Cultural Life Scripts, Personal Life Stories and Psychological Well-being of Nigerian Young Adults

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ABSTRACT

The cultural life scripts are a shared semantic knowledge of the expected life course in a given culture, including the order, timing and importance of such events. In addition to this, the life script has been thought to guide the recall of autobiographical memory leading to a bump for memories from the second and third life decades (Berntsen & Rubin, 2002; 2004; Rubin & Berntsen 2003). The present study has four main goals; the first is to obtain the life scripts of Nigerians, a less Western, Educated, Industrialized, Rich and Democratic (WEIRD) society in Sub-Saharan Africa. Second, is to determine if religion and gender will influence the cultural life scripts and life stories of Nigerian young adults. Third, the life scripts from this study will be compared with those from previous studies carried out on Turkish, Qatari, Danish and American participants. Finally, the study will determine if a culturally coherent life story (i.e. number of negative LST events, LST typicality scores, LST idiosyncrasy scores and number of scripted LST events) will predict mental well-being and depression scores of Nigerian young adults.

To achieve this, 174 participants were divided into four groups consisting of Muslim males, Muslim females, Christian males and Christian females. They were administered the life script task, the life story task, the Warwick-Edinburgh Mental Well-being Scale, the Beck Depression Inventory-II and the Revised Religious Orientation Scale. The findings mostly supported earlier claims regarding the life script, in that despite minor variations, the life script and life stories were quite stable across religion, gender and culture; in addition, the life script guided the recall of the life story. However, a bump was found for negative events in the life scripts and life

stories; and mental well-being and depression scores were not always predicted by a culturally coherent life story.

Keywords: cultural life scripts, life stories, psychological well-being

ÖZ

Kültürel yaşam senaryoları, bu tür olayların sırası, zamanlaması ve önemi de dahil olmak üzere, belirli bir kültürde beklenen yaşam seyrinin paylaşılan anlamsal bilgisidir. Ek olarak, yaşam senaryosunun otobiyografik belleğin geri çağrılmasına rehberlik ettiği ve bunun da yaşamın ikinci ve üçüncü on yıllarına ait hatıraların daha fazla hatırlanmasına yol açtığı düşünülmektedir (Berntsen ve Rubin, 2002; 2004; Rubin ve Berntsen, 2003). Bu çalışmanın dört ana amacı vardır; ilki, Sahra Altı Afrika'da daha az Batılı, Eğitimli, Sanayileşmiş, Zengin ve Demokratik (WEIRD) bir toplum olan Nijeryalıların yaşam senaryolarını elde etmektir. İkincisi, din ve cinsiyetin Nijeryalı genç yetişkinlerin kültürel yaşam senaryolarını ve yaşam öykülerini etkileyip etkilemeyeceğini belirlemektir. Üçüncüsü, bu çalışmadan elde edilen yaşam senaryoları, Türk, Katarlı, Danimarkalı ve Amerikalı katılımcılar üzerinde gerçekleştirilen önceki çalışmalardan elde edilenlerle karşılaştırılacaktır. Son olarak, çalışma kültürel olarak tutarlı bir yaşam öyküsünün (yani olumsuz LST olaylarının sayısı, LST tipiklik puanları, LST kendine özgü puanları ve yazılı LST olaylarının sayısı) Nijeryalı genç yetişkinlerin zihinsel sağlık ve depresyon puanlarını yordayıp yordamayacağını belirleyecektir.

Bunu başarmak için 174 katılımcı Müslüman erkekler, Müslüman kadınlar, Hristiyan erkekler ve Hristiyan kadınlardan oluşan dört gruba ayrıldı. Yaşam senaryosu görevi, yaşam öyküsü görevi, Warwick-Edinburgh Mental İyi Oluş Ölçeği, Beck Depresyon Envanteri-II ve Revize Dini Yönelim Ölçeği uygulandı. Bulgular çoğunlukla yaşam senaryosu ile ilgili daha önceki iddiaları destekledi, çünkü küçük farklılıklara rağmen yaşam senaryosu ve yaşam öyküleri din, cinsiyet ve kültür arasında oldukça istikrarlıydı; ek olarak, yaşam senaryosu, yaşam

öyküsünün hatırlanmasına rehberlik etti. Bununla birlikte, yaşam senaryolarında ve yaşam öykülerinde olumsuz olaylar için bir yumru bulundu ve zihinsel iyi oluş ve depresyon puanları, kültürel olarak tutarlı bir yaşam öyküsü tarafından her zaman öngörülmedi.

Anahtar Kelimeler: kültürel yaşam senaryoları, yaşam öyküleri, psikolojik iyi oluş

To God Almighty, my ever present help in my time of need

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

The present study aims to extend the understanding of the life script by investigating the influence of religion and gender on the cultural life scripts and personal life stories of young adults in Nigeria, a country that is less Western, Educated, Industrialized, Rich and Democratic (WEIRD) than others than have been previously studied. Additionally, based on studies that have revealed that a culturally coherent life story (i.e. a life story that is marked by more positive transitional life events than negative events, is typical, has fewer idiosyncratic events and has a higher number of scripted life story events) correlates with higher degrees of mental well-being, and lower depression scores (Bohn, 2010; Rubin et al., 2009); the relationship between a culturally coherent life story and psychological well-being will also be investigated.

In order to achieve this, the life script account proposed by Rubin and Berntsen (2003) was adopted as the foundation for this study. Most cultural life script studies draw their samples from WEIRD countries; thus these samples usually represent western values and styles of reasoning that do not accurately represent the whole of humanity and can therefore not be generalized (Henrich et al,. 2010; Ottsen & Berntsen, 2014). In the last decade, there have been a few cultural life script studies carried out on less and non-weird demographics like the Qataris (Ottsen & Berntsen, 2014); Malaysians (Haque & Hasking, 2010); and most recently the Nunggubuyu indigenous people of Australia (Bohn & Bundgaard-Nielsen, 2021).

While the Qatari, Malaysian and Nunggubuyu studies have been important in understanding the life scripts of Middle-Eastern, South-East Asian and Indigenous Australian communities that don't identify as WEIRD; to the best of our knowledge, there has been no study that has been carried out on a less or non-WEIRD community in Sub-Saharan Africa thereby leaving a gap in literature.

Due to this gap in literature, the present study is of importance as it aims to first determine if religion and gender will influence the cultural life scripts and life stories of Nigerian young adults. Second, the top ten life script events of Muslim participants from this study will be compared with the top ten life script events from Turkish participants from the Tekcan et al. (2012) study, and Qatari participants from the Ottsen and Berntsen (2014) study. Then, the top ten life script events of Christian participants from this study will also be compared with the top ten life script events from Danish participants from the Bohn (2010) study, and American Christian participants from the Tungjitcharoen and Berntsen (2020) study. Finally, the study will determine if a culturally coherent life story (i.e. a life story that is marked by more positive transitional life events than negative events, is typical, has fewer idiosyncratic events and has a higher number of scripted life story events) will influence the psychological well-being of Nigerian young adults across religion and gender.

1.1 The distribution of autobiographical memories across the lifespan

Autobiographical memory is memory that is about a person's life experiences (Robinson, 1986). It is a part of long-term memory that is represented by autobiographical knowledge (personal semantics) and episodic memories (Rubin, 2005). To understand how autobiographical memories are distributed across

the lifespan, Rubin et al. (1986) carried out a meta-analysis on several previous studies. This analysis revealed that when adults over 40 years old were given word cues to recall personal memories, there was a consistent pattern in memory recall. That is, the retrieval curve for autobiographical memories consistently displayed three distinct characteristics which include childhood amnesia, the retention function also known as the "recency effect" and the reminiscence bump (see figure 1).

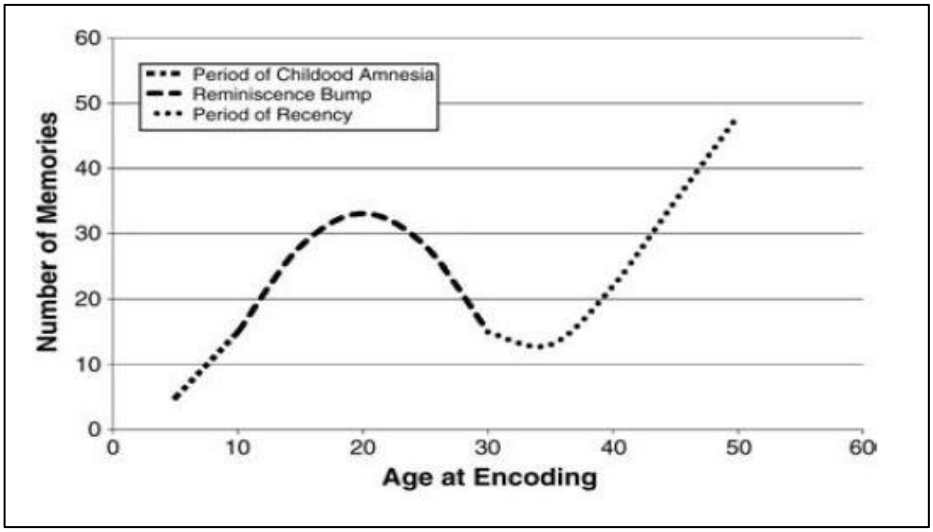

Figure 1: Distribution of autobiographical memories across the lifespan
Note: Distribution of memories throughout the lifespan. Adapted from "Cultural life script theory and the reminiscence bump: A reanalysis of seven studies across cultures," by A. Zaragoza-Scherman, 2013, *Nordic Psychology, 65*(2), p. 105. Copyright 2013 by the Editors of Nordic Psychology.

Childhood amnesia is a phenomenon that is evidenced by a limitation in recollecting autobiographical memories from early childhood (0-4years) (Rubin, 2000). Next is the retention function also known as the "the recency effect". In this case, memories from recent events (usually within the recent five years) are the ones that are mostly recalled (Rubin & Wenzel, 1996). This retention function is characterized by a steady decrease in the frequency of reported autobiographical memories as time passes. In other words, older memories are much harder to retrieve

as a result of them being further back in time making those memories harder to access (Rubin et al., 1986). This forgetting curve has a sharp drop when the retention period begins and a slow decline as the time of retention increases (Ebbinghaus, 1885/1964).

Finally, there is the "reminiscence bump" which is the enhanced recall of events that occurred in the second and the third decades of life (Rubin et al., 1986; Rubin et al., 1998). This will be discussed in greater detail in the next section.

1.2 The reminiscence bump

Through various studies, it has been shown that autobiographical memories are not distributed uniformly across the lifespan but are mostly retrieved from adolescence and young adulthood, and this period of increased recall is referred to as the reminiscence bump (Anne & Janssen, 2020; Hyland & Ackerman, 1988; Rubin et al., 1986). These vast findings providing evidence for the reminiscence bump have been replicated several times using various cueing methods. For example, the reminiscence bump was revealed in the Rathbone et al. (2008) study where participants were asked to indicate the personal events that were related to their concept of self. In the results of the study, most of the events recalled had occurred during adolescence and early adulthood. The bump was also found in the Conway and Holmes (2004); and Demiray et al. (2009) studies where participants were asked to recall several personal events from various periods of their lives in as little time as possible (i.e. five minutes). Results revealed that most of the memories reported were from the second and third decades of life. Furthermore, the bump was also found in studies where participants were asked to reveal the highest and lowest points in their lives using a timeline for such events (Elnick et al., 1999; Schroots & Assink, 2005); and also in studies where participants were given cue words and told

to describe the event that comes to mind when they saw each cue word (e.g., Fitzgerald & Lawrence, 1984; Rubin et al., 1986). This shows the presence of the bump in both cued and non-cued methods of memory recall.

Aside from personal events, the bump has also been revealed in studies where participants were asked to report on public events and general facts like politics, culture and history (Belli et al., 1997; Rubin et al., 1998; Schuman & Corning, 2014; Schuman & Rieger, 1992). For example, a study by Holmes and Conway (1999) revealed that when participants were asked to report on public events that were very important or had changed the world, they tended to report on public events that occurred while they were adolescents or young adults. Another study where participants were asked to list the five best football players ever showed that the participants tended to report the names of players who had reached the peak of their careers when the participants were in their late teenage years (Janssen et al., 2012).

Additionally, the bump has also been detected across populations. These include gender studies comparing males and females (Rubin et al., 1999; Janssen et al., 2005) and age studies comparing young, middle aged and older adults (e.g. Bohn, 2010; Jansari & Parkin, 1996; Janssen & Rubin, 2011; Tekcan et al., 2012). Furthermore, the reminiscence bump has been found in various cultures, in studies carried out on Danish (Bernsten & Rubin, 2002), Dutch (Janssen & Rubin, 2011), Turkish (Erdogan et al., 2008; Tekcan et al., 2012), Japanese (Janssen et al., 2014), Qatari (Ottsen & Bernsten, 2014), and Caribbean samples (Alea et al., 2013).

Since the bump is considered the most striking characteristic of autobiographical memory, several theories have been proposed by researchers in order to fully understand the phenomenon behind the reminiscence bump (e.g., Glück & Bluck, 2007; Pillemer, 2001; Rubin & Berntsen, 2003;

Rubin et al. 1998). In the next section, these theories will be explored alongside empirical findings that have supported them.

1.3 Theoretical accounts of the reminiscence bump

The aim of this section as previously stated is to present the various theories that have been proposed by researchers to explain the reason behind the bump as well as present empirical findings that have supported those claims. These theories include the cognitive account (Rubin et al., 1998); the biological or maturational account (Rubin et al., 1998; Berntsen & Rubin, 2002); the narrative or identity account (Erikson, 1950; Fitzgerald, 1988); the life story account (Glück & Bluck, 2007) and the life script account (Berntsen & Rubin, 2002).

1.3.1 The cognitive account

According to the cognitive account, the reason there is a tendency for enhanced memory of events during the bump period is due to the novelty of the events that occur during this period (Rubin et al., 1998). Events that are new tend to require more cognitive resources for comprehension in comparison to more familiar events, for this reason, novel events will be more deeply processed and thus encoded better making them easier to retrieve (Craik & Lockhart, 1972). Additionally, novel experiences also tend to be distinct in nature when compared to repeated or everyday events and therefore tend to leave more traces in memory making them easier to recall (Eysenck & Eysenck, 1980; Robinson, 1992); furthermore, the stability period that follows after these events are processed also plays a part in increased recall (Bernsten & Rubin, 2002).

Hence, the reason that memories during the adolescent and young adulthood period are more easily recalled is because this period is marked with a lot of first time experiences (e.g., the first relationship or the first job) (Wolf & Zimprich,

2020). Supporting this account, researchers have shown that events experienced for the first time, serve as a reference point for other similar experiences in future and this increases recall (Janssen et al., 2011; Pillemer, 2001). For example, a study by Jansari and Parkin (1996) investigated if memories from different periods in life were distinct based on first time experiences. It was revealed that participants' memories from early life (0-20 years) had a greater number of first times when compared to memories they had experienced more recently (10 to 20 years ago). Also, the first time experiences from early life were recalled within a shorter time compared to more recent first time experiences or experiences that were not first time.

Furthermore, in a study by Schrauf and Rubin (1998), the assumption that novelty leads to increased recall was tested on a group of Adult Spanish immigrants. The results revealed that regardless of the age of the participants when they migrated, there was an increased recall for memories during their immigration and settlement periods due to the novelty of moving to a new country and the vivid experiences garnered as a result. These reported findings provide empirical support to the assumption that the encoding bias towards first time experiences might contribute to the reminiscence bump (Demiray et al., 2009).

1.3.2 The biological or maturational account

The biological or maturational account postulates that the reason there is a greater recall for memories from the second and third decades of life is as a result of "genetic fitness" (Berntsen & Rubin, 2002; Rubin et al., 1998). This is because this time period is marked by optimum performance in cognitive processes like learning, encoding and retention of information due to brain maturation (Pillemer, 2001). This

is then reflected as a tendency towards greater recall for memories from this time period (Janssen et al., 2015; Pillemer, 2001).

Additionally, this theory assumes autobiographical memories are not stored in a single place but have an activation pattern in the brain that is distributed (Conway & Pleydell-Pearce, 2000; Rubin & Schulkind, 1997a). This distribution occurs through varied systems and modalities that help in the encoding and storage of autobiographical memories. They include the sense modalities (i.e. hearing, taste, vision, smell, touch), a special multimodal system that deals with the location of people and of objects, a language system, emotions, a narrative system that keeps up with causal relations (Rubin et al., 2003); and also an explicit memory system which organizes and binds information from the other systems together (Rubin, 2005).

Therefore, when biological changes occur in an individual as a result of age and maturity, it improves the ability to bind both temporal and spatial information to personal experiences leading to greater efficiency in encoding memories and therefore better memory storage (Janssen & Murre, 2008; Rubin et al., 1998). So, because these cognitive processes are at optimum level during the adolescence and early adulthood period, there is a tendency to retain a lot of memories from this time period (Janssen, 2019).

To support this theory, there have been studies that have been carried out. For example, it has been shown that young adults are seen to perform better in cognitive tasks compared to middle aged and older adults (Fiore et al., 2012; Li et al., 2004; Park et al., 2002; Salthouse, 2004). A study by Maylor and Logie (2010), also investigated the lifespan development of prospective memory of 318,614 participants between the ages of 8 to 50 years old. It was shown in the study that cognitive performance peaked between the ages of 18-19 for men and 16-17 for women.

Another similar study was also carried out by Murre et al. (2013) on 28,000 participants from 11 to 80years old. The participants were given a minimum of one verbal and visuospatial memory tests. The results of this study showed that the adolescents and younger adults performed better than middle aged adults and the middle aged adults performed better than older adults. While the verbal memory tasks performance was best between 14-26 years, the visuospatial memory tasks performance was best between 16-18 years.

1.3.3 The narrative or identity account

In order to better understand the reminiscence bump as it relates to the emergence of self, Fitzgerald (1988) adopted the Erikson (1950) "identity effect" which is a psychosocial development theory. Based on the "identity effect", the reminiscence bump can be viewed as a reflection of the emergence of a stable narrative of self which occurs in adolescence and early adulthood (Erikson, 1950; Fitzgerald, 1988). The self-narrative is seen as a "set of stories that defines who we are in narrative rather than in declarative terms" (Fitzgerald, 1988, p. 269). That the self-concept emerges during young adulthood is the reason that this period has a special place in one's self-narrative and explains the reason for the bump during this life period (Conway & Pleydell-Pearce, 2000).

It is at this stage that individuals begin to integrate their various experiences to form a self-narrative that is coherent (Fitzgerald, 1988, 1996; Prebble et al., 2013); they also start to develop interests in activities and form relationships based on what appeals to them or their personalities. The memories formed during this period are integral to defining one's self and tend to be more rehearsed, then easier to recall later on thereby becoming integral to the self-narrative (Conway & Holmes, 2004; Fitzgerald, 1988).

Research on the reminiscence bump as it relates to self has pointed out two components of the bump. The first relates to social identity which has to do with autobiographical memories relating to public events, individuals experience this from the ages of 10 to 19 years old. The second relates to personal identity, which deals with personal events that occur from 20 to 29 years old (Holmes & Conway, 1999). In the process of developing a social identity, it is the case that individuals tend to align themselves with groups that have comparable goals as they do; this groups include social, religious, cultural or political groups (Munawar et al.,2018; Ricarte et al.,2017). In contrast, when the personal identity is developing, it is evidenced by a desire to establish a connection and build intimate bonds with significant others (Conway, 2005). These two components of identity are developed during the period of 10-30 years and the result of this process of identity formation might account for the reminiscence bump (Holmes & Conway, 1999).

A study carried out by Demiray et al. (2009) provided support for this theory. In this study, participants were asked to rate the most important memories that helped to form their identity. When they compared memories from 10 to 30 years old with memories from other time periods in the lifespan, they found that the memories from 10 to 30 years old were rated higher in contributing to identity development than memories from other time periods. In addition, studies that have investigated the most important memories in participants lives also revealed a bias towards memories in the second and third decades of life (the reminiscence bump period) (e.g., Berntsen & Rubin, 2002; Glück & Bluck, 2007).

1.3.4 The life story account

The life story account was postulated by Glück and Bluck (2007). It draws from previous accounts (i.e. the narrative account) and postulates that memories from early adulthood are distinct and play a more eminent role in how "the self" is formed. The reason for this is because the bump period has a distinct influence on development so events experienced at this time period tend to stand out, are easily recalled and become part of an individual's life story (Demiray et al., 2009; Wolf & Zimprich, 2020).

A study conducted by Demiray et al. (2009) gives support to this theory. In the study, memories outside the bump period were compared with memories from the bump period (10-30years) based on importance for their identity formation, the importance and the transition. The result showed that the bump period tended to have more transitional and first time events than memories outside the bump period. Also, memories from the bump were more likely to be viewed as contributing to identity formation than those from outside the bump (Glück & Bluck, 2007).

