

## **Spirituality, Self efficacy, Age, and Gender as predictors of Psychological Wellbeing among Flood Survivors in Nigeria**

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**Abstract :-** There are existing gaps in local literature regarding the roles of spirituality and self-efficacy in enhancing psychological wellbeing among disaster survivors, even though the salutary influence of these personal attributes on psychological health have been demonstrated in past studies. Utilizing standardized measures, this study examined spirituality, self-efficacy, age, and gender as predictors of psychological wellbeing among flood survivors in one state in southwest Nigeria that recently experienced flooding. Data were collected using standardized scales that measured psychological wellbeing, spirituality, and self-efficacy. These scales were revalidated for use in the study, and they all yielded high Cronbach alpha coefficients. Three hundred and forty-nine (n = 349) respondents comprising 131 females and 218 males whose ages ranged between 20years and 54years were surveyed. Their educational qualification ranged between postgraduate degree to Senior Secondary School Certificate (SSCE). Results showed that spirituality, self-efficacy, age, and gender significantly influenced psychological wellbeing ( $R = .34$ ;  $R^2 = .10$ ;  $P < .01$ ). The independent contributions revealed that spirituality (beta =  $.23$ ;  $P < .01$ ) contributed significantly to psychological wellbeing. In contrast, result showed that self-efficacy, age, and gender had no significant contributions to psychological wellbeing ( $P > .05$ ). It is recommended that spiritual counseling should be emphasized in post-disaster management intervention, especially for flooded persons as this has been shown to improve psychological wellbeing.

**Keywords:** *Psychological wellbeing, spirituality, self-efficacy, flood survivors*

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### **I. INTRODUCTION**

Flood is one of the most discussed consequences of global warming, and may be justifiably so, because it is increasingly becoming the most common environmental hazard in recent times (Abutu, 2012; Agenzia Fides, 2012; NEMA, 2012a; UNHABITAT, 2012; WHO Regional Office for Europe, 2011). Flood is an environmental condition that occurs when natural or man-made water bodies such as seas, rivers, and dams overflow their boundary, inundating coastal lands and surrounding areas. Causes of flood include thermal expansion of natural water bodies (seas and rivers) as a result of global warming; release of water from dams; or increased precipitation as was the case in the 2012 flood in Nigeria (NASA, 2011; NEMA, 2012a). Floods also vary in form, but three types reported in Nigeria are urban, coastal and river flooding (e.g. Oriola, 1994; Okoduwa, 1999; Folorunsho & Awosika 2001; Ologunorisa, 2004). Urban flooding is precipitated by mismanagement of the environment, occurring mainly when there is a blockage of water outlets (such as drainages) by municipal waste, refuse, and eroded soil sediments (Adeoye, Ayanlade & Babatimehin, 2009). Floods that are restricted to low-lying belt of mangrove and fresh water swamps along the coast are known as coastal floods. Those that occur in the flood plains of larger rivers are known as river flooding. Flood is the most prevalent natural disaster affecting lives, properties, and businesses.

Smith (1996) x-rayed the effect of flood on humanity, and reported that 75 million people are adversely affected globally, with 20,000 deaths annually. Askew (1999) compared the impact of flood to other environmental disasters in terms of quantum of damage caused, and reported that flood accounted for one third of all deaths, injuries, and damages attributable to all natural disasters globally. In Europe alone, flooding affected an estimated 3.4 million persons directly or indirectly (Jakubicka, Vos, Phalkey, & Marx, 2010). In Nigeria, data from the Federal Environmental Management Agency revealed that there had been more than 1,600 deaths to floods in the last decade alone (NEMA, 2010). When the 2012 flood in Nigeria which affected about 10 states receded, it was reported that it led to 363 deaths, displaced 2.1 million persons, and injured 18,282 others (NEMA, 2012a). Generally, environmental disasters tend to leave indelible emotional imprints on survivors, and flooding may not be an exception as its outcome may have extensive adverse effects on survivors' emotional, social, and psychological

wellbeing. In the aftermath of the 2012 flood that occurred in Nigeria, Odiegwu (2012) found that survivors were significantly higher on level of frustration and anger, with adverse effects on psychological wellbeing.

