiosity. It also indicates that extrinsic religiosity is followed by high neuroticism while open mature spirituality and religiosity reflect emotional stability.

McCullough (2003) examined the association of the big five personality factors with religiosity in adulthood for a 19yr longitudinal sample of 492 adolescents; age 12-18 (280 boys and 212 girls). Among the Big Five, conscientiousness in adolescence was related to higher religiosity is early adulthood. For adolescents, high in emotional stability, the link between strength of religious bringing and religiosity is adulthood was weaker than it was for adolescents who were less emotionally stable. In addition, conscientiousness was found as a predictor of religiosity and suggests that emotionally unstable
adolescents might be more likely to adopt levels of religiosity that are similar to those of their parents.

Francis and Jackson (2003) examined relationship between religious beliefs and Eysenck’s dimensional model of personality. 400 undergraduates’ students completed the Eysenck personality profiler and the Francis scale of Attitude towards Christianity. Results show no significant relationship between the personality dimension of neuroticism and religiosity. The analyses go beyond studies by examining the relationship between religiosity and 7 components of neuroticism separately. The analysis demonstrate a significant positive correlation between religiosity and guilt, a significant negative correlation between religiosity and unhappiness, and no significant correlation between religiosity and low self esteem, anxiety, dependency, hypochondriasis or obsessiveness.

Peter and Francis (2004) examined the relationship between Eysenck’s primary personality factors and various aspects of religious orientation and practice using a sample of 400 U.K graduates. Results indicate a negative correlation between religiosity and higher order personality factors of psychoticism. Among the primary factors associated with religiosity, neuroticism appeared to be the strongest indicator of religiosity.

Bart (2004) examined the relationship between the two main dimensions of religiosity domain (Exclusion Vs Inclusion of Transcendence and Literal Vs Symbolic) and both FFM of personality and Berzonsky’s (1990) identity style in a
Flemish sample of late adolescents (N= 335). The results revealed that whereas Exclusion Vs Inclusion is unrelated to any of the personality dimension. Literal Vs Symbolic was strongly related to openness to experience and moderately to agreeableness. Further, Exclusion Vs Inclusion was positively related to informational identity styles and negatively with the diffuse/ avoidant identity styles. The relationship between openness to experience and Literal Vs Symbolic was fully mediated by the informational identity style. Once openness to experience was taken into account, agreeableness was no longer an important determinant of Literal Vs Symbolic.

Athony, Paul, Doris and Frank (2004) studied a sample of over 7000 adults covering three age groups (20-24yrs, 40-44yrs and 60-64yrs). The personality scales given to participants measured Eysenck’s three factors. Participants were divided into quartiles of religiosity and compared on personality styles. There were quadratic associations with all personality traits, but particularly with psychoticism and extraversion. The most and the least religion quartiles tended to be higher in psychoticism and lower in extraversion.

Lewis, Francis and Enger (2004) employed various measures of Eysenck’s dimensional model of personality alongside question of frequency of personal prayer and church attendance to test the generalizibility of the findings that it is psychoticism, rather than extraversion or neuroticism that is fundamental to a greater frequency of personal prayer and church attendance among a sample of
479, 11-18yr old Norwegian school children. A significant association was found between a greater frequency of both personal prayer and church attendance and lower psychoticism scores.

Bourke, Francis and Robbins (2005) investigated a sample of 168 church musicians who completed the Francis scale of Attitude towards Christianity together with short form of EPQ-R. The data confirm that religiosity is associated with lower psychoticism but not with extraversion or with neuroticism.

Felson (2007) employed Eysenck’s dimensional model of personality and Francis scale of Attitude towards Christianity in a sample of 255 college going students. A significant association was found between church attendance and lower psychoticism scores.

Feshback (2009) employed the NEO-FFI and religiosity orientation scale to study the relationship between personality dimensions and religiosity in university students. The results confirm that there is a positive relationship between conscientiousness and religiosity.

**STUDIES ON RELATIONSHIP BETWEEN SPIRITUALITY AND RELIGIOSITY**

Knox, Langehouge, Walters and Rowley (1998) investigated 235 undergraduate (aged 18-25 yrs) to study the relationship between spirituality and religiosity orientations towards life. The results indicate that a religious/intrinsic
spiritual orientation was significantly associated with self esteem, assets for growth and low anti-social behavior. Implications suggest the value of religious/intrinsic spiritual orientation.

Cook, Borman, Moore and Kaunkel (2000) suggested that there is a great variation regarding the concept of spirituality and religiosity in the psychology of religion literature. 16 college students were recruited for the task of concept mapping to elicit their perceptions of what the designations spiritual and religious persons mean. Results depict that many positive character traits were used to describe both religious and spiritual people. Participants described spiritual people with emphasis on intellectual activities and inner peace, placing less emphasis on external, physical characteristics than their descriptions of religious people.