While the cognitive and biological accounts credit internal processes as the reason for the emergence of the bump (Berntsen & Rubin, 2002; Rubin et al., 1998), the self-narrative theory explains that the bump is as a result of the "emergence of self" (Erikson, 1950; Fitzgerald, 1988); and the life story theory posits the bump formation as due to an ample amount of transitional life events in that period that play an important role in identity formation (Glück & Bluck, 2007). However, these theories do not account for why there is a difference between positive and negative memories in regards to the bump. According to Berntsen and Rubin (2002), the self-narrative theory can explain the absence of the reminiscence bump for negative memories if it is revised by another alternative notion like social censure, repressed

memories or dissociation. Thus, these memories must be gotten from shared cultural ideas about how life events should take place including the timing and order of such events. This schema of how these events should take place including their timing is called the life script and explains the reason for the dominance of positive memories as opposed to negative ones.

1.3.5 The life script account

The cultural life script theory has been championed as the best explanation for the observation of a bump for positive events and absence of a bump for negative events (Berntsen & Rubin, 2002). This is because, the cultural life script theory explains that the reminiscence bump is not based on an individual's internal processes but based on societal or cultural expectations about how the life course should be (Berntsen & Rubin, 2002; 2004). Therefore, the reason why people tend to recall mostly positive memories from the second and third decades of life is because of the cultural demands and expectations that are usually from these time periods (Berntsen & Rubin, 2002; Rubin & Berntsen, 2003).

Although similar in structure to the self-narrative account, the life script account is distinct in terms of theoretical and empirical makeup (Thomsen & Berntsen, 2008). The cultural life scripts are a semantic knowledge of events that are shared in a culture including the timing, importance and valence of such events. In order to investigate the cultural life script, Berntsen and Rubin (2002) asked participants to list the seven most important events that are expected to take place in the life of someone of the same gender as them in their own culture; afterwards those events were rated by the participants based on the timing, importance, prevalence and valence. At the end of the study, they ended up with 35 event categories that were mentioned by at least 4% of participants. According to Berntsen and Rubin

(2004) the concept of a cultural life script comes from the fact that societies have norms that structure and regulate the behaviours of their members. People in these societies are aware of these age norms prescribed by their cultures and also their own timing in accomplishing those prescribed norms- that is, if they are on schedule or behind schedule in fulfilling those expectations (Shai, 2002).

Additionally, these life scripts are transitional events that are culture specific and are expected to occur in the life course of individuals in that culture such as first day of school, graduation, first job, marriage, child bearing and retirement (Berntsen & Rubin, 2004; Janssen et al., 2014; Rubin et al., 2009). They include the age for the event and the order that the event should take place. Only the events that are seen as important or as transitional life events based on culturally prescribed norms are included as life script events. Although there are some events that are considered to be highly important on a personal level (e.g. loved one's death, vacation/ travelling or even getting a promotion), these occur within a non-specific age range and are usually not included as a life script event (Anne & Janssen, 2020).

Furthermore, research carried out across various cultures have revealed that there is a bump for positive events in the life scripts but not for negative events (Bernsten & Rubin, 2002; 2004; Erdoğan et al., 2008; Janssen et al., 2014; Ottsen & Bernsten 2013). The reason for the consistency of the bump for positive events but not for negative events across cultures is because the idealized events that are considered as expected, important and should happen within a specified time tend to be positively valenced events (Rubin & Berntsen, 2003). These events are usually held in high esteem and celebrated, while events that are not idealized (e.g., teenage pregnancy, divorce, illness, unemployment are usually not mentioned because they do not represent the ideal way one's life should be (Berntsen & Rubin, 2004).

In subsequent research findings, evidence will be presented to support the influence of the cultural life script theory on the recall of autobiographical memories and psychological well-being. Additionally, the influence of culture, gender and religion on the life script will be explored.

1.4 Cultural life scripts and personal life stories

Though cultural life scripts and life stories are related, they are fundamentally different concepts. The life story is a concept that has been studied extensively in theories of personality and autobiographical memory (Conway, 2005; McAdams, 1996), and it is suggested that life stories are formed by processes that include organizing, selecting and the shaping of the autobiographical memories of individuals which are also influenced by both personality and culture. While the cultural life scripts are idealized events that should follow a life course as passed down from one generation to another, life stories are episodic memories of events experienced and self-narratives of an individual's life course (Berntsen & Rubin, 2002; Glück & Bluck, 2007). However, they are related in that when individuals recall their life stories, these stories usually follow the framework of the life scripts (Zaragoza-Scherman et al., 2017). This is because the life scripts influence how individuals remember their life stories by guiding how those stories are narrated (Thomsen & Berntsen, 2008).

There have been various studies that have shown evidence that life scripts guide the recall of life stories of individuals across cultures. In a study conducted by Collin et al., (2007), 92 American young adults were asked to recall both positive and negative memories from the time they were 8 to 18 years old. The results revealed there was no bump for negative events while the bump for positive memories were situated in the transitional period between high school and college.

Another study by Rubin et al. (2009) showed that among Young Americans and Danes, there was a great overlap between their life scripts and life stories when they were asked the seven most important memories in their lives and the expected life script events. Furthermore, a study by Thomsen and Berntsen (2008) compared contents of the life stories of older Danes to those of Danish young adults (Berntsen and Rubin, 2004) and found that in both cases, there was a significant overlap between the life stories of the participants with the life script events and there was also a bump in the second and third decades of life for life stories which agrees with the cultural life scripts. All these studies show that life story recall is guided by the life scripts across cultures (Berntsen & Rubin, 2002, 2004).

These studies listed above provide evidence to the proposition that personal life stories are usually similar to life script events in their makeup and are also marked with mostly positive transitional life events (Bernsten & Rubin, 2004; Bohn, 2010; Glück & Bluck, 2007). Therefore, when there is a deviation from this tendency to have more positive transitional life events and instead an increase in negative events, it could influence the psychological well-being of individuals due to their life stories deviating from the norm (Berntsen & Rubin, 2004; Bohn, 2010; Rubin et al., 2009).

1.5 Cultural life scripts, personal life stories and psychological well-being

Psychological well-being is a variable that has been studied in the growing area of positive psychology (Kahneman et al., 1999). According to Ryff's (1989) six factor model of psychological well-being, psychological well-being involves having positive relationships with one's community, having personal and environmental mastery, a sense of autonomy, feeling that one has a purpose in life and having a

sense of personal growth and development. In other words, psychological well-being is not just about being happy, but the ability to successfully balance life events that are both challenging and also rewarding (Dodge et al., 2012). Individuals with positive psychological well-being are aware of their abilities and potentials, they are able to balance life events that are stressful and demanding, are productive and also contribute to the development of their communities (World Health Organization, 2014).

When it comes to life scripts and mental health, studies have shown that individuals with life stories that are matched with their life scripts have better psychological well-being compared to those whose life scripts do not match their life stories (Bernsten et al., 2011; Gehrt et al., 2018). In other words, a coherent life story contributes to psychological well-being. This is because, even though life stories do not always align with life scripts, individuals do have knowledge of what is the expected life course in their respective cultures (i.e. the events and the age norms) and are usually aware when they match up with such expectations or they stray away from them (Berntsen & Rubin, 2004). Therefore, when they meet such expectations, it is believed to lead to positive psychological well-being while the opposite is true if they do not (Grysman & Dimakis, 2018). There have been few studies that have investigated the relationship between life story coherence and mental well-being.

In a study conducted by Ryff and Heidrich (1997), it was found that normative life events was a predictor of psychological well-being in young, middle aged and older adults whereas non normative life events did not predict psychological well-being. In another study, Baerger and McAdams (1999) investigated the relationship between life story coherence and psychological well-

being. In this study, life story coherence was defined as the extent to which a life story;

> (1) locates the narrative in a specific temporal, social, and personal context, describing the habitual circumstances that serve as the parameters for the action of the story; (2) displays the structural elements of an episode system (i.e., an initiating event, an internal response, an attempt, and a consequence); (3) conveys an evaluative or reportable point, or a series of such points, about the speaker in such a way so as to give the story emotional significance; and (4) imparts information in an integrated manner, ultimately communicating the meaning of the experiences described within the context of the larger life story (Baerger & McAdams,1999, p. 74).

Afterwards, they had 50 adults report on their life story, level of happiness, rate of depression and overall life satisfaction. The results revealed that life story coherence had a positive correlation with life satisfaction and happiness and a negative correlation with depressive measures.

In another study by Rubin et al. (2009), American and Danish participants were asked to list and rate the seven most significant events that will take place in the life of a typical infant of their gender and also list the seven most significant events they have personally experienced in their lives. The results showed that typicality scores of the participants' personal life stories were matched with those of their cultural life scripts. It was also revealed that depression and trauma rates were higher in the Danish sample whose personal life stories typicality scores didn't match their cultural life scripts than of those that had more positive personal life stories, hence more typical life stories. However, the American sample showed no effect because they were younger and did not include some life script events in their personal life stories due to not yet experiencing them.

Similarly, in a study conducted by Bohn (2010), a culturally coherent life story was defined as a life story that consisted mainly of positive transitional life

events that occurred within their culturally agreed upon time periods. When there was a deviation from this prescribed norm (which was measured by the number of negative life stories), it was found that it played a negative role in psychological well-being. When the relationship between depression and personal life stories in the young and older adults from a non-clinical population was measured in the study, there were higher depression rates and lower life satisfaction rates in individuals with negative personal life stories. The reason for this phenomenon is explained by Janssen and Haque (2018), following the Bandura (1977) Social learning theory. Cultural life scripts can be transferred through observations of the lives of others and the feedbacks gotten from friends and family. These feedbacks help individuals to better understand the societal expectations in relation to life script events and age norms and also increase pressures associated with achieving those events at the ages specified. So if individuals are not able to live up to societal expectations, their psychological well-being has a higher chance of being compromised. Thus, individuals who present with a culturally incoherent life story marked by more negative events (i.e., teenage pregnancy, death of a loved one, accident etc.) than positive events (i.e., marriage, getting a job, having friends etc.) will have lower levels of psychological well-being compared to those who have a culturally coherent life story marked by more positive events than negative events.

1.6 Cross-Cultural differences in the life scripts

The Cultural Life Scripts theory has been tested in studies on the Dutch (Janssen & Rubin, 2011), Danish (Berntsen & Rubin, 2004; Bohn, 2010; Rubin et al., 2009), and American people (Rubin et al., 2009) and have shown that cultures with similar life expectancies tend to have similar distributions of negative, positive and neutral events across nationality with a bias towards positive events even when

accounting for age differences (Janssen & Rubin, 2011; Rubin et al., 2009). Other life scripts studies on the Danish (Berntsen & Rubin, 2004), Turkish (Erdogan et al., 2008; Tekcan et al., 2012), Japanese (Janssen et al., 2014; Kawasaki & Uehara, 2020) and the cross-cultural study on the Greenlandic, Chinese, Danish, and Mexican people (Zaragoza-Scherman et al., 2017) show similarities, with more mentions of events from adolescence and young adulthood and the report of more positive events than negative events. Similarly, other researchers have found that adolescents report more positive events than younger adults and older adults (Bohn, 2010; Tekcan et al., 2012).

Additionally, life script studies across cultures have also shown that the life script tends to be stable across age cohorts, level of education and gender proving it's a semantic based knowledge (Janssen et al., 2014; Janssen & Rubin, 2011; Tekcan et al., 2012). It has been revealed that these similarities extend to similar mentions of events that are transitional in nature like birth, graduation, marriage, child bearing, education, and retirement which tend to be mentioned more frequently (Anne, 2020). Also, a study carried out by Zaragoza-Scherman (2013) revealed that the distribution of life scripts events across the lifespan were similar across various cultures with a bias for most events to be dated to happen during early life leading to the reminiscence bump.

While cross-cultural similarities have been found in the life scripts, studies have also shown cultural differences in event content. This is because, individuals from various cultures usually have different ideals on what is considered to be important life events, which includes the content of such events and the timing; these ideals are based on the norms of said cultures hence the reason for these differences (Tungjitcharoen & Berntsen, 2020). For example, studies carried out in Chinese

(Zaragoza-Scherman et al., 2017), Turkish (Erdogan et al., 2008; Tekcan et al., 2012), and Japanese cultures (Janssen et al., 2014), have reported the "University entrance exam" as a life script event which was not found in studies carried out in American and Danish cultures (Janssen et al., 2011; Rubin & Bernsten, 2003). These findings are more than likely to be as a result of a more competitive strife for academic pursuit in the previously stated cultures when compared to the American and Danish cultures.

Furthermore, there have also been differences in distribution of negative and positive events that have been attributed to culture in some studies. For example, Tekcan et al. (2012) in their age study on Turkish participants found that young adults reported similar negative life scripts as with older adults, however, in the Bohn (2010) studies on Danish participants, the young adults reported less negative events compared to the older adults.

Additionally, less WEIRD cultures have also produced different results compared to those from WEIRD societies. That is, aside from the primary bump that usually appears in the second and third decades of life, there have been secondary bumps that have been revealed in some studies in less WEIRD societies. For example, in the Turkish study carried out by Tekcan et al. (2012), there was a secondary bump revealed in older participants for positive events occurring in the thirties and forties that was not present in adolescents and young adults, this was attributed to more life experiences leading to a broader pool of events to draw from. There was also a strong bump for negative events that occurred during the teenage years for adolescents and young adults which was attributed to milestones that were related to education in the Turkish society. Likewise, in the Ottsen and Bernsten (2014) study, there was a secondary bump that was marked by an elevated starting

point in the first decade of life which was attributed to religious events and customs associated with this time period in the life scripts of the Qatari people.

In a more recent study by Bohn and Bundgaard-Nielsen (2021) on the Nunggubuyu people of Australia, a secondary bump was also revealed in the later years as evidenced by life scripts and memories that were about teaching grandchildren, adult children and the community about the culture and values of the Nunggubuyus. This shows that in the Nunggubuyu culture, even in later years, important memories are formed as a result of key roles that elders play in that society especially when it comes to the transfer of cultural norms and values. In addition to the secondary bump found, the study also noticed that the reminiscence bump which usually appeared between the ages of 16-30 years old in previous studies occurred instead between 6-15 years old. This was attributed to the process of learning tasks that were culture specific life skills like fishing and hunting as opposed to the events like schooling, finding a job and marriage that were found in previous studies carried out in other cultures (Rubin et al., 2009; Zaragoza-Scherman et al., 2017). These results show that indeed alternative representations of the "classic" reminiscence bump exist especially in less or non-WEIRD societies. With this potential for none or less WEIRD societies displaying these alternative representations of the classic bump, this study has the potential to reveal if such a representation will occur in a less WEIRD society like Nigeria.

To sum up, although the life script can be said to be similar cross culturally and are mostly made up of positive transitional life events (Rubin et al., 1986), it is also true that there are other factors that could influence the life script and cause some differences in the events of individuals in certain societies. Examples of such

factors include religion and gender (Bernsten & Rubin, 2004). In the next two sections, religious and gender influences on the life script will be explored.

1.7 Religious differences in cultural life scripts

Though there have been various studies carried out on age (Bohn, 2010; Janssen & Rubin, 2011; Tekcan et al., 2012), and gender (Erdoğan et al., 2008; Ottsen &Berntsen, 2014), effects on life scripts across cultures, there has been little investigation that has been carried out specifically on the influence of religion on life scripts. Culture has historically included the transference of ideals attitudes and belief systems from one generation to another and religion is a form of a belief system (Geertz & Banton, 1966). In this way, religion can be viewed as a part of culture itself (Hulsether, 2005) and similarly, it is able to shape the society that upholds its messages and values (Geertz & Banton, 1966). As a result, it is inevitable that religious societies should have their cultural life scripts influenced by the traditions and practices of the religion they practice (Berntsen & Rubin, 2004).

For example, in the life scripts studies on Turkish participants, circumcision was mentioned quite often (Erdogan et al., 2008; Tekcan et al., 2012), in Mexican samples baptism and the first communion were mentioned (Zaragoza Scherman et al., 2017) while the Danish samples mentioned confirmation as part of their life scripts events (Berntsen & Rubin, 2004; Bohn & Berntsen, 2008). Similarly, a study conducted by Haque and Hasking (2010), revealed that the cultural life scripts events of Malaysian Muslims was linked to religious activities (e.g. Pilgrimage to mecca, Eid celebration). While another study by Ottsen and Bernsten (2014) showed that Qatari undergraduate students tended to mention more religious events (e.g. Learning the Quran, Learning to pray, Islamic birth rituals, Pilgrimage to mecca) as part of their cultural life scripts events compared to participants from secular societies like

Denmark (Berntsen & Rubin, 2004), Turkey (Erdogan et al., 2008) and the United States (Rubin et al., 2009).

Furthermore, in a more recent American study by Tungjitcharoen and Bernsten (2020), religious influence on cultural life scripts was investigated across followers of Buddhism, Islam, Christianity, Judaism and Hinduism. The study is important because unlike previous studies that drew participants from cultures that were for the most part religiously homogenous, this study was the first of its kind to make life script comparisons across multiple religions, hence bringing a new perspective to the study of the life scripts. The results from the study revealed that while the life scripts of participants were quite similar across religions thus supporting the stability of the life script, religiosity also played a significant role on the valence and importance of life script events. That is, religiosity had a positive correlation with importance and valence ratings of life script events. Additionally, positive correlations were also found between religiosity and the number of religious events mentioned in Buddhist, Christian and Muslims groups.

However, while this study is a step in the right direction for demographic diversification when it comes to the study of life scripts, it is also important to note that first, this study was carried out in a WEIRD society; therefore it will not be fair to generalize such findings to less WEIRD societies that have different social structures and value systems. Second, in this study the researchers modified the instructions of the life script task to emphasize religious affiliation which could have had an influence on the responses of participants. The present study is therefore important because not only has it been carried out on Nigerians who are a less WEIRD demographic, the instruction given to participants was similar to the classic life script task with no mention of religious identification in order to avoid priming

participants into religious identification which could in turn influence their life scripts. This will in turn further the understanding of life scripts in a new demographic as well as answer the question regarding the influence of methodological differences in the study of life scripts.

1.8 Gender differences in cultural life scripts

In studies on gender differences on cultural life scripts, societies that are largely secular with no segregation between males and females tend to have similarity across genders in regards to life script events (e.g. Erdogan et al., 2008; Janssen et al., 2015; Tungjitcharoen & Bernsten, 2020), but this tends to hold differently in religious or segregated societies. For example, a study carried out on the Qatari people by Ottsen and Berntsen (2014) found that there were differences in life script events based on gender when it came to content generated and number of religious events mentioned, with women generating only one religious event (e.g. Islamic birth rituals) and mentioning fewer religious events as a group and the men generating about five religious events (e.g. Going to the mosque, circumcision rites etc.) and mentioning more religious events as a group. The Qatari women also tended to include more cross-cultural events (e.g. marriage, having children) compared to the men who instead mentioned more country/culture specific events (e.g. “Ennah” a trip for young men). The reason for this might be because Qatar is a society where women and men are segregated in order to uphold religious beliefs and values, thus they have different roles prescribed to them which creates a clearer divide in the life scripts of the two genders.

However, in the case of the Turkish (Erdogan et al. 2008), and Japanese (Janssen et al. 2015), these demographic belong to a secular state with men and women being brought up together without segregation therefore such clear role

distinctions are not readily manifested. Similarly, even in the case of the Tungjitcharoen and Bernsten (2020) American study where participants clearly identified with a specific religion, it was revealed that there was no significant influence of gender on their life scripts. This goes to show that even though participants had clear religious affiliations, the fact that they were from a secular society contributed to the absence of clear role distinctions in their life scripts.

Though the studies mentioned above have contributed towards understanding the role that religion plays in the development of life scripts; aside the most recent multi-religious American study by Tungjitcharoen and Bernsten (2020), the societies studied up until now have been mostly religiously homogenous Muslim countries. Therefore, in order to better understand the interaction between culture and religion on life scripts, there should be more studies carried out on societies that are multi-religious. This will help to shed light upon the influence that differences in religion have on the life scripts of individuals within a similar culture. Furthermore, it is important that researchers expand their study to not only multi-religious societies in general but also to societies that are non-western (e.g. Nigeria). This gives the opportunity to further understand the extent to which differences in religion can influence a society in Sub-Saharan Africa.

1.9 The present study

The studies that have been cited up until this point have investigated cultural life scripts across European, Asian and Middle-Eastern countries; and an indigenous society in Australia. First, studies have shown that despite minor differences, the lifespan distribution of cultural life scripts is quite similar across cultures (Berntsen & Rubin, 2004; Bohn, 2010; Erdogan et al., 2008; Janssen et al., 2014; Kawasaki & Uehara, 2020; Zaragoza-Scherman et al., 2017). Second, age comparison studies

have shown that while the life script is stable across age cohorts, adolescents tend to report more positive life scripts events compared to younger and older adults (Bohn, 2010; Tekcan et al., 2012). Third, in some studies, unique secondary bumps in addition to the classic reminiscence bump have been found (Bohn & Bundgaard-Nielsen, 2021; Ottsen & Berntsen, 2014; Tekcan et al., 2012).