Psychological wellbeing (PWB) refers to an individual's appraisal of his/her overall life experiences (Diener, 1997). PWB is a well-researched concept in existential psychology literature, and its relationship with both subjective and objective health outcomes is widely reported in scholarly literature (Martin & Rubin, 1995). A review of relevant literature suggests that the psychologically healthy individual is an asset to the self, family, community, and the society because such individuals are able to function well and contribute meaningfully to society. In a review that highlighted the importance of psychological wellbeing as a desirable mental health status, Abele (1991) reported that psychological wellbeing is a precondition for growth motives; improves sociability and open-mindedness; increased problem-solving capacity amongst other positive attributes. Relying on past evidence from epidemiological studies to assess the global health impacts of flooding, Ahern, Kovats, Wilkinson, Few, & Matthies (2005) found that flooding is positively related to mental disorder (especially anxiety and depression), post-traumatic stress disorder (PTSD), and suicide. In addition, the literature suggested that disaster survivors were more likely to report significantly poor social and psychological functioning, usually both as a direct or indirect consequence of the stressful incident (Norris, Kaniasty, Conrad, Inman, & Murphy, 2002; Rubonis & Bickman 1991; Tyler & Hoyt 2000). The decline in vitality experienced by survivors may be attributed to the deep and long lasting negative emotions (including hopelessness, despair, and depression) induced by the adversity. In view of the psychologically incapacitating effect of flood, the need to assist survivors overcome the negative episode so that they resume normal life is compelling, and has influenced research focused on identifying factors that may promote psychological wellbeing among disaster survivors.

Studies along this line of research interest have implicated spirituality as capable of ameliorating the psychological distress induced by a disaster (Adams, Bezner & Steinhardt, 1997), implying that spirituality might help boost psychological functioning in individuals who experienced stressful life events. This assertion is consistent with Ellen's (2008) view of spirituality as a motivational force that pushes an individual to seek to understand the meaning of life, with the pull expected to be stronger when exposed to stressful life events. Finding by Adams et al. (1997) supported this interconnectedness when they reported a positive association between spirituality and mental health outcomes. Specifically, their finding revealed that spirituality influenced how an individual interpreted personal experiences, the meaning they give to such experiences, and post-disaster psychological adjustment. Self-efficacy is a personal attribute which describes an individual's beliefs about his/her abilities to influence events such that they are able to achieve predetermined performance levels (Bandura, 1997). Self-efficacy is critical in self-regulating behaviour as it has been shown to influence an individual's cognition, and determines individuals' motivations and behaviour, as well as influences how people cope with stressful situations (Bandura, 1997). Based on the likely positive influence of self-efficacy on an individual's ability to perform behaviour, it may be concluded that efficacious persons will be more likely to achieve set goals since they are more likely to back it with requisite behaviour that enhances success. Consistent with this line of thinking is Bandura, Caprara, Barbaranelli, Gerbino & Pastorelli (2003) who found that self-efficacy determined an individual's resiliency to adversity, vulnerability to stress, and depression, implying that a high level of self-efficacy might be a personal attribute that could mitigate the negative impact of stressful occurrences such as flooding on survivors psychological functioning.

## **II. LITERATURE REVIEW**

### **Spirituality and psychological wellbeing**

The age long debate on how spirituality is related to mental health subsists. Nonetheless, past research has shown a positive relationship between spirituality with physical and psychological health (Dezutter, Soenens, & Hutsebaut, 2006; Ellens, 2007; Elliott & Hayward, 2007; Lavric & Flere, 2008; Maltby, Lewis, & Day, 1999; Pargament, 1997). These authors also reported other findings which showed that spirituality significantly contributed to enhanced social support network, and facilitated a coherent framework for responding to existential questions that are of interest to humanity (Elliott & Hayward, 2007); helped to mitigate the effects of negative life events, or chronic illness (Pargament, 1997); and facilitated a sense of shared understanding of a loss or a trauma (Ellens, 2007), which often accompanied stressful life events. In an investigation of the relationship among spirituality, religiosity, and psychological wellbeing, it was found that not only did spirituality predict psychological wellbeing, it also contributed the most to the variance in psychological wellbeing (Emmons, 2005). Similarly, Kim and Seidlitz (2002) reported that spirituality had a direct beneficial effect on negative affect, in addition to buffering the detrimental effects of stress on negative affect and physical adjustment. In a study that assessed the influence of spirituality on marital and health-related outcomes, Gartner (1996) reported significant contribution of spirituality to marital satisfaction, well-being, and general psychological functioning. The result of an exploratory study among

flooded persons showed that religious involvement enhanced psychological wellbeing (Lim & Putman, 2010; Pargament, Magyar-Russell & Murray-Swank, 2005). The finding suggested that religious involvement inspires hope and meaning, and enhanced access to social support networks, which may help bolster psychological resilience. Additional support for the salutary effect of religiosity on health was provided by Koenig, McCullough & Larson (2001) who found that religious persons reported less depression and anxiety.