Jacqueline (2000) explored the meaning of spirituality for African-American women (mean age 31.9 yrs) and the distinction that women made difference between spirituality and religiosity. Content analysis of 128 women’s written narratives revealed 13 categories of meaning that were assigned to spirituality. In depth interviews with a sub-sample of 21-women revealed that three key differences between spirituality and religiosity. (1) Whereas religiosity was associated with organized worship, spirituality is defined as an internalization of positive values. (2) religion was conceptualized as a path and spirituality as an outcome. (3) Finally whereas religion was tied to worship, spirituality was associated with relationship.
Herrera (2000) explored the meaning of spirituality for African-American women (mean age 31.9 years) and the distinction that women made difference between spirituality and religiosity. Content analysis of 128 women’s written narratives revealed 13 categories of meaning that were assigned to spirituality. In depth interviews with a sample of 21 women revealed that three key differences between spirituality and religiosity. (1) Whereas religiosity was associated with organized worship, spirituality is defined as an internalization of positive values. (2) Religiosity is conceptualized as a path and spirituality as an outcome. (3) Finally whereas religiosity is tied with worship, spirituality is associated with relationship.

Mansanger (2000) explored the difference between spirituality and religiosity by analyzing the data sheets filled in by a sample of 400 church goers and the results obtained indicate the majority of the sample is of the view that religiosity is a personal transformative experience and spirituality is an academic discipline studying that experience.

Mattis (2000) explored the meaning of spirituality in the sample of African American women and distinguished between spirituality and religiosity. In experiment one, content analysis of 128 women’s written narratives revealed 13 categories of meaning that were assigned to spirituality. In experiment 2nd, in depth interviews with a sub-sample of 21 women revealed a key difference
between spirituality and religiosity that religiosity is a path towards achieving the different levels of spirituality.

Pederson, Williams and Kristensen (2000) examined the relationship of spiritual self identity related to religious orientation and religious attitude with the help of Who am I scale and Religious attitude questionnaire respectively. 315 undergraduates from four universities participated in the study. Those who score higher on spiritual self identity scored significantly lower on the means and quest orientations. They also manifested higher scores on the affect and contain scales regarding religious matters. Participants manifesting low spiritual self identity are a salient feature of self identification and contribute to research literature on religiosity.

Thlbourne and Houtkooper (2002) used data from 188 students (aged 15-61 yrs) at a German university to find a positive correlation between two measures of belief in paranormal and religiosity/spirituality. Results depicted that each of the two paranormal belief measures correlated significantly with each other and with the religiosity variable, the latter correlations clearly indicating that, once again, believers in the paranormal are more likely to be religious/spiritual minded.

Allfera, Jeung, and Maiko (2003) depicts how the 1st year college impacted student’s spirituality and religiosity. The sample comprises of 3680 students from 50 colleges and universities across the country and included individuals representing a variety of racial (ethnic and religious backgrounds). Overall
students become less religiously active but were more omitted to integrating spirituality in their lives after one year. Further religiousness and spirituality were highly correlated, although personal characteristics and college experiences were associated with these constructs.

Berkel, Armstrong and Cokley (2004) identified similarities and differences between spirituality and religiosity in 170 African–American college students. Results support the multi-dimensionality of both constructs. An intrinsic religious orientation accounted for most of the variance in each type of spirituality. Conversely, one type of extrinsic religious orientation accounted for almost no. No significant differences between men’s and women’s scores on any of the spirituality and religiosity were found.

Kirsi Tirri and Martin Ubani (2005) studied the relationship between spirituality and religiosity among theology students in the university of Helsinki (N=40). The study revealed three domains – institutional dimension, the supernatural dimension and the humanistic dimension while the meaning given to religion emphasized the institutional dimension, the meaning given to spirituality emphasized the humanistic dimension.

Irwin and Alan (2007) studied the relationship between spirituality and religiosity among the working and non-working men and women (N=200). The study revealed a negative relationship between spirituality and religiosity.
Tacey (2008) studied the relationship between spirituality and religiosity among college and university students (N=300) Results of the study revealed that there is no relationship between spirituality and religiosity.

In the light of the above presented survey of literature, it is clear that there is paucity of literature on the Big Five that could have been studied in relation to spirituality and religiosity, especially in the Indian context. Therefore such studies are the need of the day which identifies the dimensions of personality having subsequent influence on spirituality and religiosity. Moreover, the literature reviewed does not provide any clear cut distinction between spirituality and religiosity or in other words it does not clearly define what it means to be spiritual or religious? Furthermore, since all behaviors are anchored in the social milieu, the investigator feels that gender and religion should be studied.