Fourth, some studies have also shown that life scripts can be influenced by factors such as religion (Haque & Hasking, 2010; Ottsen & Berntsen, 2014; Tungjitcharoen & Bernsten, 2020) and gender (Ottsen & Berntsen, 2014). Furthermore, other studies have shown that life scripts tend to guide the recall of life stories of individuals (Berntsen & Rubin, 2004; Bohn, 2010; Rubin et al., 2009) thus, leading to an impact on psychological well-being if the life stories deviate from the life scripts (Bohn, 2010; Rubin et al. 2009; Ryff & Heidrich, 1997). However, most of these studies have been carried out in WEIRD and Asian societies. There has been little research carried out on the cultural life scripts and personal life stories of those of African descent; specifically, none has been carried to the best of our knowledge on the Nigerian Population, a people located in Sub-Saharan Africa.

Nigeria is a multi-religious and multi-ethnic democratic country that is located in West Africa. It has about 50% of its population identifying as Muslims, 48.1% as Christians and 1.9% practicing either indigenous religions or unaffiliated with any religion (Pew Research Centre, 2020). Nigeria is known as the “Giant of Africa” due to it being the most populous African country with a population of about 201 million people (World Bank Group, 2020). It is also home to 250 ethnic groups who are distributed throughout its 36 states. However, 68% of the population are comprised of the three major ethnic groups, with the Hausa-Fulani (29%) situated in the north, the Yoruba (21%) in the west, and the Igbo (18%) in the east (USCIRF,

2016). There are also about 500 spoken languages; however, English is the most widely spoken language and the official language used in government, learning and commerce with 50% to 70% of the population speaking the language (PBS, 2007; Pereltsvaig, 2011; Tirosh, 2021). The three most spoken indigenous languages are Hausa with about 26% of speakers, Yoruba with 22% of speakers and Igbo with 20% of speakers (Tirosh, 2021).

Nigeria is also the largest economy in Africa, hence its status as an emerging economy (World Bank Group, 2020). However, it comes short and also lags when it comes to gender parity, equity and human development index indicators in regards to education, politics, health infrastructure and economic empowerment (UNDP, 2015). Nigeria can be classified as a less WEIRD (Western, Educated, Industrialized, Rich and Democratic) country because while it is relatively Educated, Rich and Democratic (World Bank Group, 2020); it is not a Western society and lags when it comes to Industrialization (UNDP, 2015). Hence, it displays to an extent only three of the five characteristics of WEIRD countries.

In terms of value systems, Nigeria is a generally conservative society where traditional and religious values continually shape the behaviour and attitudes of the people (Para-Mallam, 2017). The diversity in its culture including its traditional values and patriarchal principles brought about by colonialism and Islam are seen in the way that gender roles are allocated to biological males and females (Nweze & Takaya, 2001). It is a country that is caught between its traditional value systems and modernity. Nigerians find themselves having to balance their traditionally held ideals of gender norms as well as adjust to the new influence of globalization that has been brought about by westernization (Para-Mallam, 2011; 2017). This gendered struggle between two differing realities of traditional and urban forces are seen to noticeably

vary across ethnic and religious groups in Nigeria and end up influencing their lifestyles (Para-Mallam, 2017). That Nigeria is a conservative society with strong religious values and gender norms should be a valid reason to suggest that the life scripts of Nigerians could show some differences compared to the life scripts of individuals from WEIRD countries and should therefore be investigated, hence why this study is important.

Therefore, building upon previous research and seeking to fill the gap in literature, the present study aims to explore the cultural life scripts and personal life stories of a sample of young adults from Nigeria, a multi-religious society with strong gender normative practices. This will be achieved by investigating "Cultural life scripts, personal life stories and psychological well-being of Nigerian young adults" through bringing into focus how religious differences and gender norms shape the cultural life scripts and personal life stories of Nigerian young adults. Alongside that, the life scripts of Nigerian young adults will be compared with those of their counterparts from earlier studies carried out in Danish (Bohn, 2010), Turkish (Tekcan et al., 2012), Qatari (Ottsen & Bernsten, 2014) and American societies (Tungjitcharoen & Bernsten, 2020). Then, this study will explore how the cultural coherence of their personal life stories informs their psychological well-being. Additionally, due to previous studies that have shown that level of religiosity is a factor that can influence the life script (Tungjitcharoen & Bernsten, 2020); and psychological well-being (Ellison et al., 1989; Ellison, 1991; Koegnig, 2012) of participants; this study considered "level of religiosity" as a covariate. The nine predictions made for this study are as follows:

1. First, in line with a previous study that found no significant differences between the life scripts of Muslim and Christian participants (Tungjitcharoen & Bernsten,

2020), it was predicted that there will be no significant difference between the cultural life scripts of Muslim and Christian participants.

2. Second, based on previous studies that have found no significant gender differences in life scripts events of individuals from religious societies (Haque & Hasking, 2010; Ottsen & Bernsten, 2014; Tungjitcharoen & Bernsten, 2020), it was predicted that there will be no difference between the cultural life scripts of male and female participants.
3. Third, based on previous studies from religious societies that have shown the generality of life scripts (Haque & Hasking, 2010; Ottsen & Bernsten, 2014; Tungjitcharoen & Bernsten, 2020), it is predicted that there will be no significant difference between the cultural life scripts of Muslim and Christian participants across gender.
4. Fourth, since the life scripts are thought to guide the retrieval of autobiographical memories (Berntsen & Rubin, 2004); just like the Tungjitcharoen and Bernsten, (2020) study, it is predicted that there will be no significant difference between the personal life stories of Muslim and Christian participants.
5. Fifth, based on findings by Ottsen and Bernsten (2014) that found no significant differences between the life stories of males and female participants, it is predicted that there will be no significant difference between the personal life stories of male and female participants.
6. Sixth, based on findings by Ottsen and Bernsten (2014) that found no significant differences between the life stories of participants, it is predicted that there will be no significant difference between the personal life stories of Muslim and Christian participants across gender.

7. Seventh, based on previous studies that have revealed partial overlaps between cultural life scripts and life stories of individuals across cultures (Berntsen & Rubin, 2004; Rubin et al., 2009; Ottsen & Bernsten, 2014), it is predicted that there will be a high overlap between the cultural life scripts and personal life stories of participants.
8. Eighth, based on findings by Bohn (2010), Tekcan et al. (2009) that found partial overlaps between top 10 life scripts across cultures, it was predicted that there would be a partial overlap between top ten events mentioned from the present study and studies carried out in Turkish (Tekcan et al., 2012), and Qatari (Ottsen & Bernsten, 2014) societies for Muslim participants; and for studies carried out on the Danish (Bohn, 2010) and American Christians (Tungjitcharoen & Berntsen, 2020) for Christian participants.
9. Finally, based on previous studies like Rubin et al. (2009) and Bohn (2010) it is predicted that there will be a significant positive relationship between a culturally coherent life story and psychological well-being. Hence, it is expected that a culturally coherent life story will be associated with higher mental well-being scores and lower depression scores across gender and religion.

Chapter 2

METHOD

2.1 Participants

The sample size for this study was determined using G-power 3.1.9.4 software for windows (Faul et al., 2009). A power analysis was made using a Cohen's d effect size of .25, an alpha error probability of .05 and a power of 0.80. Based on the power analysis, it was recommended that in order to reach statistical significance, 158 participants would need to be recruited. A total of 221 participants ended up being recruited for the study but 47 participants were excluded from the study either because they did not complete the tasks given or they did not provide viable responses, leaving a final sample of 174 participants. Among the final sample, 81 of them were Muslims (48 women, 33 men) and 93 of them were Christians (41 women, 52 men). The age distribution for participants was (M = 25.73, SD = 3.69) for Muslim males, (M = 23.87, SD =3.65) for Muslim females, (M = 26.75, SD = 3.68) for Christian males and (M = 25.63, SD = 3.94) for Christian females.

The participants were recruited using flyers and word of mouth in Kaduna, a cosmopolitan city in Nigeria through convenience and snowball sampling method. To meet the inclusion criteria for the study, the participants had to be Nigerians and be aged between 18-34 years old, a similar age range to young adults recruited in earlier life script studies (i.e. Bohn, 2010; Janssen & Rubin, 2011; Tekcan et al., 2012). They also had to be physically and cognitively healthy, must identify either as

a Muslim or Christian and be permanently based in Nigeria. Participants were excluded if they were below 18 or above 34 years old, were taking any medication that could affect cognitive functioning, had been recently diagnosed with a mental disorder and did not identify as either Muslim or Christian. In addition to this, participants were also screened for depression using the Beck Depression Inventory-II which ranges from 0(not depressed) to 63(severely depressed). Their average scores were 15.39 for Muslim males, 16.13 for Muslim females, 21.88 for Christian males and 16.13 for Christian females which fall between the mild to moderate depression levels. See table 1 for a summary of participant demographic distribution.

Table 1: Summary of demographic distribution of participants

	Male		**Female**		**Total**	
Variables	**(n)**	**(%)**	**(n)**	**(%)**	**(n)**	**(%)**
Religion						
Muslim	33	18.97	48	27.59	81	46.56
Christian	52	29.89	41	23.56	93	53.45
Ethnicity						
Hausa-Fulani	25	14.37	17	9.77	42	24.14
Yoruba	13	7.47	28	16.10	41	23.56
Igbo	4	2.30	2	1.15	6	3.45
Igala	7	4.02	7	4.02	14	8.05
Idoma	5	2.87	2	1.15	7	4.02
Nupe	5	2.87	5	2.87	10	5.75
Igbira	2	1.15	9	5.17	11	6.32
Tiv	2	1.15	4	2.30	6	3.45
Others	27	15.52	15	8.62	42	24.14
State of origin						
Kaduna	40	22.99	20	11.49	60	34.48
Kogi	12	6.90	19	10.92	31	17.82
Kwara	3	1.72	13	7.47	16	9.20
Oyo	2	1.15	2	1.15	4	2.30

Table 1 (continued)

Variables	Male		Female		Total	
	(n)	(%)	(n)	(%)	(n)	(%)
State of Origin						
Lagos	0	0.00	4	2.30	4	2.30
Bauchi	1	0.57	1	0.57	2	1.15
Osun	1	0.57	6	3.45	7	4.02
Ekiti	1	0.57	0	0.00	1	0.57
Benue	8	4.60	6	3.45	14	8.05
Katsina	2	1.15	2	1.15	4	2.30
Imo	2	1.15	1	0.57	3	1.72
Niger	1	0.57	6	3.45	7	4.02
Adamawa	3	1.72	1	0.57	4	2.30
Edo	0	0.00	2	1.15	2	1.15
Taraba	0	0.00	1	0.57	1	0.57
Cross-river	0	0.00	1	0.57	1	0.57
Nassarawa	0	0.00	1	0.57	1	0.57
Ondo	4	2.30	1	0.57	5	2.87
Kano	2	1.15	1	0.57	3	1.72
Borno	1	0.57	0	0.00	1	0.57
Abia	0	0.00	1	0.57	1	0.57
Enugu	2	1.15	0	0.00	2	1.15

2.2 Materials/Data collection tools

The materials used to collect data for this study include a demographic questionnaire and five measurement tools and are listed as following.

2.2.1 Demographic information

The demographic information was collected using the demographic questionnaire form where participants provided information such as "*age", "gender", "religion*" etc. (See appendix B).

2.2.2 The life script questionnaire

The life script was measured using the life scripts questionnaire based on Berntsen and Rubin (2004) recommendations. For the task, participants were asked to produce the seven most important events that were expected to occur in the life of

a same gendered newborn in their culture. Afterwards, they were asked to rate those events based on prevalence, expected age of event, valence and importance (See appendix C).

2.2.3 The life story questionnaire

The life story events of participants was measured using the Thompson and Berntsen (2008, p. 424) procedure. For the task, participants were asked to recall and produce the seven most important events that have occurred in their lives. In addition, they were asked to rate those events based on prevalence, age at event, valence and importance (See appendix D).

2.2.4 Warwick-Edinburgh Mental Well-being Scale

This was measured using the Warwick-Edinburgh Mental Well-being Scale (Tennant et al, 2007). It is a 14-item scale, a self report measure which assesses the degree of mental well-being of the population' with items like "*I have been feeling optimistic about the future*", "*I have been feeling relaxed*", "*I have been dealing with problems well*" etc. The item responses range from 1 (none of the time) to 5(all of the time). Its Cronbach's alpha score is 0.97 (See appendix E)

2.2.5 Beck Depression Inventory-II

This was measured using the Beck Depression Inventory-II (Beck, Steer, & Brown, 1996). It is a 21-item scale with 21 groups of statements, a self-report measure that assesses the depression levels of individuals. The scale includes items for "*Sadness*", "*Pessimism"*, "*Loss of pleasure"*, "*Self- Dislike"*, "*Changes in sleeping pattern"*, "*Changes in appetite"* etc. The item responses range from (0-3). Its Cronbach's alpha score is 0.93 (See appendix F).

2.2.6 Revised Religious Orientation Scale

This was measured using the Revised Religious Orientation Scale (Gorsuch & MacPherson, 1989). It is a 14-item scale that measures intrinsic and extrinsic religiosity combined. Items of this scale include intrinsic measures like "*I enjoy reading about my religion*", "*It is important to me to spend time in private thought and prayer*", and extrinsic measures like "*I go to mosque/church mostly to spend time with my friends"* and "*I go to church/mosque mainly because I enjoy seeing people I know there*" .The Cronbach's alpha is .83 for intrinsic religiosity and .65 for extrinsic religiosity. However, for this study the total scale was used to measure the covariate "level of religiosity" (see appendix G).

2.3 Design

The design adopted for this study was the 2(Christian vs. Muslim) x 2 (male vs. female) x 2 (life scripts vs. life stories) Mixed factorial design.

2.4 Procedure

In order to carry out the present study, an application was tendered to the Institute of Graduate Studies and Research at Eastern Mediterranean University to obtain ethics approval. After ethics approval was granted, three research assistants were trained on how to administer and collect data for the study. The research assistants were given information on the process of recruiting participants based on inclusion and exclusion criteria, about informed consent, the confidentiality of participants, the operational definitions of terms, how to avoid demand characteristics during the process of data collection and how to debrief participants afterward. The research assistants were however blind to the hypothesis of the study to avoid observer-expectancy effect.

After participants were recruited, they were invited to fill in the questionnaires in a group setting. They were first given an informed consent form which had the general information about the study. If they agreed to participate and gave their consent, they were then given a booklet with instructions for each of the tasks.

For the life scripts task, participants were first asked to list the seven most important events that a typical infant in their culture and of their gender would experience in their lifetime. After they had listed the seven events, they were asked to make an estimate for the age of the event, prevalence of the event (the average number out of a 100 people to experience said event), the importance of the event using a 7 point likert scale (from 1 (unimportant) to 7 (greatest importance) and the emotional valence of the event rating from -3 (very negative) to 3(very positive).

For the life story tasks, participants were asked to list the seven most important memories that are central to their life stories from birth to their present age. They were instructed that the memories be actual events and not general themes and should have lasted not more than a day. After each event was listed, participants were asked to estimate the prevalence of the event (the average number out of a 100 people to experience said event), the age that the event was had taken place , the importance of the event using a 7 point likert scale (from 1 (unimportant) to 7 (greatest importance), the emotional valence of the event rating from -3 (very negative) to 3(very positive), The life script and life story tasks were counterbalanced to deal with order effects.

After they had finished the life scripts and life story tasks, they then filled in the Warwick–Edinburgh Mental Well-Being Scale (WEMWBS; Tennant et al., 2007), the Beck Depression Inventory-II (Beck, Steer, & Brown, 1996); the Revised

Religious Orientation Scale (Gorsuch & MacPherson, 1989) and finally the demographic questionnaire. Afterwards, the participants were provided with an information sheet called the “debrief form” which detailed the aims and purpose of the study and were thanked for participating in the study.

2.5 Scoring

The life script and life story events were classified based on the 35 categories by Bernsten and Rubin (2004). In addition to those, events that did not correspond with the 35 previous categories but were mentioned by more than 4% of the participants were included as new categories, while those events that were mentioned by less than 4% of participants were grouped as “others”. In total 30 event categories were generated for the life scripts excluding “others”, while 36 event categories were generated for the life story events excluding “others”.

To ensure inter-rater reliability two independent raters scored the life scripts and life stories for event categories. For the life script event categories, the inter-rater agreement was 99.18% (Cohen’s Kappa=.99). Out of the 1218 events listed by 174 participants, raters agreed on 1208 events and disagreed on 10 events. The two-raters resolved the disagreement by a discussion. For the life story event categories, the inter-rater agreement was 98.60% (Cohen’s Kappa=.99). Out of the 1218 events listed by 174 participants, raters agreed on 1201 events and disagreed on 17 events and similar to the life scripts, the disagreements were resolved through a discussion.

To measure normativity of life scripts, the typicality and idiosyncrasy scores introduced by Bohn and Bernsten (2008) was calculated for the life scripts and life story events of participants in each group.

2.5.1 Typicality

The typicality score was measured based on the number of times an event is mentioned by a participant from a particular group. Therefore, the more frequent an event is mentioned by participants within a group, the higher the typicality scores for that event within that group. Hence, typicality scores are calculated by assigning the seven events mentioned by the participant the frequency of each of the events within the group the participant belongs to (e.g. Christian males or Muslim females), then subsequently adding up the total scores for each of the seven events which will then be the measure of typicality for the individual's life scripts or life stories. Hence, an individual with high frequency events will have a more typical life script or life story than an individual with low frequency events.

Due to having four unequal group sizes, a correction for sample size was made. In this case, because Christian males had the most number of participants (n=52), the typicality scores was used as the norm and the other three groups were corrected by dividing the typicality scores by the other groups sample size and then multiplying the result by the sample size of the Christian male group. Subsequently, each event typicality score will be summed up to calculate the individual's measure of typicality for the life scripts and life story events.

2.5.2 Idiosyncrasy

The idiosyncrasy score was measured by adding up the number of events that are not mentioned frequently in the life script or life story events. Those events are events that are scored as "other" or have not been mentioned by 4% of participants. Therefore, an individual's idiosyncrasy scores could rate from 0 (which means there are no "other" events) to 7 (which mean the events are entirely "other" events).

Chapter 3

RESULTS

The main results of this study will be organized according to the following topics based on the hypotheses given : (a) group comparisons for demographic characteristics (b) the comparison of life scripts between religions (i.e. Muslims and Christians), between genders (i.e. Males and Females); and across religion and gender (i.e., Muslim males, Muslim females, Christian males and Christian females), (c) the comparison of life stories scripts between religions (i.e. Muslims and Christians), between genders (i.e. Males and Females); and across religion and gender (i.e., Muslim males, Muslim females, Christian males and Christian females), (d) the overlap between life scripts and life stories across religion and gender (i.e., Muslim males, Muslim females, Christian males and Christian females), (e) cross-cultural comparison of life scripts, and (f) group comparisons of mental well-being and depression scores between religions (i.e. Muslims and Christians), between genders (i.e. Males and Females); and across religion and gender (i.e., Muslim males, Muslim females, Christian males and Christian females); (g) the relationship between a culturally coherent life story and psychological well-being across religion and gender (i.e., Muslim males, Muslim females, Christian males and Christian females).

3.1 Group comparisons for demographic characteristics

In this section, group comparisons will be made for demographic characteristics like age, level of religiosity, gender and religion. To achieve this, a series of one-way between groups ANOVAs and a Chi square test was conducted.

For age differences across groups, a one-way between groups ANOVA was conducted (see table 2). It was revealed that that there was a significant effect of group type on age of participants, F (3,170) = 4.618, p = .004, MSe = 14.269, η_p^2 = .075. Post hoc comparisons using Tukey HSD test indicated that Muslim females (M= 23.96, SD= 0.55) were significantly younger than Christian males (M= 26.75, SD= 0.52) (p= .002). There was no significant difference between Muslim females and Muslim males (M= 25.73, SD= 0.66) (p= .167), between Muslim females and Christian females (M= 25.63, SD=0.52) (p= .951), between Muslim males and Christian males (p= .617), between Muslim males and Christian females (p= 1.000), and between Christian males and Christian females, p= .492.

A one-way between groups ANOVA was carried out to compare the effect of group type on the level of religiosity (see table 2). The results revealed that there was no effect of group type on the extent of religiosity, F (3,170) = 1.227, p =.302, MSe = .278, η_p^2 = .021. A Chi square test was also carried out to compare the distribution of gender across religions. Results revealed that there was a significant relationship between gender and religion with χ^2 (1, N = 174) = 3.989, p= .046. Christian males (61.20%) participated more than Muslim males (38.80%), and Muslim females (53.90%) participated more than Christian females (46.10%).

Table 2: Means, Standard Deviations, and One-Way Analysis of Variance of effect of Group type on Age of participant and Level of religiosity

Measure	Muslim males		Muslim females		Christian males		Christian females		F(3, 170)	η_p^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Age of participant	25.73	0.66	23.96	0.55	26.75	0.52	25.63	0.52	4.618**	0.075
level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	1.227	0.021

* $p<.05$, ** $p<.01$, *** $p<.001$

In conclusion, the results revealed that first, age differences were only found between Muslim females and Christian males. Second, there were no differences in the level of religiosity between groups; and finally, Christian males had the most number of participants followed by Muslim females, Christian females and Muslim males.

3.2 Life scripts across groups

In this section, life script comparisons were made across religion and gender. These comparisons were made based on event types, event characteristics, normativity, valence and the life span distribution of the events.