#### **Self-efficacy and Psychological Wellbeing**

Self-efficacy is defined as an individual's belief in his/her capacity to exercise a certain degree of control over the environment (Bandura, 2001). Numerous studies suggest that high self-efficacy is related to positive psychological wellbeing, regulation of stress, higher self-esteem, better physical condition, and better adaptation to, and recovery from diseases (Bandura, 1997; Bisschop, Knegsman, Beekman, & Deeg, 2004; Kuijer & de Ridder, 2003). Interestingly, studies have reported significant relationship between low self-efficacy and lower levels of subjective well-being (Barlow, Wright, & Cullen, 2002; Bandura et al. 2003; Caprara, 2002). An investigation of personal and organisational factors that influenced psychological wellbeing among financial sector employees revealed that self-efficacy, target setting, and job insecurity contributed to psychological wellbeing (Adejuwon & Lawal, 2013). Cakar (2012) reported that highly efficacious persons tend to be more comfortable and productive when they were faced with harsh or unfavourable working conditions compared with less efficacious persons. The observation may not be unconnected with the fact that less efficacious persons exhibit a restrictive thought pattern that limits their ability to explore alternative options in problem solving (Pajares, 2002). Investigations of the role of self-esteem, psychological wellbeing, emotional self-efficacy, and affect balance on happiness showed a significant relationship between psychological wellbeing and emotional self-efficacy among other findings of the study (Dogon, Totan & Sapma, 2013). The finding is an indication that when emotional self-efficacy increased, psychological wellbeing was likely to increase also. Salami's (2010) investigation into how self-efficacy was related to students' attitudes and behaviours revealed that self-efficacy influenced attitude formation and behaviour. In contrast, Omoniyi (2014) reported non-significant contribution of self-efficacy to problem solving skills among widows in Nigeria. While this finding is not consistent with literature, it might not be unconnected with subsisting emotional upheavals associated with being a widow.

#### **Demographic factors and Psychological Wellbeing**

Evaluating gender differences in psychological wellbeing is important because it may influence efforts being made to empower individuals to deploy their potentials towards attaining self-actualization. Most previous research that examined gender differences in psychological wellbeing yielded mixed findings. On the one hand, Ryff, (1989), Ryff & Keyes (1995), and Ruini, Ottolini, Rafanelli, Ryff, & Fava (2003) found significant sex differences in psychological wellbeing, and concluded that females displayed lower psychological wellbeing compared to males. Findings of a comparative study (McRae, Ochsner, Mauss, Gabrieli & Gross, 2008) indicated that men showed greater decrease in emotional responding than women, implying that men might be less emotional when exposed to disasters compared to women. On the other hand, researchers have reported that males were significantly lower compared to females on psychological wellbeing (Lahelma, 1992; Muller, Hicks, & Winocur, 1993; Shamir, 1986).

Summary of the literature reviewed highlighted the contributions of spirituality and self-efficacy to psychological functioning, especially among disaster survivors. It is surprising however to note that, while past studies have shown that spirituality and self-efficacy enhanced psychological wellbeing (Bisschop et al. 2004; Ellens, 2007; Elliott & Hayward, 2007; Lavric & Flere, 2008), there is a dearth of indigenous studies that have investigated the role of spirituality and self-efficacy on psychological wellbeing, especially among flood survivors in Nigeria. The present study therefore seeks to enrich local disaster management literature by exploring the joint and independent contributions of spirituality and self-efficacy as factors that may contribute to enhanced psychological wellbeing of flooded persons in Nigeria. The study also explored age and sex differences in psychological wellbeing among flooded persons.

#### **Hypotheses**

- i. Spirituality, self-efficacy, age and gender will have significant independent and joint influence on psychological wellbeing of flood survivors.
- ii. Female flood survivors will report significantly higher on psychological wellbeing than male flood survivors.

### **III. METHOD**

**Design and participants:** The study was designed as a cross-sectional ex post facto survey. Three hundred and forty nine (349) participants comprising 131 females and 218 males, whose ages ranged between 20 and 54 were

surveyed in the study. Participants' educational status varied between postgraduate degree, first degree, and ordinary school leaving certificate (O'level).

#### IV. INSTRUMENTS

Material for data collection was a questionnaire comprising four sections. Demographic information measured included age, sex, and highest educational qualification.