3.2.1 Events in the life script

As earlier reported, participants provided a total of 30 life script events with a mention of 4% or more across the four groups. However, based on each group, Muslim males reported 22 events, Muslim females reported 29 events, Christian males reported 25 events and Christian females reported 24 events and the overlap for LSC events across groups was 63.33% (See table 3). It was also revealed that aside the 63.33% of LSCs shared by all four groups, 27.27% of events were common to Muslim males and Muslim females, 18.18% were common to Christian males and Christian females. 18.18% were common to Muslim males and Christian males, 45.45% were common to Muslim females and Christian females, 9.09% were

common to Muslim males and Christian females and 36.36% were common to Muslim females and Christian males.

Additionally, differences of overlaps between groups were compared using z-test for proportions. The results revealed that while the overlap between Muslim males and Christian females nearly differed from the overlap between Muslim females and Christian females, Z = -1.90, p = .057; there were no significant differences across the other groups compared (all *ps* > .057). Overall, only the difference in percentage overlap between Muslim males and Christian females (9.09%), and the percentage overlap between Muslim females and Christian females (45.45%) reached near significance.

In addition to this, 5 of the 10 high frequency LSC events mentioned across groups were identical; these events include *marriage, begin school, begin working/job, begin university* and *begin secondary school.* These findings are almost similar to figures gotten from earlier group comparison studies (Bohn, 2010; Janssen & Rubin, 2011; Tekcan et al., 2012). There were also new culture specific categories that have not been identified in other studies. These events include *skills acquisition, national youth service corps, starting a business, sports events, loved one's naming ceremony* and *loved one's marriage*.

It was also noticed that "religion specific events" (see table 3) were among the top ten events mentioned across groups; however, this depended on religious affiliation. For example, "religion specific events for Muslims" aka Islamic events was among the top ten events mentioned by Muslim males with 15 events (45.45%) mentioned. It was also among the top ten events mentioned by Muslim females with 16 events (33.33%) mentioned. These Islamic events include *begin Islamic school, Eid festival, Islamic school graduation, Mosque prayers* and *pilgrimage to Mecca*.

Christian participants also had “religion specific events for Christians” among their top ten events mentioned. While Christian males had 24 events (46.15%) mentioned, Christian females had 15 events (36.59%) mentioned. These Christian events included *begin Sunday school, Christmas, Church club activities, Bible study, child dedication, thanksgiving, Church service, Christian youth conference, Ordination* and *Baptism*.

To determine if these events differed significantly, z-tests were carried out. The results revealed that Muslim males did not significantly produce more religious events than Christian males, $Z = -0.09$, $p = .928$; Muslim females, $Z = 1.09$, $p = .276$ and Christian females, $Z = 0.70$, $p = .484$. Christian males did not differ from Muslim females, $Z = -1.33$, $p = .184$, and Christian females, $Z = 0.87$, $p = .384$; and Muslim females did not differ from Christian females, $Z = -0.39$, $p = .697$. Additionally, it is important to note that though most of the religious events generated by participants were events that belonged to their religion, some of the events were from the other religion. For example, aside from Christian females who had 100% of religious events generated from their religion, an additional 3 events (16.67%) generated by Muslim males were Christian religious events which included *Church service* and *Sunday school*; 3 events (15.79%) generated by Muslim females were Christian events which included *Christmas* and *Sunday school*; and 3 events (11.11%) generated by Christian males was an Islamic event, this event was *Eid festival*. Overall (for both “own” religion and “other” religion) religion specific events generated, Muslim males had the highest percentage of religious events mentioned with 54.54%, followed by Christian males with 51.54%, Muslim females with 39.58% and Christian females with 36.59%.

To determine if these differences were significant, z-tests were carried out. The results revealed that Muslim males did not significantly produce more religious events than Christian males, $Z = 0.27$, $p = .787$; Muslim females, $Z = 1.33$, $p = .184$ and Christian females, $Z = 1.55$, $p = .121$. Christian males did not differ from Muslim females, $Z = 1.20$, $p = .230$, and Christian females, $Z = 1.44$, $p = .150$; and Muslim females did not differ from Christian females, $Z = 0.29$, $p = .772$. To sum up, there were no differences in religious events produced across groups.

Table 3: Percentage of mention, estimates of age at event, and valence for life script events for males and females of both religions

	Muslims (n= 81)						**Christians (n=93)**					
	Male (n=33)			**Female (n=48)**			**Male (n= 52)**			**Female (n=41)**		
Event	Perc.	Age	Valence	Perc.	Age	Valence	Perc.	Age	Valence	Perc.	Age	Valence
Marriage	**60.61**	**27.85**	**2.85**	**56.25**	**24.33**	**1.93**	**69.23**	**27.14**	**2.39**	**65.85**	**27.11**	**2.67**
Begin school	**57.58**	**6.47**	**2.05**	**56.25**	**6.33**	**2.07**	**59.62**	**6.23**	**2.48**	**70.73**	**6.79**	**2.31**
Begin working/Job	**57.58**	**25.00**	**2.79**	**25.00**	**24.33**	**2.17**	**50.00**	**24.62**	**2.62**	**68.29**	**27.07**	**2.29**
Begin university	**54.54**	**19.72**	**2.72**	**75.00**	**19.75**	**2.31**	**61.54**	**20.25**	**2.50**	**75.61**	**20.42**	**2.61**
Skills acquisition	**45.45**	**14.53**	**2.67**	10.42	16.40	2.80	**30.77**	**18.00**	**2.19**	**24.39**	**16.10**	**2.80**
Religion specific events (M)	**45.45**	**8.27**	**2.60**	**33.33**	**11.94**	**2.25**	5.77	35.00	2.67	-	-	-
National Youth Service Corps	**39.39**	**23.31**	**2.77**	**25.00**	**25.25**	**2.42**	23.08	25.17	2.83	**43.90**	**24.72**	**2.50**
Begin secondary school	**36.36**	**13.92**	**2.67**	**37.50**	**13.27**	**2.39**	**46.15**	**13.71**	**2.63**	**60.98**	**13.76**	**2.72**
Starting a business	**36.36**	**17.92**	**2.83**	14.58	25.86	2.43	**28.85**	**25.47**	**2.47**	17.07	20.14	2.71
Career experiences	**27.27**	**24.44**	**2.33**	6.25	23.00	2.00	17.31	25.22	2.33	14.63	26.67	2.00
Having children	**21.21**	**30.28**	**2.71**	20.83	27.44	2.40	**30.77**	**28.94**	**2.81**	21.95	28.89	2.67
Having friends	**21.21**	**20.29**	**1.86**	16.67	18.75	1.25	13.46	22.29	2.00	12.20	15.25	2.00
Travel	**21.21**	**18.86**	**0.86**	18.75	17.22	2.33	11.54	22.83	1.50	9.76	21.25	0.50
Death of a loved one	**18.18**	**21.50**	**-2.50**	**56.25**	**14.56**	**-1.11**	17.31	19.00	-1.89	**24.39**	**16.50**	**-2.40**
Graduation	**18.18**	**20.33**	**1.67**	20.83	20.11	1.50	17.31	19.67	2.11	7.32	21.00	2.33
Academic experiences	**18.18**	**21.17**	**1.33**	**22.92**	**17.63**	**1.55**	5.77	20.67	2.00	14.63	21.40	1.83
Accident	**12.12**	**17.00**	**-0.25**	10.42	16.80	-1.20	7.69	20.50	-2.00	4.88	13.00	-1.50
Religion specific events (C)	9.09	5.67	3.00	6.25	16.67	1.33	**46.15**	**14.25**	**2.75**	**36.59**	**16.53**	**2.53**
Family affection	9.09	20.33	3.00	6.25	17.67	2.67	-	-	-	4.88	15.00	3.00
Problem with friends	9.09	20.67	1.67	10.42	19.63	0.75	5.77	15.67	-0.67	12.20	17.00	-1.20
Sports events	6.06	22.50	2.00	6.25	19.00	-0.67	15.38	22.25	1.75	2.44	22.00	3.00
Own illness	6.06	40.50	-2.00	6.25	16.00	1.33	13.46	17.29	-0.71	17.07	17.00	-1.43
Falling in love	3.03	16.00	-3.00	**22.92**	**15.82**	**0.27**	11.54	21.67	2.00	**31.71**	**19.77**	**0.31**
Celebration	3.03	22.00	3.00	2.08	21.00	2.50	**28.85**	**20.00**	**1.73**	-	-	-
Birthday party	3.03	18.00	2.00	16.67	19.50	1.63	11.54	20.50	2.50	2.44	18.00	1.00
Loved one's Marriage	3.03	23.00	2.00	**25.00**	**16.92**	**1.42**	3.85	22.50	2.00	-	-	-
University entrance exams	3.03	20.00	-2.00	18.75	19.00	0.11	1.92	17.00	0.00	2.44	18.00	3.00
Family problems	3.03	20.00	-3.00	10.42	16.00	-0.60	3.85	13.50	-2.50	4.88	10.00	0.00
Loved one's Naming ceremony	-	-	-	4.17	24.50	0.50	9.62	23.60	1.40	4.88	42.50	2.00
Violence	-	-	-	4.17	15.50	2.00	3.85	12.00	-2.00	9.76	17.00	-2.75
Others	51.52	20.47	0.29	52.08	18.44	0.84	48.08	19.12	0.36	34.15	21.93	-0.07

***Note*:** Bold event characteristics (i.e. Perc., Age and Valence) represent top 10 events of participants in each group. For "religion specific events", M=Muslims, and C=Christians

3.2.2 Event characteristics of the life script

To determine group differences in the event characteristics of LSCs, two-way ANCOVAs were carried out to determine the main and interaction effects of religion and gender on age estimates, event prevalence, event importance and event valence with level of religiosity as a covariate for all four events (see table 4).

3.2.2.1 Age estimates

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the age estimates for LSC events. For this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was not significantly related to the age estimates for LSC events, F (1,169) = .074, p = .786, MSe = 15.557, η_p^2 = .000. There was a significant main effect of religion on the age estimates for LSC events after controlling for the effect of level of religiosity, F (1,169) = 4.845, p = .029, MSe = 15.557, η_p^2 = .028; Christian participants (M= 19.86, SD = 4.19) reported higher age estimates than Muslim participants (M= 18.40, SD = 3.61). There was no main effect of gender on the age estimates for LSC events after controlling for the effect of level of religiosity, F (1,169) = 1.549, p = .215, MSe = 15.557, η_p^2 = .009. There was no interaction between religion and gender on the age estimates for LSC events after controlling for the effect of level of religiosity, F (1,169) = .639, p = .425, MSe = 15.557, η_p^2 = .004.

3.2.2.2 Event prevalence

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the prevalence rating for LSC events. For this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was not significantly related to the prevalence rating for LSC events,

F (1,169) = .956, p = .330, MSe = 178.934, η_p^2 = .006. There was no main effect of religion on the prevalence rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = .782, p = .378, MSe = 178.934, η_p^2 = .005. There was no main effect of gender on the prevalence rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = .179, p = .673, MSe = 15.557, η_p^2 = .001. There was no interaction between religion and gender on the prevalence rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = 2.307, p = .131, MSe = 178.934, η_p^2 = .013.

3.2.2.3 Event importance

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the importance rating for LSC events. For this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was significantly related to the importance rating for LSC events, F (1,169) = 10.953, p = .001, MSe = .652, η_p^2 = .061. There was no main effect of religion on the importance rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = .014, p = .905, MSe = .652, η_p^2 = .000. There was no main effect of gender on the importance rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = .126, p = .723, MSe = .652, η_p^2 = .001. There was no interaction between religion and gender on the prevalence rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = 2.786, p = .097, MSe = .652, η_p^2 = .016.

3.2.2.4 Event valence

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the valence rating for LSC events. For

this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was not significantly related to the valence rating for LSC events, F (1,169) = 1.557, p = .214, MSe = 1.427, η_p^2 = .009. There was no main effect of religion on the valence rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = .383, p = .537, MSe = 1.427, η_p^2 = .006. There was a significant main effect of gender on the valence rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = 4.414, p = .037, MSe = 1.427, η_p^2 = .025; male participants (M= 1.98, SD = 1.14) rated their LSCs as more positive than female participants (M= 1.61, SD = 1.24). There was no interaction between religion and gender on the valence rating for LSC events after controlling for the effect of level of religiosity, F (1,169) = .970, p = .326, MSe = 1.427, η_p^2 = .006.

Table 4: Means, Standard Deviations, and Interaction between Religion and Gender on LSC event characteristics with Level of religiosity as a covariate

Measure	Muslim Males		Muslim Females		Christian Males		Christian females		F	η_p^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Age estimates	19.14	3.86	17.89	3.86	19.99	4.95	19.70	3.99	.634	.004
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	.074	.000
Event prevalence	70.10	14.15	66.05	12.35	65.08	13.40	67.02	13.85	2.307	.013
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	.956	.006
Event importance	6.24	1.05	6.00	0.85	6.03	0.77	6.26	0.67	2.786	.016
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	10.953**	.061
Event valence	2.02	1.18	1.46	1.07	1.96	1.14	1.79	1.41	.970	.006
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	1.557	.009

* p<.05, **p<.01, ***p<.001

3.2.3 Normativity of life scripts

To determine normativity of life scripts two-way analyses of covariance were carried out to determine the main and interaction effects of religion and gender first on LSC typicality scores and then on LSC idiosyncrasy scores. For these analyses, level of religiosity was considered as a covariate (see table 5). For LSC typicality, the results revealed that the covariate level of religiosity was not significantly related to the LSC typicality scores, F (1,169) = .947, p = .332, MSe = 1934.923, η_p^2 = .006.

There was a significant main effect of religion on the LSC typicality scores after controlling for the effect of level of religiosity, F (1,169) = 8.214, p = .005, MSe = 1934.923, η_p^2 = .046; Christian participants (M= 145.69, SD = 50.19) produced a more typical life script than Muslim participants (M= 126.50, SD = 38.49). There was no main effect of gender on the LSC typicality scores after controlling for the effect of level of religiosity, F (1,169) = 2.051, p = .154, MSe = 1934.923, η_p^2 = .012.

There was a significant interaction between religion and gender on LSC typicality scores after controlling for the effect of level of religiosity, F (1,169) = 7.555, p = .007, MSe = 1934.923, η_p^2 = .043. For Christians, females (M = 162.16, SD = 56.92) had a more typical life script than males (M = 132.71, SD = 40.15). For Muslims, males (M = 131.69, SD = 47.36) had a more typical life script than females (M = 122.93, SD = 31.02).

For LSC idiosyncrasy, results revealed that the covariate level of religiosity was significantly related to LSC idiosyncrasy scores, F (1,169) = 4.049, p = .046, MSe = .892, η_p^2 = .023. There was no main effect of religion on the LSC idiosyncrasy scores after controlling for the effect of level of religiosity, F (1,169) = .689, p = .408, MSe = .892, η_p^2 = .004. There was no main effect of gender on the LSC

idiosyncrasy scores after controlling for the effect of level of religiosity, F (1,169) = 1.833, p = .178, MSe = .892, η_p^2 = .011. There was no interaction between religion and gender on LSC idiosyncrasy scores after controlling for the effect of level of religiosity, F (1,169) = .163, p = .687, MSe = .892, η_p^2 = .001.

Table 5: Means, Standard Deviations, and Interaction between Religion and Gender on LSC Typicality and Idiosyncracy scores with Level of religiosity as a covariate

Measure	Muslim Males		Muslim Females		Christian Males		Christian Females		F	η_p^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Typicality scores	131.69	47.36	122.93	31.02	132.71	40.15	162.16	56.92	7.555***	. 043
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	0.947	.006
Idiosyncracy scores	0.67	1.02	0.52	0.87	0.60	1.01	0.29	0.90	0.163	.001
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	4.049*	.023

* p<.05, **p<.01, ***p<.001

3.2.4 Valence of life script events

In this section the percentage of positive and negative events of LSCs will be compared across groups. This differs from the LSC event valence previously analyzed in that, while the "event valence" is the average emotional valence rating for events mentioned in the LSC across groups, this section explores the differences in percentage mentions of positive and negative LSC events across groups.

The LSCs for the four groups were made up of mostly positive events (see table 3); the percentages of positive events in the LSCs were 81.81, 72.41, 84.00, and 66.67 for Muslim males, Muslim females, Christian males, and Christian females respectively. This dominance for positive events was also noticed in the top 10 events mentioned with 10, 9, 10 and 9 of the events being positive for Muslim males, Muslim females, Christian males and Christian females respectively.

The percentage of mention for positive and negative events was also calculated for each participant and then averaged in order to perform the z-test for proportions. The results revealed that the percentage mentions of positive events were 85.28, 75.00, 84.34 and 80.84 for Muslim males, Muslim females, Christian males and Christian females respectively (see figure 2). Additionally, a series of z-test for proportions were carried out assuming events produced were independent. Results revealed that Muslim females had fewer positive events compared to Muslim males ($Z = 4.88$, $p < .001$), Christian males ($Z = 4.96$, $p < .001$) and Christian females ($Z = -2.68$, $p < .05$). Christian females had fewer positive events compared to Muslim males ($Z = 1.99$, $p = .047$). There was no difference between Muslim males and Christian males ($Z = 0.47$, $p = .637$), and between Christian males and Christian females ($Z = 1.73$, $p = .084$). For the negative events (see figure 2), comparisons revealed that Christian males (9.07%) had fewer negative events compared to Muslim males (12.12%), $Z = 1.93$, $p = .053$, Muslim females (14.29%), $Z = 3.71$, $p < .001$, and Christian females (13.94%), $Z = -2.98$, $p = .002$. There was no difference between Muslim males and Muslim females, $Z = -1.31$, $p = .189$, between Muslim males and Christian females, $Z = -0.98$, $p = .326$ and between Muslim females and Christian females, $Z = 0.21$, $p = .837$.

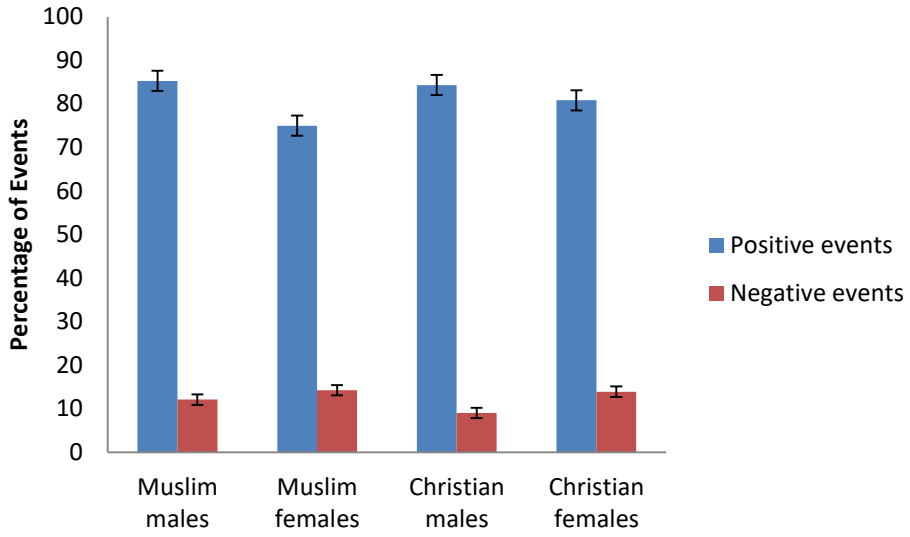

Figure 2: Percentage of positive and negative LSC events across groups

In general, the findings above suggest that Christian males provided the most positive LSCs followed by Muslim males, Christian females and Muslim females respectively.

3.2.5 The life span distribution of life scripts

For the positive life script events, the four groups all showed a clear bump for the second and third decades of life (see figure 3a). There was no significant difference regarding the distribution of estimated ages for positive events across the lifespan. However, Christian males had the highest percentage of positive events (84.00%), followed by Muslim males (81.81%), Christian females (72.41%) and Muslim females (66.67%). The four groups also showed a strong bump for negative events (see figure 3b). However, while most of the negative events came from the teenage years for Muslim females (100%), Christian males (85.19%) and Christian females (66.67%), Muslim males only had 33.33% of the negative events coming from teenage years, instead the event *death of a loved one* was the most mentioned negative event for Muslim males (53.33%) and it's expected age of occurrence was in the 20's.

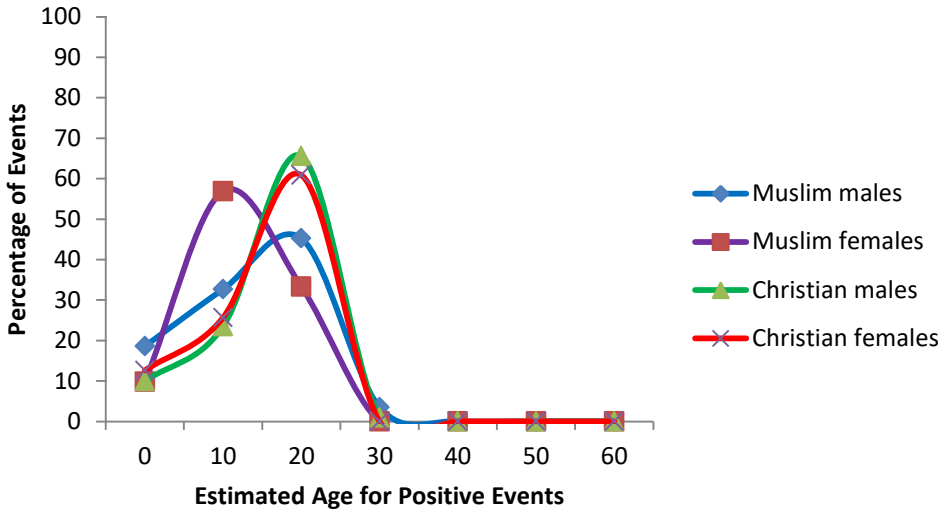

Figure 3: a. Distribution of positive life script events across groups

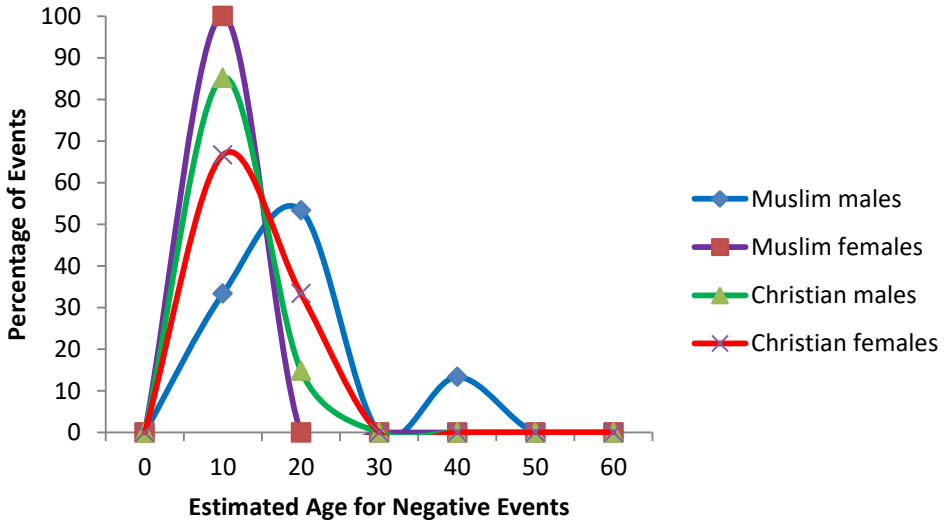

Figure 3: b. Distribution of negative life script events across groups

In summary, the life script comparisons across religion and gender first revealed that for events in the life script, there was an overlap for about 63.33% of all events produced across four groups (i.e. Muslim males, Muslim females, Christian males and Christian females) five out of the top ten events were the same for all four groups. In addition, the only difference in overlap was found between the overlap for Muslim females and Christian females (45.45%) and that of Muslim males and

Christian females (9.09%) who have the highest and lowest percentage of overlaps respectively. There was also no significant difference in the percentage of religious events produced across groups.

Second, for event characteristics, Christians reported higher age estimates than Muslims, there were no differences in age estimates between males and females and there were no interaction effects of religion and gender on age estimates; the covariate level of religiosity had no effect. There was no difference between Christians and Muslims; there was no difference between males and females and there was no interaction effect of religion and gender on prevalence ratings for LSC events; the covariate level of religiosity had no effect. There was no difference between Christians and Muslims; there was no difference between males and females and there was no interaction effect of religion and gender on importance ratings for LSC events; the covariate level of religiosity had an effect on importance rating. For valence ratings, males rated LSC events as more positive than females. However, there was no difference between Christians and Muslims in valence ratings for LSC events; the covariate level of religiosity had no effect.

Third, for normativity of the life scripts, it was revealed that for main effects, Christians produced a more typical life script than Muslims. However, there were no differences between males and females. There was an interaction found between religion and gender. For Christians, females had a more typical life script than males, for Muslims, males had a more typical life script than females; the covariate level of religiosity had no effect. There were no main and interaction effects for religion and gender in life script idiosyncracy scores; however, the covariate level of religiosity had an effect. Fourth, for number of positive in the LSC it was revealed that Muslim males produced more positive LSC events than Muslim females and Christian

females; and Christian males produced more positive LSC events than Muslim females. For negative events, Christian males produced fewer negative LSC events than Muslim males, Muslim females and Christian females.

Finally, for the lifespan distribution of LSC events, there was a bump for positive events in the second and third life decades. However, there was no difference between groups when it came to the distribution of positive events across the lifespan based upon estimated ages. There was also a bump for negative events across all groups, but while most of the negative events were from the teenage years for Muslim females, Christian males and Christian females; Muslim males had most of their negative events situated during the 20's and the most mentioned event was *death of a loved one*. They also had a smaller bump situated in the 40's with the event mentioned being *own illness*.

3.3 Life stories across groups

In this section, life story comparisons were made across religion and gender. These comparisons were made based on event types, event characteristics, normativity, valence and the life span distribution of the events.

3.3.1 Events in the life story

For the life stories**,** the four groups of participants produced a total of 36 life stories with a mention of 4% or more. Muslim males reported 31 events, Muslim females reported 33 events, Christian males reported 29 events and Christian females reported 30 events and the overlap for LST events across groups was 58.33% (See table 6). It was also revealed that aside the 58.33% of LSTs shared by all four groups, 40.00% of events were common to Muslim males and Muslim females, 20.00% were common to Christian males and Christian females, 26.67% were common to Muslim males and Christian males, 46.67% were common to Muslim

females and Christian females, 40.00% were common to Muslim males and Christian females and 40.00% were common to Muslim females and Christian males. Additionally, differences across overlaps between groups were compared using z-test for proportions. The results revealed that there were no significant differences across all groups compared (all ps ≥ .116).

Furthermore, 4 of the 10 high frequency LST events mentioned across groups were identical; these events include *begin university, academic experiences, travel* and *death of a loved one.* Here, 25.00% (9/36) events were culture specific categories that have not been identified in other studies. These events include *loved one's marriage, having property, skills acquisition, sports events; national youth service corps, recreational activities, starting a business, receiving a gift,* and *embarrassing experience.*

It was also noticed that "religion specific events" (see table 6) were among the top ten events mentioned across groups; however, this depended on religious affiliation. For example, "religion specific events for Muslims" aka Islamic events was among the top ten events mentioned by Muslim males with 8 events (24.24%) mentioned. It was also among the top ten events mentioned by Muslim females with 15 events (31.25%) mentioned. These Islamic events include *begin Islamic school, Eid festival, Islamic school graduation, Mosque prayers* and *pilgrimage to Mecca*. Christian participants also had "religion specific events for Christians" among their top ten events mentioned. While Christian males had 24 events (46.15%) mentioned, Christian females had 12 events (29.27%) mentioned. These Christian events included *Christmas, Church service, child dedication ceremony, Ordination, Bible study, born again event, Church camp and Christian youth conference.*

To determine if these events differed significantly, z-tests were carried out. The results revealed that Christian males produced more religious events than Muslim males, Z = -2.04, p = .041.Christian males did not differ from Muslim females, Z = -1.54, p = .124 and Christian females, Z = 1.67, p = .095. Muslim males did not differ from Muslim females, Z = -0.69, p = .490, and Christian females, Z = -0.30, p = .764; and Muslim females did not differ from Christian females, Z = 0.21, p = .834. However, just like the life scripts, though most of the religious events generated by participants were events that belonged to their religion, some of the events were from the other religion. For example, aside from Christian females who had 100% of religious events generated from their religion, 4 events (8.33%) generated by Muslim females were Christian events which included *Christmas*, *child dedication ceremony* and *Sunday school*; 1 event (3.03%) generated by a Muslim male was a Christian event which was *Sunday school*; and 2 events (3.85%) generated by Christian males was an Islamic event, this event was *Eid festival.*

Overall for (both "own" religion and "other" religion) religion specific events generated, Christian males had the highest percentage of religious events mentioned with 50.00%, followed by Muslim females with 39.58%, Christian females with 29.27% and Muslim males with 27.27%. To determine if these differences were significant, z-tests were carried out. The results revealed that Christian males produced more religious events than Christian females, Z = 2.05, p = .040; and Muslim males, Z = 2.10, p = .036. Christian males did not differ from Muslim females, Z = 1.00, p = .317; Christian females did not differ from Muslim females, Z = 1.09, p = .280; and Muslim males, Z = 0.19, p = .849; and Muslim females did not differ from Muslim males, Z = 1.21, p = .226.

Table 6: Percentage of mention, estimates of age at event, and valence for life story events for males and females of both religions

	Muslims (n= 81)						**Christians (n=93)**					
	Male (n=33)			**Female (n=48)**			**Male (n= 52)**			**Female (n=41)**		
Event	Perc.	Age	Valence	Perc.	Age	Valence	Perc.	Age	Valence	Perc.	Age	Valence
Begin university	**60.61**	**20.35**	**2.55**	**54.17**	**19.31**	**2.50**	**53.85**	**22.00**	**2.21**	**58.53**	**19.79**	**2.58**
Academic experiences	**54.55**	**22.82**	**1.67**	**77.08**	**16.03**	**0.41**	**32.69**	**17.06**	**1.24**	**68.29**	**18.43**	**1.43**
Travel	**51.52**	**18.35**	**2.35**	**25.00**	**17.92**	**1.58**	**42.31**	**20.29**	**1.95**	**41.46**	**23.50**	**2.29**
Death of a loved one	**36.36**	**15.20**	**-1.75**	**70.83**	**16.06**	**-1.97**	**26.92**	**20.36**	**-2.50**	**41.46**	**17.56**	**-2.29**
Having friends	**27.27**	**16.56**	**2.00**	**27.08**	**19.69**	**1.54**	5.77	20.00	2.67	14.63	16.67	2.33
Having property	**27.27**	**22.00**	**2.78**	4.17	22.00	2.00	9.62	14.00	2.60	4.88	16.00	3.00
Loved one's Marriage	**24.24**	**20.88**	**2.38**	**35.42**	**18.38**	**1.65**	**23.08**	**19.75**	**2.33**	9.76	19.50	1.50
Religion specific events (M)	**24.24**	**16.00**	**2.50**	**31.25**	**11.87**	**1.93**	3.85	16.00	1.50	-	-	-
Career experiences	**24.24**	**21.13**	**1.50**	2.08	25.00	3.00	15.38	27.00	1.50	17.07	23.14	1.14
Graduation	**21.21**	**19.57**	**2.29**	16.67	19.88	1.13	17.31	22.67	2.44	12.20	19.80	2.40
Begin working/Job	**21.21**	**23.86**	**2.71**	**18.75**	**23.78**	**2.22**	**21.15**	**22.00**	**2.36**	**31.71**	**25.31**	**2.46**
Falling in love	**21.21**	**21.14**	**1.14**	**37.50**	**18.44**	**0.83**	**34.62**	**22.00**	**1.61**	**56.10**	**20.87**	**1.57**
Birthday party	**21.21**	**21.43**	**2.71**	14.58	19.00	2.00	**21.15**	**16.64**	**2.18**	17.07	16.43	2.29
Begin school	**18.18**	**6.67**	**2.50**	14.58	6.14	2.14	**34.62**	**7.17**	**2.83**	17.07	6.14	1.86
Marriage	**15.15**	**26.60**	**2.60**	**22.92**	**23.45**	**1.73**	**26.92**	**26.31**	**2.71**	**31.71**	**27.31**	**2.62**
Skills acquisition	**15.15**	**17.60**	**2.60**	8.33	22.75	2.75	**25.00**	**15.92**	**2.15**	7.32	18.67	2.67
Accident	**15.15**	**21.00**	**0.00**	12.50	13.83	-2.33	**21.15**	**16.55**	**-1.18**	**26.83**	**15.91**	**-1.09**
Family affection	**15.15**	**20.00**	**1.60**	12.50	17.83	2.33	9.62	16.80	2.40	9.76	22.00	3.00
Financial problems	**15.15**	**16.80**	**-0.40**	14.58	20.43	0.57	7.69	20.00	0.25	2.44	17.00	0.00
Sports events	**12.12**	**17.25**	**2.75**	6.25	20.00	1.33	25.00	19.08	2.46	7.32	19.33	3.00
Having children	**12.12**	**28.75**	**2.75**	8.33	26.25	2.25	1.92	34.00	3.00	14.63	29.00	2.83
Problem with friends	**12.12**	**17.25**	**2.50**	6.25	19.33	-1.00	5.77	12.00	-1.67	9.76	19.75	-1.50
Begin driving	**12.12**	**21.50**	**3.00**	2.08	20.00	3.00	3.85	18.50	1.00	2.44	26.00	3.00
National Youth Service Corps	9.09	26.33	3.00	10.42	25.40	2.40	-	-	-	9.76	26.25	3.00
Illness in family	-	-	-	9.09	17.67	-1.33	3.85	21.50	-1.00	9.76	14.00	-0.75
Violence	9.09	19.33	-2.00	14.58	14.71	-1.86	9.62	10.80	0.40	**29.27**	**15.42**	**-2.00**
Begin secondary school	6.06	12.50	3.00	12.50	11.67	1.17	**21.15**	**11.91**	**2.55**	12.20	12.20	2.80
Recreational activities	6.06	21.50	0.00	2.08	4.00	2.00	9.62	22.60	2.80	9.76	15.75	2.75
Covid-19 pandemic experiences	6.06	23.00	2.00	10.42	21.20	0.20	3.85	26.50	-3.00	7.32	18.67	-1.00
Celebration	6.06	23.50	1.50	12.50	20.50	1.17	19.23	21.56	1.90	-	-	-
Family problems	6.06	28.00	3.00	16.67	17.13	-0.25	5.77	21.67	-2.33	12.20	19.40	-3.00
Starting a business	3.03	26.00	3.00	8.33	25.75	2.75	9.62	22.80	2.40	-	-	-
Religion specific events (C)	3.03	5.00	3.00	8.33	16.50	2.50	**46.15**	**16.52**	**2.50**	**29.27**	**18.75**	**2.33**
Receiving a gift	3.03	20.00	2.00	6.25	11.33	1.67	9.62	13.00	2.20	-	-	-
Own illness	3.03	16.00	-3.00	10.42	16.60	-2.20	**21.15**	**19.82**	**-1.36**	14.63	9.80	0.50
Embarrassing experience	3.03	25.00	-3.00	12.50	19.17	-2.00	3.85	17.50	-1.50	4.88	18.00	0.00
Others	78.79	19.32	1.50	45.83	17.36	0.68	23.08	21.91	1.83	14.63	20.50	1.17

Note: Bold event characteristics (i.e. Perc., Age and Valence) represent top 10 events of participants in each group. For "religion specific events", M=Muslims, and C=Christians

3.3.2 Event characteristics of the life story

To determine group differences in the event characteristics of LSTs, two-way ANCOVAs were carried out to determine the main and interaction effects of religion and gender on age estimates, event prevalence, event importance and event valence with level of religiosity as a covariate for all four events (see table 7).

3.3.2.1 Age estimates

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the age estimates for LST events. For this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was not significantly related to the age estimates for LST events, F (1,169) = .057, p = .812, MSe = 13.927, η_p^2 = .000. There was no main effect of religion on the age estimates for LST events after controlling for the effect of level of religiosity, F (1,169) = .265, p = .607, MSe = 13.927, η_p^2 = .002. There was no main effect of gender on the age estimates for LST events after controlling for the effect of level of religiosity, F (1,169) = 2.146, p = .145, MSe = 13.927, η_p^2 = .013. There was no interaction between religion and gender on the age estimates for LST events after controlling for the effect of level of religiosity, F (1,169) = 3.611, p = .059, MSe = 13.927, η_p^2 = .021.

3.3.2.2 Event prevalence

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the prevalence rating for LST events. For this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was not significantly related to the prevalence rating for LST events,

F (1,169) = .073, *p* = .788, *MSe* = 217.468, η_p^2 = .000. There was no main effect of religion on the prevalence rating for LST events after controlling for the effect of level of religiosity, *F* (1,169) = 1.529, *p* = .218, *MSe* = 217.468, η_p^2 = .009. There was no main effect of gender on the prevalence rating for LST events after controlling for the effect of level of religiosity, *F* (1,169) = .089, *p* = .766, *MSe* = 217.468, η_p^2 = .001. There was an interaction between religion and gender on the prevalence rating for LST events after controlling for the effect of level of religiosity, *F* (1,169) = 5.287, *p* = .023, *MSe* = 217.468, η_p^2 = .030. For Muslims, male participants (*M*= 66.08, *SD* = 15.50) had higher prevalence rating than female participants (*M*= 61.54, *SD* = 14.00). For Christians, female participants (*M*= 64.05, *SD* = 14.31) had higher prevalence rating than males participants (*M*= 58.05, *SD* = 15.13).

3.3.2.3 Event importance

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the importance rating for LST events. For this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was significantly related to the importance rating for LST events, *F* (1,169) = 12.023, *p* = .001, *MSe* = .927, η_p^2 = .066. There was no main effect of religion on the importance rating for LST events after controlling for the effect of level of religiosity, *F* (1,169) = .695, *p* = .406, *MSe* = .927, η_p^2 = .004. There was a main effect of gender on the importance rating for LST events after controlling for the effect of level of religiosity, *F* (1,169) = 4.634, *p* = .033, *MSe* = .927, η_p^2 = .027; male participants (*M*= 5.99, *SD* = 1.00) rated their LSTs as more important than female participants (*M*= 5.74, *SD* = 0.99). There was no interaction between religion

and gender on the importance rating for LST events after controlling for the effect of level of religiosity, F (1,169) = 1.261, p = .263, MSe = 178.934, η_p^2 = .007.

3.3.2.4 Event valence

A two-way analysis of covariance was carried out to determine the main and interaction effects of religion and gender on the valence rating for LST events. For this analysis, level of religiosity was considered as a covariate. The covariate, level of religiosity, was not significantly related to the valence rating for LST events, F (1,169) = 1.935, p = .297, MSe = 1.766, η_p^2 = .006. There was no main effect of religion on the valence rating for LST events after controlling for the effect of level of religiosity, F (1,169) = .355, p = .552, MSe = 1.766, η_p^2 = .002. There was a main effect of gender on the valence rating for LST events after controlling for the effect of level of religiosity, F (1,169) = 10.058, p = .002, MSe = 1.766, η_p^2 = .056; male participants (M= 1.64, SD = 1.22) rated their LSTs as more positive than female participants (M= 1.02, SD = 1.43). There was no interaction between religion and gender on the valence rating for LST events after controlling for the effect of level of religiosity, F (1,169) = 2.789, p = .097, MSe = 1.766, η_p^2 = .016.

Table 7: Means, Standard Deviations, and Interaction between Religion and Gender on LST event characteristics with Level of religiosity as a covariate

Measure	Muslim Males		Muslim Females		Christian males		Christian Females		F	η_p^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Age estimates	19.71	4.29	17.78	2.86	18.92	4.13	19.19	3.59	3.611	.021
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	.057	.000
Event prevalence	66.08	15.50	61.54	14.00	58.05	15.13	64.05	14.31	5.287*	.030
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	.703	.000
Event importance	6.16	0.96	5.68	0.96	5.88	1.00	5.81	1.03	1.261	.007
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	12.023**	.066
Event valence	1.77	1.15	0.79	1.29	1.56	1.27	1.29	1.56	2.789	.016
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	1.935	.006

* $p<.05$, ** $p<.01$, *** $p<.001$

3.3.3 Normativity of life stories

To determine normativity of life stories, two-way analyses of covariance were carried out to determine the main and interaction effects of religion and gender first on LST typicality scores and then on LST idiosyncrasy scores. For these analyses, level of religiosity was considered as a covariate (see table 8). For LST typicality, the results revealed that the covariate level of religiosity was significantly related to the LST typicality scores, F (1,169) = 6.274, p = .013, MSe = 1039.618, η_p^2 = .036.

There was no main effect of religion on the LST typicality scores after controlling for the effect of level of religiosity, F (1,169) = 1.488, p = .224, MSe = 1039.618, η_p^2 = .009. There was a significant main effect of gender on the LST typicality scores after controlling for the effect of level of religiosity, F (1,169) = 17.880, p < .001, MSe = 1039.618, η_p^2 = .096; female participants (M= 116.577, SD = 38.34) had a more typical life story than male participants (M= 93.64, SD = 25.33). There was no interaction between religion and gender on LST typicality

scores after controlling for the effect of level of religiosity, F (1,169) = .063, p = .802, MSe = 1039.618, η_p^2 = .000.

For LST idiosyncrasy, results revealed that the covariate level of religiosity was not related to LST idiosyncrasy scores, F (1,169) = 1.023, p = .313, MSe = .775, η_p^2 = .006. There was no main effect of religion on the LSC idiosyncrasy scores after controlling for the effect of level of religiosity, F (1,169) = 1.109, p = .294, MSe = .775, η_p^2 = .007. There was a significant main effect of gender on the LST idiosyncrasy scores after controlling for the effect of level of religiosity, F (1,169) = 6.403, p = .021, MSe = .775, η_p^2 = .037; male participants (M= 0.86, SD = 1.00) produced more idiosyncratic LST events than female participants (M= 0.48, SD = 0.74). There was no interaction between religion and gender on LST idiosyncrasy scores after controlling for the effect of level of religiosity, F (1,169) = .030, p = .863, MSe = .775, η_p^2 = .000.