**Psychological wellbeing scale:** *Ryff's psychological wellbeing scale* was used in the study to assess participants' psychological wellbeing. It is a 42-item self-rating scale designed as a global measure of psychological wellbeing. Although the scale can be used to measure dimensions of psychological wellbeing (autonomy, environmental mastery, personal growth, positive relations, purpose in life and self-acceptance), in this study, the overall score across dimensions was used as a measure of psychological wellbeing. Items on the scale are rated on a 6-point Likert format with options that ranged between strongly disagree (1) to strongly agree (6). For the positively worded statements, participants who indicated strongly agree scored 6, while those who indicated strongly disagree scored 1. However, for negative statements, participants who indicated strongly agree scored 1 while those who indicated strongly disagree scored 6. The scores were then summed up to get the mean. Scores in the scale are interpreted such that those above the mean indicated better psychological wellbeing, while scores below the mean indicated poor psychological wellbeing. Sample items in the scale include; when I look at the story of my life, I am pleased with how things have turned out; and I think it is important to have new experiences that challenge how you think about yourself and the world. The scale yielded Cronbach alpha of .71 in this study.

**Self-efficacy scale:** Self-efficacy was measured with the General Self-Efficacy Scale (Jerusalem & Schwarzer, 1981). It is a 10-item psychometric scale designed to assess a person's optimistic self-beliefs to cope with a variety of difficult demands in life. Items on the scale have options that ranged from, Not at all true (1) to Exactly true (4). Respondents who indicated *exactly true* to positive statements were scored 4, those who indicated *not at all true* scored 1. The scores were then summed and the average established. Scores above the mean indicated high self-efficacy, while scores below the mean indicated low self-efficacy. A Cronbach alpha of .81 was established for the scale in this study.

**Spirituality scale:** Spirituality scale developed by Delaney (2003) was used to measure participants' level of spirituality. The scale contained 23 items all written in short lucid narratives. Items on the scale were rated on a 6point Likert format with options that ranged from strongly disagree (1), to strongly agree (6). Respondents' scores to all the statements were summed up, an overall score obtained and the mean determined. Scores above the mean is interpreted as an indication of high spirituality, while scores below the mean is an indication of low spirituality. Sample items in the scale include: "Prayer is an integral part of my spiritual nature" and "My spirituality gives me inner strength". In this study, the scale yielded a Cronbach alpha of .75.

#### V. PROCEDURE

Questionnaire administration was carried out in selected communities that reported massive destruction to amenities, businesses, properties, as well as deaths in the aftermath of the 2012 flood in Ondo State, Nigeria. Purposive sampling technique was used to select individuals who were personally affected, and had suffered loss of property, valuables, death of family member(s) or were injured by the flood. Community heads were intimated about the study and their support enlisted for questionnaire administration. Those selected were introduced to basic information about the research, and were also informed that participation was voluntary, stressing that they could drop out any time from further participation if they felt like withdrawing. The selected participants had all attained legal age at the time the study was carried out, and they all gave verbal consent before they were given a copy of the questionnaire to complete. Questionnaire distribution lasted approximately 9weeks. In all, a total of 390 sets of questionnaires were distributed, however only 349 questionnaires were considered suitable for further analyses after collation.

## VI. RESULTS

**Table 1: Simple Multiple Regression predicting Psychological wellbeing from Age, Gender, Spirituality and Self-efficacy**

<i>Predictors</i>	$\beta$	<i>T</i>	<i>P</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>P</i>
Age	-.01	-.16	ns				
Gender	-.06	-1.34	ns				
Spirituality	.38	7.50	<.01		.43	.18	20.38
Self-efficacy	.09	1.73	ns				

Result presented in Table 1 showed a significant joint influence of age, gender, spirituality, and self-efficacy on psychological wellbeing { $R^2 = .18$ ;  $F(4, 346) = 20.38$ ;  $p < .01$ }. The result indicated that age, gender, spirituality, and self-efficacy jointly accounted for 18% of variance in psychological wellbeing. With respect to independent contributions, result revealed that only spirituality contributed significantly to psychological wellbeing ( $\beta = .38$ ;  $t = 7.50$ ;  $p < .01$ ), signifying that when level of spirituality increased, psychological wellbeing is likely to improve. Age had no significant contribution to psychological wellbeing ( $\beta = -.01$ ;  $t = -.16$ ;  $p > .05$ ), indicating that any change in age is not associated with significant increase or decrease in psychological wellbeing. Similarly, there was no significant contribution of self-efficacy to psychological wellbeing ( $\beta = .09$ ;  $t = 1.73$ ;  $p > .05$ ), suggesting that any change in self-efficacy is not associated with any significant increase or decrease in psychological wellbeing. With this result, hypothesis one is partially supported.