Table 8: Means, Standard Deviations, and Interaction between Religion and Gender on LST Typicality and Idiosyncracy scores with Level of religiosity as a covariate

Measure	Muslim Males		Muslim Females		Christian males		Christian Females		F	η_p^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Typicality scores	96.39	30.87	119.01	42.24	91.90	21.22	113.73	33.49	.063	.000
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	6.224*	.036
Idiosyncracy scores	0.79	0.96	0.42	0.71	0.90	1.03	0.56	0.78	.030	.000
Level of religiosity	3.76	0.59	3.78	0.57	3.79	0.53	3.96	0.41	1.023	.006

* p<.05, **p<.01, ***p<.001

3.3.4 Valence for life story events

In this section the percentage of positive and negative events of LSTs will be compared across groups. This differs from the LST event valence previously analyzed in that, while the "event valence" is the average emotional valence rating for events mentioned in the LST across groups, this section explores the differences in the percentage mentions of positive and negative LST events across groups.

The LSTs for the four groups were made up of mostly positive events (see Table 6); the percentages of positive events in the LSTs were 80.65, 63.64, 75.86, and 70.00 for Muslim males, Muslim females, Christian males, and Christian females respectively. The percentage of mention for positive and negative events was also calculated for each participant and then averaged in order to perform the z-test for proportions across groups. The results revealed that the percentage mention of positive events were 83.55, 64.44, 76.92 and 71.43 for Muslim males; Muslim females, Christian males and Christian females respectively (see figure 4). Additionally, a series of z-test for proportions were carried out assuming events produced were independent. Results revealed that Muslim females reported fewer positive events compared to Muslim males (Z = 8.96, p < .001), Christian males (Z = 5.91, p < .001) and Christian females (Z = -2.96, p=.003). Christian females had fewer positive events compared to Muslim males (Z = 5.67, p < .001) and Christian males (Z = 2.60, p =.009), and Christian males had fewer positive events compared to Muslim males (Z = 3.56, p < .001).

For the negative events, comparisons revealed that Muslim males (15.15%) had fewer negative events compared to Muslim females (27.05%), Z = -5.85, p < .001 and Christian females (23.81%), Z = -4.22, p < .001. Christian males (15.66%) had fewer negative events compared to Christian females, Z = -4.21,

$p < .001$ and Muslim females, $Z = -5.95$, $p < .001$. There was no difference between Muslim males and Christian males, $Z = -0.29$, $p = .772$, and between Muslim females and Christian females, $Z = 1.48$, $p = .139$.

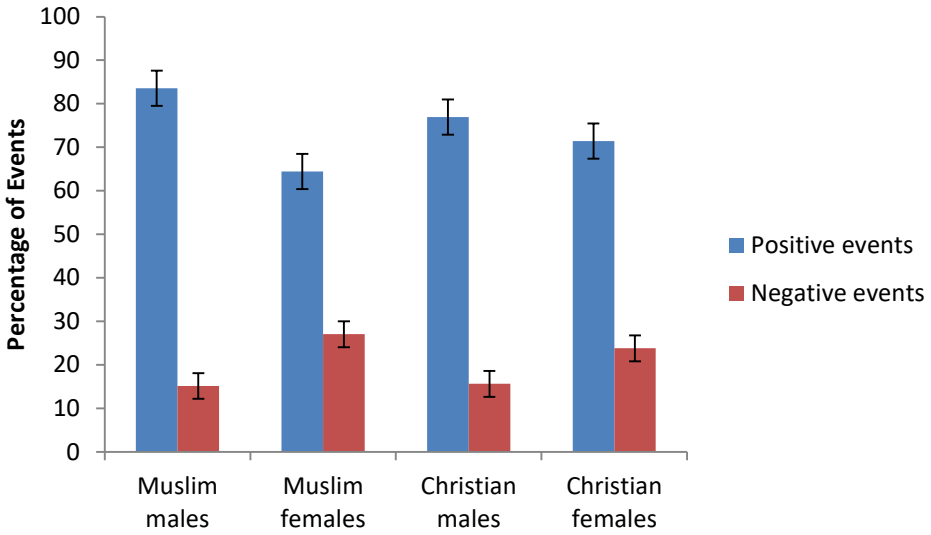

Figure 4: Percentage of positive and negative LST events across groups

In general, the findings above suggest that Muslim males provided the most positive LSTs followed by Christian males, Christian females and Muslim females respectively.

3.3.5 The life span distribution of life stories

In the lifespan distribution for positive life stories, the four groups all showed a reminiscence bump for the second and third decades of life. However, Muslim females had the bump skew more to the second decade of life compared to Muslim males, Christian males and Christian females (see figure 5a). There was no significant difference regarding the distribution of estimated ages for positive events across the lifespan. However, Muslim males had the highest percentage of positive events (80.65%), followed by Christian males (75.86%), Christian females (70.00%) and Muslim females (63.64%). There was also a strong bump for negative events.

However, while most of the negative events came from the teenage years for Muslim females (100%), Christian females (100%) and Muslim males (95.45%), Christian males had a reminiscence bump for negative events in the second (56.25%) and third (43.75%) decades of life (see figure 5b).

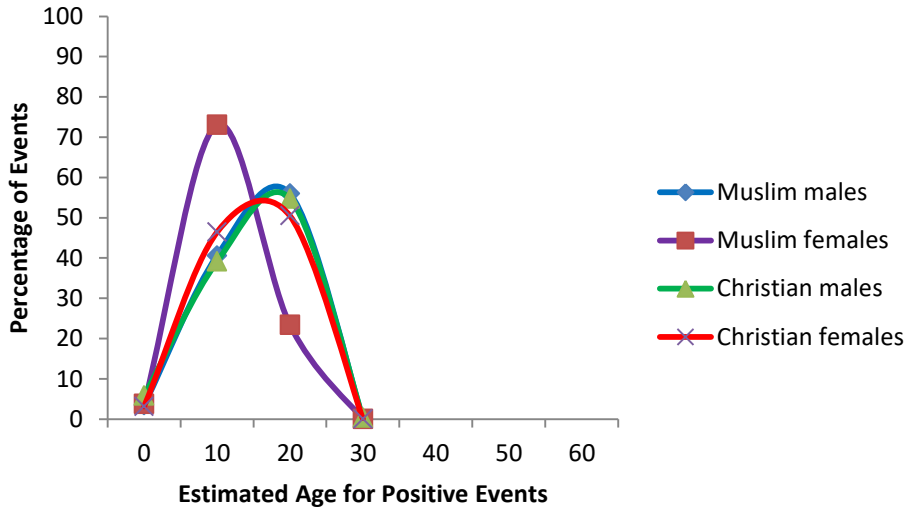

Figure 5: a. Distribution of positive life story events across groups

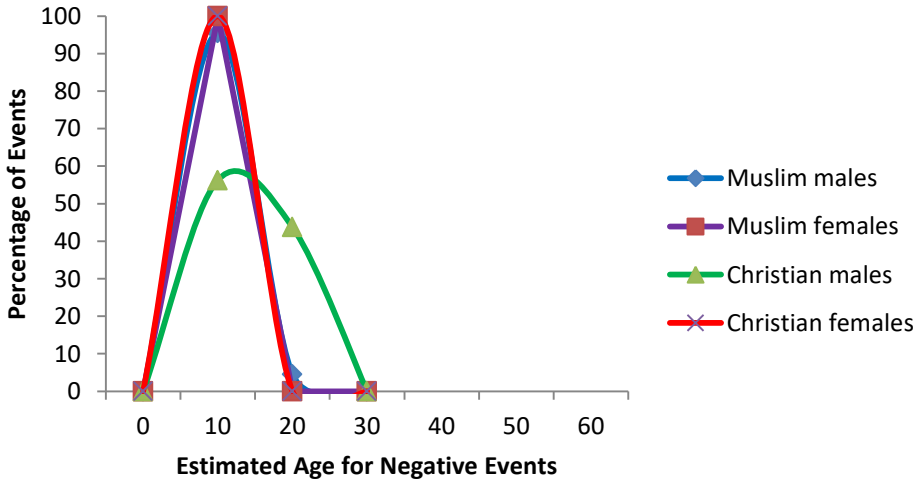

Figure 5: b. Distribution of negative life story events across groups

In summary, the life story comparisons across religion and gender first revealed that for events in the life story, there was an overlap for about 58.33% of all

events produced across four groups (i.e. Muslim males, Muslim females, Christian males and Christian females) four out of the top ten events were the same for all four groups. There was no difference in LST overlap for religious events generated across groups. Second, for religious events based on "one's own" religion, Christian males produced more religious events than Muslim males. While when it came to religious events produced from "one's own" as well as "the other" religion combined together, Christian males produced more religious events compared to Muslim males and Christian females.

Third, for event characteristics, there were no main and interaction effects for religion and gender on age estimates for LST events; the covariate level of religiosity had no effect. There were no main effects of religion and gender on prevalence ratings for LST events; however, there was an interaction effect between religion and gender; for Muslims, males had higher prevalence rating than females while for Christians, females had higher prevalence rating that males; level of religiosity had no effect. For importance ratings for LST events, there was a main effect of gender with males rating their LSTs as more important than females; however, there was no main effect of religion and no interaction between religion and gender. The covariate level of religiosity had an effect on importance rating. For valence ratings, there was a main effect of gender with males rating their LSTs as more positive than females. However, there was no main effect of religion and no interaction between religion and gender; the covariate level of religiosity had no effect.

Fourth, for normativity of the life scripts, it was revealed that there was a main effect of gender, females had a more typical life story than males, there was no main effect of religion and there was no interaction between religion and gender; the covariate level of religiosity was related to life story typicality. For idiosyncracy

scores, there was a main effect of gender with males producing more idiosyncratic events than females. There was no main effect of religion and no interaction between religion and gender; the covariate level of religiosity had no effect. Fourth, for number of positive events in the LST it was revealed that Muslim males, Christian males and Christian females produced more positive LST events than Muslim females. Muslim males and Christian males produced more positive events than Christian females, and Muslim males produced more positive LST events than Christian males. Muslim males produced fewer negative LST events than Muslim females and Christian females; and Christian males produced fewer negative LST events than Christian females.

Finally, for the lifespan distribution of LST events, Muslim females had their bump skew more to the second decade of life compared to Muslim males, Christian males and Christian females. There was also a bump for negative events for all groups, but while most of the negative events were from the teenage years for Muslim males, Muslim females and Christian females; Christian males had their negative events more equally distributed between their teenage years and their 20's.

3.4 Overlap between life scripts and life stories

In this section, the overlap between life scripts events and life stories will be analyzed. Here, scripted life stories are those events that are also present in the life scripts of participants while non-scripted life stories are those that are not present in the life scripts of participants.

First, for Muslim males, 19 out of the 31 life story events were scripted (61.29%), and 18 out of the 19 scripted events came from the bump period (94.74%). Second, for Muslim females, 26 out of the 33 life story events were scripted (78.79%), and 24 out of the 26 scripted events came from the bump period (92.31%).

Third, for Christian males, 20 out of the 29 life story events were scripted (68.97%), and 19 out of the 20 scripted events was from the bump period (95%). Finally, for Christian females, 22 out of the 30 life story events were scripted (73.33%), and 21 out of the 22 scripted events were from the bump period (95.45%). These figures provide proof that most of the events recalled from the life story are drawn from adolescence and young adulthood which support the influence of the life scripts in the recall of autobiographical memories (Bernsten & Rubin, 2002).

In addition to the figures gotten from percentage overlaps, z-tests for proportions were also carried out across groups. Results revealed that first, there was no significant difference between the number of scripted life story events of Muslim males and Muslim females (Z = -1.58, p = .116), Muslim males and Christian males (Z = -0.65, p = .516), Muslim males and Christian females (Z = -1.00, p = .317), Muslim females and Christian males (Z = 0.90, p = .368), Muslim females and Christian females (Z = 0.56, p = .575), and Christian males and Christian females (Z = 0.34, p = .728). Second there was no significant difference between the bump period scripted life story events of Muslim males and Muslim females (Z = 0.40, p = .689), Muslim males and Christian males (Z = 0.00, p = 1.000), Muslim males and Christian females (Z = 0.00, p = 1.000), Muslim females and Christian males (Z = -0.40, p = .689), Muslim females and Christian females (Z = -0.42, p = .674), and Christian males and Christian females (Z = 0.00, p = 1.000).

Furthermore, additional z-tests were carried out to compare LSCs and LSTs of each group. For positive events, comparisons revealed that Muslim females had fewer LSTs (64.44%) compared to LSCs (75.00%), Z = 4.79, p < .001; Christian males had fewer LSTs (76.92%) compared to LSCs (84.34%), Z = 4.18, p < .001; and Christian females had fewer LSTs (71.43%) compared to LSCs (80.84%),

$Z = 4.03$, $p < .001$. However there was no difference between the LSCs (85.28%) and LSTs (83.55%) for Muslim males, $Z = 0.85$, $p = .393$. For negative events results revealed that Muslim females had fewer LSCs (14.29%) compared to LSTs (27.05%), $Z = -6.87$, $p < .001$; Christian males had fewer LSCs (9.07%) compared to LSTs (15.66%), $Z = -4.46$, $p < .001$; and Christian females had fewer LSCs (13.94%) compared to LSTs (23.81%), $Z = -4.80$, $p < .001$. However there was no difference between the LSCs (12.12%) and LSTs (15.15%) for Muslim males, $Z = -1.65$, $p = .100$.

The age distribution of positive and negative events for life scripts and life stories were plotted for each group. First, results showed that for positive events, the life scripts and life stories of all groups showed similar distributions with a robust reminiscence bump (see figures, 6a-6d). However, for Christian males, the bump for positive LSCs (65.59%) was stronger than for positive LSTs (54.72%), $Z = -2.80$, $p = .005$; for Christian females, the bump for positive LSCs (60.87%) was stronger than for positive LSTs (50.45%), $Z = -2.35$, $p = .019$; while for Muslim females, the bump for positive LSTs (73.02%) was stronger than for positive LSCs (56.88%), $Z = 3.66$, $p < .001$; and for Muslim males the difference between the positive LSTs (55.94%) and positive LSCs (45.23%) was approaching significance, $Z = 1.91$, $p = .056$.

Second, results showed that for negative events, the life scripts and life stories of all groups showed similar distributions with a robust reminiscence bump (see figures, 7a-7d). However, for Muslim males, the bump for negative LSTs (95.45%) was stronger than for negative LSCs (53.33%), $Z = -3.03$, $p = .002$; for Christian females, the bump for negative LSTs (100%) was stronger than for negative LSCs (66.67%), $Z = -4,64$, $p < .001$; while for Christian males, the bump for negative LSCs

(85.19%) was stronger than for negative LSTs (56.25%), $Z = 2.55$, $p = .011$. There is no difference between the negative LSCs (100%) and negative LSTs (100%) of Muslim females, $Z = 0.43$, $p = .667$.

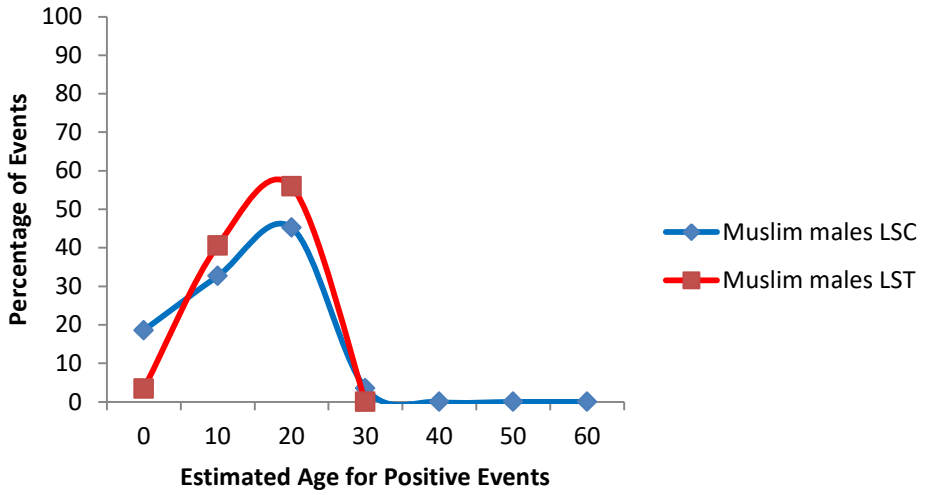

Figure 6: a. Distribution of positive life scripts and life stories for Muslim males

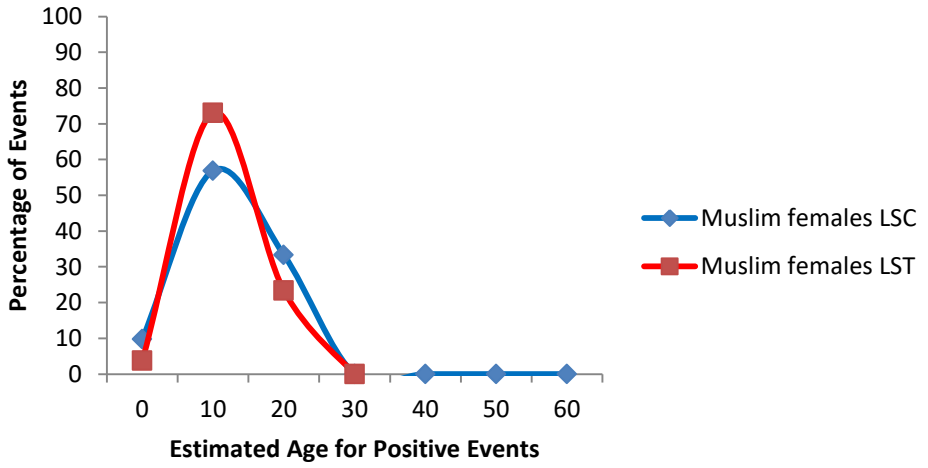

Figure 6: b. Distribution of positive life scripts and life stories for Muslim females

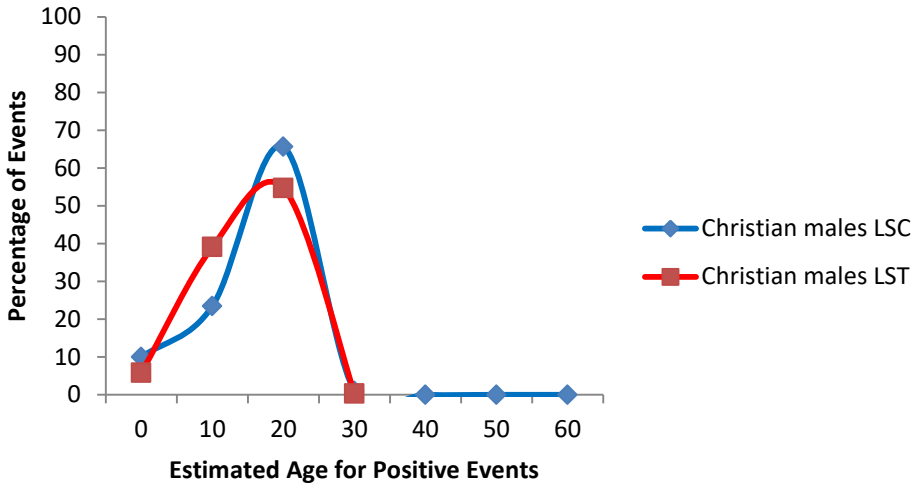

Figure 6: c. Distribution of positive life scripts and life stories for Christian males

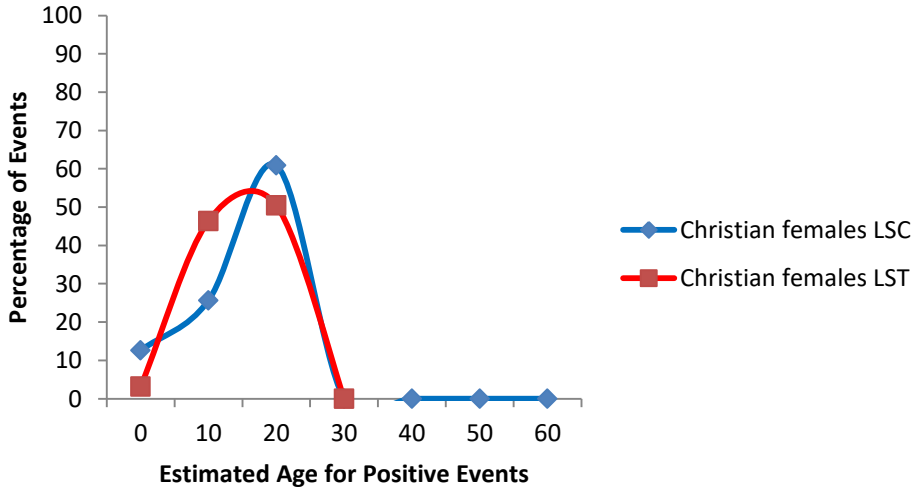

Figure 6: d. Distribution of positive life scripts and life stories for Christian females

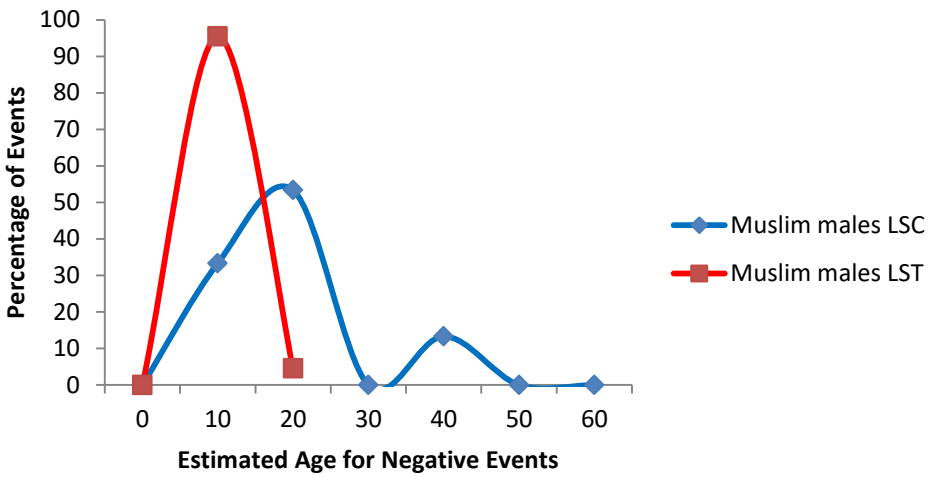

Figure 7: a. Distribution of negative life scripts and life stories for Muslim males

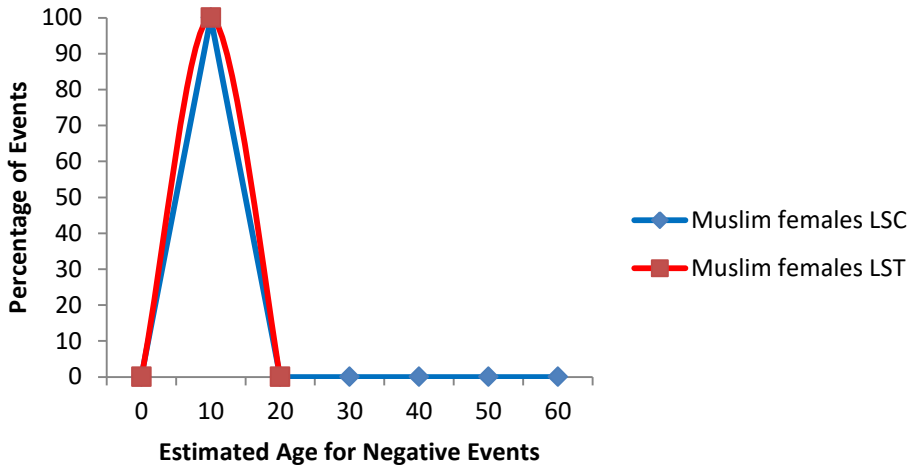

Figure 7: b. Distribution of negative life scripts and life stories for Muslim females

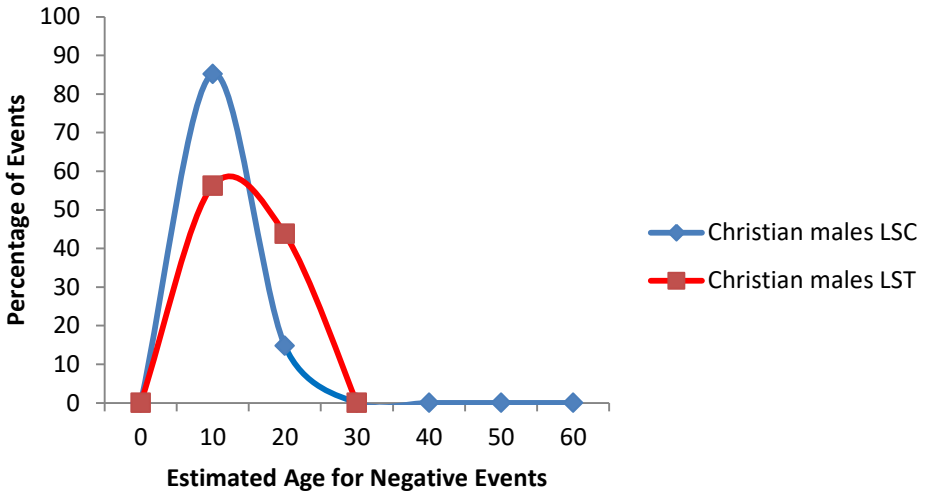

Figure 7: c. Distribution of negative life scripts and life stories for Christian males

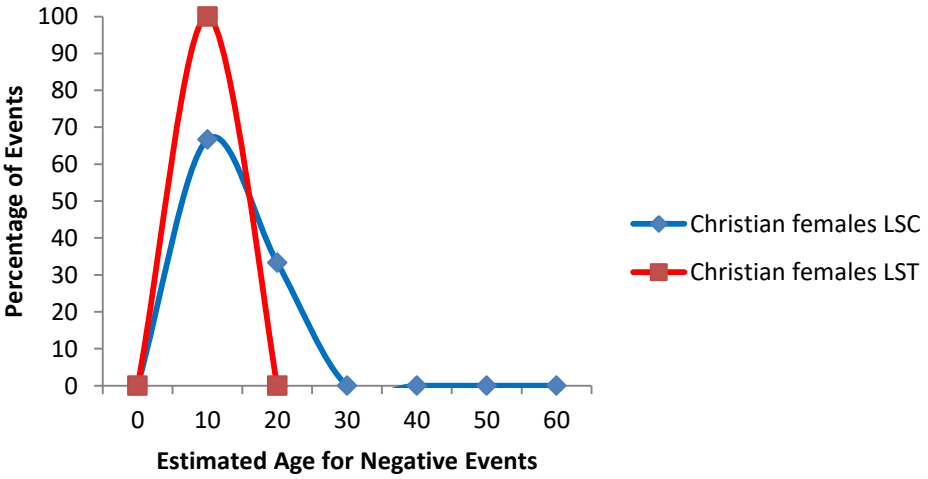

Figure 7: d. Distribution of negative life scripts and life stories for Christian females

In summary, the overlap between LSCs and LSTS across religion and gender first revealed that there was no significant difference in the percentage overlap across the four groups (i.e. Muslim males, Muslim females, Christian males and Christian females). However, while Muslim females, Christian males and Christian females all had more positive LSCs than positive LSTs, there was no difference between the number of positive LSCs and positive LSTs for Muslim males. Similarly, while Muslim females, Christian males and Christian females all had more negative LSTs

than negative LSCs, there was no difference between the number of negative LSCs and negative LSTs for Muslim males. Additionally, while the bump for positive LSCs was stronger than that of positive LSTs for Christian males and Christian females, the bump for positive LSTs was stronger for Muslim females and approached significance for Muslim males. For negative events, the bump was stronger for negative LSTs than LSCs for Muslim males and Christian females. For Christian males, the bump was stronger for negative LSCs than LSTs. There was no difference for Muslim females.

3.5 Cross-cultural comparison of life scripts

In this section, cross-cultural comparisons of the life scripts will be carried out for Muslim and Christian participants respectively. First, Muslim participants from this study will be compared with their counterparts from Turkey (Tekcan et al., 2012); a secular Muslim society; and their counterparts from Qatar (Ottsen & Bernsten, 2014); a religious Muslim society. Second, Christian participants from this study will be compared with their Counterparts from Denmark (Bohn, 2010); a secular Christian society; and their religious counterparts from America (Tungjitcharoen & Bernsten, 2020). The top ten life script events from the previous studies were displayed alongside the top ten life script events from this study (see tables 9 & 10).

For Muslim participants (see table 9), when the previous studies were compared against the present study it was found that the Tekcan et al. (2012) and Ottsen and Bernsten (2014) studies had four life script events in common with the present study. These events include *marriage, begin school, begin university and begin working/job.* Aside the four common events, Tekcan et al. (2012) had "*loss in*

family/death of a loved one" and Ottsen and Bernsten (2014) had "*religious specific events"* as additional common events with the present study.

Additionally, differences across studies were analyzed in terms of the frequency of mention for the four common life script events. It was revealed that *marriage* was more frequently mentioned by Turkish participants (80.00%) than Nigerian Muslim participants (58.02%), $Z = 2.61$, $p = .009$; There was no difference between Turkish and Qatari participants (64.00%), $Z = 1.83$, $p = .067$; and between Qatari and Nigerian Muslim participants ($Z = 0.70$, $p = .484$). *Begin school* was more frequently mentioned by Qatari participants (82.00%) than Nigerian Muslim participants (56.79%), $Z = 3.05$, $p = .002$, There was no difference between Turkish (67.00%) and Qatari participants ($Z = -1.78$, $p = .075$); and between Turkish and Nigerian Muslim participants ($Z = 1.15$, $p = .250$).

Begin university was more frequently mentioned by Nigerian Muslim participants (66.67%) than Turkish (43.00%) $Z = -2.72$, $p = .007$; and Qatari participants (49.00%), $Z = -2.10$, $p = .036$. Turkish and Qatari participants did not differ from each other ($Z = -0.62$, $p = .535$). For *Begin working/job,* there no difference between Turkish (29.00%) and Qatari participants (31.00%), $Z = -0.22$, $p = .826$; between Turkish and Nigerian Muslim participants (38.27%), $Z = -1.06$, $p = .289$; and between Qatari and Nigerian Muslim participants ($Z = 0.84$, $p = .401$).

Table 9: Cross-cultural comparison of life scripts for Muslim participants

Tekcan et al.(2012)	**Ottsen and Bernsten(2014)**	**Present study (Muslims)**
*Marriage**	*Begin school**	*Begin university**
*Begin school**	Religion specific events	*Marriage**
Having children	*Marriage**	*Begin school**
*Begin University**	*Begin University**	Death of a loved one
University entrance exams	*Begin working/job**	*Begin working/job**
*Begin working/job**	Kindergarten/Daycare	Religion specific events
Falling in love	Puberty	Begin secondary school
Loss in family	Having children	National Youth Service Corps
High school exams	University graduation	Skills acquisition
Having friends/Begin walking	Own birth	Starting a business

*Common for three studies

For Christian participants (see table 10), when the previous studies were compared against the present study it was found that the Bohn (2010) and Tungjitcharoen and Bernsten (2020) studies had four life script events in common with present study. These events include: *having children, begin school, marriage, and religion specific events.* Aside the four common events, Bohn (2010) had "*begin secondary school*" and Tungjitcharoen and Bernsten (2020) had "*begin university*" as additional common events with the present study.

Additionally, differences across studies were analyzed in terms of the frequency of mention for the four common life script events. It was revealed that *having children* was mentioned more frequently by Danish participants (95.83%) than American participants (55.77%), $Z = 6.54$, $p < .001$; and Nigerian Christian participants (26.88%), $Z = 9.77$, $p < .001$; and by American than Nigerian Christian participants ($Z = 4.11$, $p < .001$). *Begin school* was more frequently mentioned by Danish participants (78.13%) than American (36.54%), $Z = 5.85$, $p < .001$, and Nigerian Christian participants (26.88%), $Z = 1.98$, $p = .048$); and by American participants than Nigerian Christian participants ($Z = -3.92$, $p < .001$).

For *marriage,* Danish participants (64.58%) did not differ from American participants (70.19%), Z = -0.75, p = .453; and Nigerian Christian participants (66.67%), Z = -0.29, p = .772. American participants did not differ from Nigerian Christian participants (Z = 0.46, p = .646). *Religion specific events* were mentioned more frequently by American participants (67.27%) than Nigerian Christian participants (41.14%), Z = 3.52, p < .001, and Danish participants (19.79%), Z = -6.42, p < .001; and by Nigerian Christian participants than Danish participants (Z = 3.27, p < .001).

Table 10: Cross-cultural comparison of life scripts for Christian participants

Bohn (2010)	**Tungjitcharoen and Bernsten (2020)**	**Present study (Christians)**
*Having children**	*Marriage**	Begin university
*Begin school**	Graduation	*Marriage**
*Marriage**	*Having children**	*Begin school**
Secondary education	*Religion specific events**	Begin working/job
Retirement	*Begin school**	Begin secondary school
Falling in love	Own death	*Religion specific events**
Begin working/job	Begin walking	National Youth Service Corps
Begin daycare	Own birth	Skills acquisition
Leaving home	Going to school	*Having children**
*Confirmation(Religion spec. event)**	College/ University	Starting a business

*Common for three studies

In summary, the cross-cultural comparisons revealed that for Muslim participants, the top ten LSC events mentioned by Turkish (Tekcan et al., 2012); and Qatari participants (Ottsen & Bernsten, 2014), were four in common with the Nigerian Muslim participants in the present study. These include *marriage, begin school, begin university* and *begin working/job*. Results revealed that for *marriage,* Turkish participants had a higher mention rate than Nigerian Muslim participants, Turkish and Qatari participants did not differ from each other and same was the case for Qatari and Nigerian Muslim participants. For *begin school,* Qatari participants

had a higher mention rate than Nigerian Muslim participants. There was no difference between Turkish and Qatari participants as well as between Turkish and Nigerian Muslim participants. For *begin university,* Nigerian Muslim participants had a higher mention rate than Turkish, and Qatari participants. There was no difference between Turkish and Qatari participants. For *begin working/job,* Turkish, Qatari and Nigerian Muslim participants did not differ from each other.

For Christian participants, the top ten LSC events mentioned by Danish (Bohn, 2010) and American participants (Tungjitcharoen & Bernsten, 2020), were four in common with Nigerian Christian participants in the present study. These include *having children; begin school, marriage, and religion specific events.* Results revealed that for *having children,* Danish participants had a higher mention rate than American and Nigerian Christian participants. And Americans had a higher mention rate than Nigerian Christian participants. For *begin school,* Danish had higher mention rates than American and Nigerian Christian participants while American participants had higher mention rates than Nigerian Christian participants. For *marriage,* Danish, American and Nigerian Christian participants did not differ from each other. For *religion specific events*, American participants had higher mention rates than Nigerian Christian participants and Danish participants. Nigerian Christian participants had higher mention rates than Danish participants.

3.6 Relationship between a culturally coherent life story and psychological well-being

In this section, two-way analyses of covariance were first carried out to determine the main and interaction effects of religion and gender on mental well-being and depression scores with level of religiosity as a covariate. Then, two hierarchical regression analyses were carried out to determine the relationship

between a culturally coherent life story and psychological well-being across religion and gender with the predictor variable in the first step as level of religiosity; and the predictor variables in the second step as number of negative LST events, LST typicality scores, LST idiosyncrasy scores and number of scripted LST events (i.e. those LST events that are also present in the life scripts of participants). The outcome variables were mental well-being and depression scores.

3.6.1 Group differences for mental well-being and depression scores

For the two-way analysis of covariance, the results revealed that, The covariate, level of religiosity, was significantly related to mental well-being scores, F (1,169) = 18.502, p < .001, MSe = .267, η_p^2 = .099. For the main and interaction effects of religion and gender on mental well-being scores; there was a significant main effect of religion on mental well-being scores after controlling for the effect of level of religiosity, F (1,169) = 12.161 p = .001, MSe = .267, η_p^2 = .067; Christian participants (M= 3.92, SD = 0.50) reported higher mental well-being scores than Muslim participants (M= 3.60, SD = 0.58). There was a no main effect of gender on mental well-being scores after controlling for the effect of level of religiosity, F (1,169) = .379, p = .539, MSe = .267, η_p^2 = .002. There was no interaction between religion and gender, on mental well-being scores after controlling for the effect of level of religiosity, F (1,169) = .094, p = .759, MSe = .267, η_p^2 = .001.

The covariate, level of religiosity, was not related to depression scores, F (1,169) = 2.769, p = .098, MSe = .396, η_p^2 = .016. For the main and interaction effects of religion and gender on depression scores; there was a significant main effect of religion on depression scores after controlling for the effect of level of religiosity, F (1,169) = 3.780, p = .054, MSe = .396, η_p^2 = .022; Christian participants (M= 0.75, SD = 0.60) reported lower depression scores than Muslim participants

(*M*= 0.94, *SD* = 0.66). There was no main effect of gender on depression scores after controlling for the effect of level of religiosity, *F* (1,169) = .842, *p* = .360, *MSe* = .396, η_p^2 = .005. There was no interaction between religion and gender, on depression scores after controlling for the effect of level of religiosity, *F* (1,169) = .669, *p* = .414, *MSe* = .396, η_p^2 = .004.

Table 11: Means, Standard Deviations of Mental well-being and Depression scores according to Religion and Gender

Measure	Muslim				Christian			
	Male		Female		Male		Female	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Mental well-being scores	3.640	0.628	3.575	0.557	3.90	0.484	3.934	0.520
Depression scores	1.042	0.676	0.869	0.652	0.769	0.658	0.733	0.533

3.6.2 Correlations between the predictor and outcome variables across groups

Tables 12, 13, 14 and 15 show the correlations between the predictor and outcome variables for Muslim males, Muslim females, Christian males and Christian females respectively.

Table 12: Correlations among predictor and outcome variables for Muslim males

	Level of religiosity	Number of negative LST events	LST typicality scores	LST idiosyncrasy scores	Number of scripted LST events	Mental well-being scores	Depression scores
Level of religiosity	-						
Number of negative LST events	.005	-					
LST typicality scores	-.154	-.035	-				
LST idiosyncrasy scores	-.030	.168	-.582**	-			
Number of scripted LST events	-.113	.316	-.108	.143	-		
Mental well-being scores	.502**	.040	-.041	.022	-.065	-	
Depression scores	-.179	.352*	-.074	.184	.233	-.284	-

*p< .05, **p < .01

Table 13: Correlations among predictor and outcome variables for Muslim females

	Level of religiosity	Number of negative LST events	LST typicality scores	LST idiosyncrasy scores	Number of scripted LST events	Mental well-being scores	Depression scores
Level of religiosity	-						
Number of negative LST events	-.080	-					
LST typicality scores	.367*	.385**	-				
LST idiosyncrasy scores	-.103	.019	-.229	-			
Number of scripted LST events	.215	-.009	.352*	-.234	-		
Mental well-being scores	.359*	-.014	-.012	.011	-.097	-	
Depression scores	.102	.046	.153	-.118	.180	-.181	-

*p< .05, **p < .01

Table 14: Correlations among predictor and outcome variables for Christian males

	Level of religiosity	Number of negative LST events	LST typicality scores	LST idiosyncrasy scores	Number of scripted LST events	Mental well-being scores	Depression scores
Level of religiosity	-						
Number of negative LST events	-.185	-					
LST typicality scores	.202	-.373**	-				
LST idiosyncrasy scores	-.023	.117	-.579**	-			
Number of scripted LST events	.161	-.093	.081	-.239	-		
Mental well-being scores	.165	-.221	.086	.034	-.195	-	
Depression scores	-.211	.305*	-.106	-.083	.246	-.342*	-

*p< .05, **p < .01

Table 15: Correlations among predictor and outcome variables for Christian females

	Level of religiosity	Number of negative LST events	LST typicality scores	LST idiosyncrasy scores	Number of scripted LST events	Mental well-being scores	Depression scores
Level of religiosity	-						
Number of negative LST events	.111	-					
LST typicality scores	.211	-.227	-				
LST idiosyncrasy scores	-.235	.231	-.461**	-			
Number of scripted LST events	-.026	.242	-.216	.194	-		
Mental well-being scores	.213	-.328*	.049	-.007	.083	-	
Depression scores	-.340*	.145	-.095	-.052	.253	-.287	-

*p< .05., **p < .01

3.6.2 Mental well-being

For the hierarchical regression analyses, the covariate level of religiosity was added in the first step to control for its effect on the outcome variable mental well-being scores. In the second step, number of negative LST events, LST typicality scores, LST idiosyncrasy scores, number of scripted LST events were added to determine if they predicted the outcome variable mental well-being scores while keeping level of religiosity constant. These analyses were carried out for Muslim males, Muslim females, Christian males and Christian females separately.

The results for Muslim males (see table 16), revealed that the first model was significant and explained 25% of the variance in mental well-being scores, F (1, 31) = 10.46, p = .003. The analyses revealed that there was a significant positive linear relationship between the level of religiosity (β = .502, t (32) = 3.23, p = .003) and mental well-being scores. The second model did not significantly predict mental well-being scores (p=.128). For Muslim females (see table 17), the results revealed that the first model was significant and explained 13% of the variance in mental well-being scores, F (1, 46) = 6.82, p = .012. The analyses revealed that there was a significant positive linear relationship between level of religiosity (β = .359, t (47) = 2.61, p = .012) and mental well-being scores. The second model did not significantly predict mental well-being scores (p= .131).

For Christian males (see table 18), the results revealed that both models were not significant ($ps \geq .243$). For Christian females (see table 19), the results revealed that both models were not significant ($ps \geq .127$). However, in the second model, analyses revealed that there was a significant negative linear relationship between number of negative LST events (β = -.434, t (40) = -2.70, p = .011) and a portion of mental well-being scores.