**Table 2: Summary of t-test of independence showing the influence of gender on Psychological wellbeing**

<i>Variables</i>	<i>N</i>	<i>MEAN</i>	<i>SD</i>	<i>DF</i>	<i>T</i>	<i>P</i>
Male	217	169.59	19.86			
Female	130	177.40	28.18	345	-3.08	<.01

Result in Table 2 indicated that gender had significant influence on psychological wellbeing,  $t(345) = -3.08$ ;  $p < .01$ . The result showed that females (Mean = 177.40; SD = 28.18) were higher on psychological wellbeing compared to males (Mean = 169.59; SD = 19.86). This means that compared with males, female flood survivors were more likely to report increased psychological wellbeing. The hypothesis was supported as stated.

## VII. DISCUSSION

The present study investigated the influence of spirituality, self-efficacy, age and gender on psychological wellbeing of flood survivors. Findings of this study corroborated prior research which reported significant relationship between spirituality and psychological wellbeing, thereby reinforcing past studies. As hypothesized, spirituality, self-efficacy, age, and gender had significant joint influence on psychological wellbeing, and contributed significantly to the variation in psychological wellbeing. The finding signified that significant variation in the level of psychological wellbeing of flood survivors was attributable to the combined influence of these psychosocial variables, and implicitly confirmed findings of past studies that investigated how these variables are related (Ellens, 2007; Elliott & Hayward, 2007; Dezutter et al. 2006; Maltby et al. 1999; Pargament, 1997). Also, findings revealed that only spirituality contributed significantly to psychological wellbeing, while others made contributions that are not statistically significant. The finding which established significant contribution of spirituality to psychological wellbeing may not be totally unexpected when taken against the background of common believe that portrays Nigerians as generally religious people who mostly adduce consoling religious explanations for their experiences, especially negative ones. The study also examined sex difference in psychological wellbeing among flood survivors. Result showed that females reported significantly higher psychological wellbeing than males, and corroborated findings of gender difference in psychological health reported by prior research (Lahelma, 1992; Muller et al. 1993; Shamir, 1986). But the outcome in the study might likely be the consequence of predominant cultural practices and norms common in many Nigerian communities which encourages that distressed, disadvantaged females be treated more favourably.

## VIII. IMPLICATION OF FINDINGS

There are implications for improving disaster management interventions and programs derivable from the findings of this study. Spirituality, self-efficacy, age and gender correlated significantly with psychological wellbeing, implying that psychological wellbeing would suffer were these variables are lacking. The significant independent contribution of spirituality implies that spiritual counseling should be incorporated into disaster management programs as well as rehabilitation protocols especially for flood survivors. This means that spiritual counseling should be a key component of rehabilitation for flood survivors if the goal of management includes improvement of psychological wellbeing of survivors. It is concluded that disaster response agencies could leverage on survivors spiritual inclinations as a tool to boost their psychological wellbeing.

## **IX. CONCLUSION AND RECOMMENDATION**

Spirituality is a personal attribute that has been shown to have a salutary effect on wellbeing, and the finding of this study showed that spirituality predicted psychological wellbeing of flood survivors. The likelihood that flood survivors will suffer significant psychological distress is a foregone conclusion, however to reduce the negative impact on wellbeing, rehabilitating programs should be broad, flexible, and emphasize the primacy of spiritual counseling. This is because there is growing evidence which point to a positive relationship between spirituality and health outcomes (Dezutter, Soenens, & Hutsebaut, 2006; Ellens, 2007; Elliott & Hayward, 2007; Lavric & Flere, 2008; Maltby, Lewis, & Day, 1999; Pargament, 1997), which might include psychological wellbeing. Although the findings of the study did not demonstrate that self-efficacy contributed significantly to psychological wellbeing (probably because the respondents were overwhelmed by the disaster), nonetheless it is advocated that survivors be availed self-efficacy training, the goal of such training being to help survivors manage anxiety, and increase belief in their own ability to achieve new goals they may set for themselves in the post-flood episode.

## **X. LIMITATION**

Data were collected in this study using self-report questionnaires. The use of self-report measures in research tends to bias findings due to social desirability effect. The study design was cross-sectional which means that causal relationship cannot be inferred. As a result, it is recommended that future research should consider adopting longitudinal design to test this relationship. In addition, the study was conducted in only one of the States affected by flood while survivors in other States were excluded. This approach might have reduced the extent to which the findings of the study can be generalized to flood survivors in States other than the one where data was collected.

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