Table 16: Summary of Hierarchical Multiple Regression Analysis of Predictors of Mental well-being scores for Muslim males

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*β*	*P*
1.	.25	1,31	10.458				
Level of religiosity				.534	.165	.502	.003
2.	.26	4,27	.070				
Level of religiosity				.449	.182	.516	.006
Number of negative LST events				.014	.078	.033	.856
LST typicality scores				.002	.004	.087	.680
LST idiosyncrasy scores				.056	.137	.085	.687
Number of scripted LST events				-.005	.049	-.019	.914

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events.

Table 17: Summary of Hierarchical Multiple Regression Analysis of Predictors of Mental well-being scores for Muslim females

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*β*	*P*
1.	.13	1,46	6.818				
Level of religiosity				.352	.135	.359	.012
2.	.18	4,42	.621				
Level of religiosity				.446	.153	.456	.006
Number of negative LST events				.025	.046	.086	.593
LST typicality scores				-.002	.002	-.167	.362
LST idiosyncrasy scores				-.012	.115	-.015	.921
Number of scripted LST events				-.038	.042	-.138	.373

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events.

Table 18: Summary of Hierarchical Multiple Regression Analysis of Predictors of Mental well-being scores for Christian males

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*β*	*P*
1.	.03	1,50	1.393				
Level of religiosity				.151	.128	.165	.243
2.	.12	4,46	1.236				
Level of religiosity				.151	.133	.165	.262
Number of negative LST events				-.068	.048	-.216	.161
LST typicality scores				.000	.004	-.007	.970
LST idiosyncrasy scores				.001	.083	.002	.992
Number of scripted LST events				-.066	.040	-.241	.105

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events.

Table 19: Summary of Hierarchical Multiple Regression Analysis of Predictors of Mental well-being scores for Christian females

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*β*	*P*
1.	.05	1,39	1.848				
Level of religiosity				.270	.199	.213	.182
2.	.22	4,35	1.934				
Level of religiosity				.379	.200	.298	.067
Number of negative LST events				-.117	.043	-.434	.011
LST typicality scores				.000	.003	-.020	.908
LST idiosyncrasy scores				.082	.116	.122	.487
Number of scripted LST events				.042	.040	.168	.293

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events

3.6.2 Depression

For the hierarchical regression analyses, the covariate level of religiosity was added in the first step to control for its effect on the outcome variable depression scores. In the second step, number of negative LST events, LST typicality scores, LST idiosyncrasy scores, number of scripted LST events were added to determine if they predicted the outcome variable depression scores while keeping level of religiosity constant. These analyses were carried out for Muslim males, Muslim females, Christian males and Christian females separately.

The results for Muslim males (see table 20) and Muslim females (see table 21) revealed that both models were not significant (all *ps* ≥ .319). For Christian males (see table 22), the results revealed that the first model was not significant (p = .133). The second model was significant and explained 21% of the variance in depression scores, F (5, 46) = 2.47, p = .046. The analyses revealed that there was a significant positive linear relationship between number of negative LST events (β = .297, t (51) = 2.07, p = .044) and depression scores; and between number of scripted LST events (β = .293, t (51) = 2.13, p = .039) and depression scores. The other variables were not significant predictors (*ps* > .104). For Christian females (see table 23), the first model was significant and explained 12% of the variance in depression scores, F (1, 39) = 5.09, p = .030. The analyses revealed that there was a significant negative linear relationship between level of religiosity (β = -.340, t (40) = -2.26, p = .030) and depression scores. The second model was not significant (p=.074).

Table 20: Summary of Hierarchical Multiple Regression Analysis of Predictors of Depression scores for Muslim males

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*β*	*P*
1.	.03	1,31	1.027				
Level of religiosity				-.205	.202	-.179	.319
2.	.18	4,27	1.227				
Level of religiosity				-.193	.206	-.169	.356
Number of negative LST events				.143	.088	.303	.115
LST typicality scores				.000	.005	-.018	.934
LST idiosyncrasy scores				.073	.155	.103	.643
Number of scripted LST events				.030	.055	.101	.592

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events

Table 21: Summary of Hierarchical Multiple Regression Analysis of Predictors of Depression scores for Muslim females

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*β*	*P*
1.	.01	1,46	.487				
Level of religiosity				.117	.168	.102	.489
2.	.05	4,42	.408				
Level of religiosity				.053	.192	.046	.784
Number of negative LST events				.010	.058	.028	.870
LST typicality scores				.001	.003	.062	.751
LST idiosyncrasy scores				-.063	.145	-.069	.666
Number of scripted LST events				.043	.053	.132	.428

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events.

Table 22: Summary of Hierarchical Multiple Regression Analysis of Predictors of Depression scores for Christian males

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*β*	*P*
1.	.04	1,50	2.327				
Level of religiosity				-.263	.172	-.211	.133
2.	.21	4,46	2.442				
Level of religiosity				-.251	.171	-.202	.149
Number of negative LST events				.127	.061	.297	.044
LST typicality scores				.000	.006	-.013	.940
LST idiosyncrasy scores				-.038	.107	-.060	.725
Number of scripted LST events				.110	.052	.293	.039

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events.

Table 23: Summary of Hierarchical Multiple Regression Analysis of Predictors of Depression scores for Christian females

Step	Δ R^2	DF	*F-Change*	*B*	*SE*	*B*	*P*
1.	.12	1,39	5.090				
Level of religiosity				-.442	.196	-.340	.030
2.	.24	4,35	1.448				
Level of religiosity				-.528	.202	-.406	.013
Number of negative LST events				.050	.044	.183	.257
LST typicality scores				-.001	.003	-.032	.853
LST idiosyncrasy scores				-.172	.118	-.251	.152
Number of scripted LST events				.062	.040	.240	.130

Note: Level of religiosity; Number of negative life story events; life story typicality scores; life story idiosyncrasy scores; Number of scripted life story events.

In summary, the results above revealed that for the group differences analyses, Christian participants had higher mental well-being scores and lower depression scores compared to Muslim participants. There was no difference between male and female participants for mental well-being and depression scores. There were no religion and gender interaction effects for mental well-being and depression scores.

For the Hierarchical regression analyses predicting mental well-being scores, it was revealed that for Muslim males, and Muslim females number of negative LST events, LST typicality scores, LST idiosyncrasy scores and number of scripted LST events did not significantly predict mental well-being scores. However, level of religiosity positively predicted mental well-being scores. That is, the higher the level of religiosity scores, the higher the mental well-being scores. For Christian males number of negative LST events, LST typicality scores, LST idiosyncrasy scores, number of scripted LST events and level of religiosity did not predict mental well-being scores. For Christian females, it was revealed that the number of negative LST events negatively predicted mental well-being scores, that is, the higher the number of negative LST events, the lower the mental well-being scores. LST typicality scores, LST idiosyncrasy scores, number of scripted LST events and level of religiosity did not significantly predict mental well-being scores.

For the Hierarchical regression analyses predicting depression scores, it was revealed that for Muslim males and Muslim females, number of negative LST events, LST typicality scores, LST idiosyncrasy scores, number of scripted LST events and level of religiosity did not significantly predict depression scores. For Christian males, number of negative LST events and number of scripted LST events positively predicted depression scores. That is, the higher the number of negative LST events and scripted LST events the higher the depression scores. For Christian females, level of religiosity negatively predicted depression scores. That is, the higher the level of religiosity scores, the lower the depression scores.

Chapter 4

DISCUSSION

This study extended the understanding of the cultural life script by determining the influence of religion and gender on the life scripts, life stories and psychological well-being of Nigerian young adults (a less WEIRD demographic). The study's main objectives were to determine the main and interaction effects of religion and gender on the life scripts; to determine the main and interaction effects of religion and gender on the life stories; to determine the overlap between life scripts and life stories across religion and gender; to make a cross-cultural comparison of life scripts for Muslims and Christian participants, and to determine if there was a relationship between a culturally coherent life story and psychological well-being across religion and gender.

In line with these objectives, this study made the following suggestions: First, it was predicted that there will be no significant difference between the cultural life scripts of Muslim and Christian participants. The first hypothesis was partially supported, in that while there were no significant differences in the LSC event characteristics ratings (i.e. prevalence, importance and valence) and the LSC idiosyncrasy scores of Muslims and Christians; there were differences found in the LSC age estimates ratings, Christians had higher age estimates for their LSCs than Muslims. There were also differences found in the LSC typicality scores with Christians producing a more typical life script than Muslims. The covariate level of

religiosity had no effect on all the LSC variables mentioned aside from importance rating and idiosyncrasy scores.

Second, it was predicted that there will be no difference between the cultural life scripts of male and female participants. The second hypothesis was partially supported, in that while there were no significant differences in the LSC event characteristics ratings (i.e. age estimates, prevalence and importance) and the LSC idiosyncrasy scores of males and females; there were differences found in the LSC valence ratings; males rated their LSCs more positive than females. There were also differences found in the LSC typicality scores with males producing more typical LSCs than females. The covariate level of religiosity had no effect on all the LSC variables mentioned aside from importance rating and idiosyncrasy scores.

Third, it was predicted that there will be no significant difference between the cultural life scripts of Muslim and Christian participants across gender. The third hypothesis was partially supported, in that while there were no interaction effects for the LSC event characteristics (i.e. age estimates, prevalence, importance and valence) and idiosyncrasy scores across religion and gender; there was an interaction effect for LSC typicality scores. For Christians, females had a more typical life script than men, while for Muslims; males had a more typical life script than females. The covariate level of religiosity had no effect on all the LSC variables mentioned aside from importance rating and idiosyncrasy scores.

Fourth, it was predicted that there would be no significant difference between the life stories of Muslims and Christians. The fourth hypothesis was supported, in that there were no significant differences in the LST event characteristics ratings (i.e. age estimates, prevalence, importance and valence); typicality scores and

idiosyncrasy scores of Muslims and Christians. The covariate level of religiosity only had an effect on the LST variables importance rating, and typicality scores.

Fifth, it was predicted that there would be no significant difference between the life stories of males and females. The fifth hypothesis was partially supported because while there were no significant difference in the LSTs event characteristics ratings (i.e. age estimates and prevalence) of males and females; there were differences found with the importance rating with males rating their LSTs as more important than females; and in valence ratings with males rating their LSTs as more positive than females. Additionally, females had a more typical life story than males; and males produced more idiosyncratic events than females. The covariate level of religiosity only had an effect on the LST variables importance rating, and typicality scores.

Sixth, it was predicted that there will be no significant difference between the life stories of Muslim and Christian participants across gender. The sixth hypothesis was partially supported because while there were no interaction effects in the LSTs event characteristics ratings (i.e. age estimates, importance and valence) across religion and gender; there was an interaction effect for prevalence rating for LSTs, for Muslims, males had higher prevalence rating than females; while for Christians, females had higher prevalence rating than males. The covariate level of religiosity only had an effect on the LST variables importance rating, and typicality scores.

Seventh, it was predicted that there would be a high overlap between the cultural life scripts and personal life stories of Muslim males, Muslim females, Christian males and Christian females. The seventh hypothesis was supported because there was a significant overlap between the life scripts and life stories of

Muslim males (61.29%), Muslim females (78.79%), Christian males (68.97%) and Christian females (73.33%) as predicted.

Eighth, it was predicted that there would be a partial overlap between top ten events mentioned from the present study and studies carried out in Turkish (Tekcan et al., 2012), and Qatari (Ottsen & Bernsten, 2014) societies for Muslim participants, and for studies carried out in the Danish (Bohn, 2010) and American (Tungjitcharoen & Berntsen, 2020) societies for Christian participants. The eighth hypothesis was supported because there was an overlap of four events each for Muslims and Christians with said societies as predicted.

Finally, it was predicted that a culturally coherent life story would be associated with higher mental well-being scores and lower depression scores across gender and religion. The final hypothesis was not supported in that; a culturally coherent life story did not always lead to higher mental well-being or lower depression scores in Muslim males, Muslim females, Christian males and Christian females as predicted.

In the following sections, the results from this study will be discussed in greater detail. First, it will be determined if the results from this study align with or contradict previous literature. Then the implication of these findings in regard to the life script account will be discussed.

4.1 Life scripts across groups

First, the comparisons for the "Events in the life scripts" revealed that there was a significant overlap (63.33%) across the four groups compared, which supports the stability of the life scripts in line with previous studies that have shown substantial overlap across group comparisons (Bohn, 2010; Tekcan et al., 2012). For example the Bohn (2010) study showed a 68.42% overlap between the young and old

groups compared; Tekcan et al. (2012) showed a 49.00% LSC overlap across adolescents, young adults and older adults. In addition to this, it was revealed that while there was a significant consensus on events mentioned in the life scripts across all groups with the 63.33% overlap, for the remaining events in the life scripts (i.e. the events that did not overlap across all groups), Muslim females and Christian females had the most events in common with a 45.45% overlap while Muslim males and Christian females had the least events in common with a 9.09% overlap.

This suggests that females from both religions had agreed with each other the most when it came to the types of events that should be included in the life script. The reason for this high level of agreement between women from both religions can be supported by the Droeber (2012) qualitative study comparing the differences and similarities in the socio-cultural and religious practices between Muslim and Christian women in Middle-East Jordan. The results for the study revealed that although there appeared to be slight differences between Muslim and Christian women, these differences stemmed from issues like gender segregation (with Muslim women experiencing it more than Christian women) and theological outlook (i.e. religious practices). However, when it came to their ideological beliefs, values, attitudes and behavioural patterns, the women from both religions had more similarities than differences.

On the other hand, Muslim men and Christian women had the least agreement when it came to events they thought should be included in the life script. The reason for this might be due to the interactive influences of culture, religion and gender. For example, the major difference between the LSCs of Muslim men and that of Christian females lie with Muslim males mentioning *Islamic events* and *Sports events* as part of their life scripts. The mention of Islamic/religious events was the same as

the Ottsen and Bernsten (2014) study where Muslim men tended to mention more religious/Islamic events compared to their female counterparts; additionally, the mention of *sports events* though not mentioned in previous life script studies (Bernsten & Rubin, 2004, Bohn, 2010;Janssen et al., 2014; Ottsen &Bernsten; 2014; Tekcan et al., 2012; Tungjitcharoen & Berntsen, 2020) is an important part of male bonding culture in Nigeria (Odegbami, 2021).

Second, it was revealed that 5 of the 10 high frequency LSC events mentioned were identical across groups. These figures are similar to previous studies (Bohn, 2010; Janssen & Rubin, 2011; Tekcan et al., 2012). Additionally, new culture specific events were identified in this study including *skills acquisition, starting a business, national youth service corps, sports events, loved ones naming ceremony* and *loved one's marriage*. The identification of these new events is in line with previous studies where culture specific events were also found. For example, in the Tekcan et al. (2012) study, culture specific events like *national high school entrance exam, university entrance exam* and *military service* were included in the Turkish life script; in the Ottsen & Bernsten (2014) study, culture specific events like *Gender divided social skills*, *Women's independence* and *Ennah* (a trip for young men) were part of the Qatari life script; in the Janssen et al. (2014) study, culture specific events like *seijinshiki ceremony* and *shichi-go-san festival* were part of the Japanese life script; and in the Bohn and Bundgaard-Nielsen (2020) study, culture specific events like *Teaching grandchildren about Nunggubuyu culture, Learn about Nunggubuyu culture* and *Learn to take care of oneself* were part of the Nunggubuyu life script.

To sum up, these findings are in line with the life script theory and reveal that while the life scripts tends to be considerably similar across cultures (Erdogan, 2008; Ottsen & Bernsten, 2014; Rubin et al., 2009); the norms, values and structure of a

society also influences expectations of how the life course should be, thereby influencing the contents and order of events in the life script (Bernsten & Rubin, 2004; Ottsen &Bernsten; 2014). Therefore, while some events might be present in the life script of people from a culture, those same events might be absent in the life scripts of people from a different culture (Janssen et al., 2014).

Third, it was found that there were no differences in the percentage of religious events generated across groups. Though this study did not emphasize religious affiliation in the life script task, the findings were in line with the Tungjitcharoen and Berntsen (2020) study which emphasized religious affiliation. In their study, Muslim and Christian participants did not differ in the percentage of religion specific events mentioned. It however, contradicted the Ottsen and Bernsten (2014) study that had similar instructions with the present study in the life script task. In their study, Muslim males were shown to produce more religious events compared to Muslim females. The reason for the difference between the Ottsen and Bernsten (2014) study and the present study was thought to be due to separation between males and females in the Qatari society leading to the development of separate subcultures between the two genders. On the other hand, the Nigerian society, while religious and conservative is still a secular state with a national gender equality policy for women (Para-Mallam, 2006), so there are no separation laws which could influence the life script as seen in the Qatari demographic.

Additionally, participants generated events specific to the religion they belonged to just as predicted. However, it was also noticed that some participants mentioned religious activities from the other religion. Examples of Christian events mentioned my Muslim participants include *Christmas* and *Sunday school;* while the Muslim event mentioned by Christian participants was always *Eid festival.* These

findings were in line with the Tungjitcharoen and Berntsen (2020) study where some participants from other religions mentioned another religion's event as part of their life script. The mention of Christian events by participants from other faiths in their study was alluded to Christianity being the dominant religion in the United States, while the mention of Hindu events by Buddhist participants was alluded to the similarities between the two religions.

In this case however, Christianity and Islam are both dominant religions in Nigeria with roughly an equal percentage of Nigerians practicing either religion (Pew Research Centre, 2020). Therefore, the state is equally favourable to both religions when it comes to laws and policies. For that reason, you find religious events and holidays for Christians and Muslims being adhered to by members of both religions. Hence why people from both faiths are more likely to observe and participate in some of each other's religious events and holidays. These findings support the life script theory in that, life scripts do not necessarily represent actual life events but instead are extracted from the structure and traditions of the society one belongs to (Bernsten & Rubin, 2004). In this case, since the laws and policies of the Nigerian society support religious cooperation as a tradition, it is no surprise that members of both religions would mention each other's religious events as part of their life scripts. In sum, these findings reveal that because religion plays a role in shaping culture (Hulsether, 2005); if religiosity is highly regarded in a society, influences of religion will be present in the life script of people in said societies (Geertz & Banton, 1966).

Fourth, for the "event characteristics" of the LSCs, it was revealed that for effect of religion, aside the slight difference between Christians and Muslims when it came to age estimates, there were no differences when it came to event prevalence, event importance and event valence ratings. Participants rated their LSC events as

highly prevalent, very important and mostly positive in line with previous literature (Jansen & Rubin; 2011; Janssen et al., 2014; Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020).

However, it was noted that the covariate level of religiosity influenced the importance ratings of LSCs. This finding was similar to the Tungjitcharoen and Berntsen (2020) study where religiosity significantly correlated with the event importance ratings of participants. For the typicality scores of LSCs, it was revealed that Christians produced a more typical life script than Muslims. In other words, Christians agreed more with other Christians in terms of events to be contained in the life script than Muslims contradicting the Tungjitcharoen and Berntsen (2020) study where the content of the life scripts of Muslims and Christians participants did not differ. These differences might be because while Christians in Nigeria largely have similar ideologies and values due to the Nigerian Christian community's tendency to embrace different traditions and ethnicities (Beyer, 1997; Enang, 2012); Northern and Southern Muslims tend to have differences when it comes to their ideologies and value systems. In that, Northern Muslims tend to have more conservative Islamic views than their Southern counterparts (Odeh, 2012).

For effect of gender on event characteristics, while there were no differences found between males and females in age, prevalence and importance ratings, in line with previous literature (Erdogan et al. 2008; Janssen et al., 2014; Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020); differences were found in males and females when it came to valence rating, with males rating their LSCs as more positive than females. While this contradicts LSC studies that have found no gender differences in valence rating (Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020); it is in line with other memory studies that have shown that females tend to

recall more negative events and information than males (Dewhurst et al. 2012; Staugaard & Bernsten, 2021). Males also had more typical LSCs than females contradicting the Janssen et al. (2014) study that found no gender differences in the LSCs. The reason for this might be due to the gender roles in the Nigerian society where males are usually ladened with the responsibility of being the primary bread winners in the family (Enfield, 2019). As a result, males are more likely to follow a similar life path that ensures their ability to get access to jobs that will help them take care of their families sufficiently (Ojo, 2002). This can be seen in the present study were 8 out of the 10 top ten life script events for males were events that had to do with getting an education, having a job and career experiences while it was 6 out of 10 for females.

For interaction effects of religion and gender on LSC event characteristics, no differences were found in line with previous studies (Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020). However, it is interesting that there was an interaction for LSC typicality with Christian females reporting more typical LSCs than Christian males and Muslim males reporting more typical LSCs than Muslim females. Level of religiosity had an effect on importance rating for the LSCs in line with the Tungjitcharoen and Berntsen (2020) study.

Fifth, for the "valence for the life script events", it was revealed that while Muslim males and Christian males produced similar number of positive events. Muslim males produced more positive events than Muslim females and Christian females and Christian males produced more positive events than Muslim females. This finding is similar to the Ottsen and Bernsten (2014) where gender differences were found in the types of LSC events generated with men producing more positive events compared to women. Finally, the lifespan distribution of LSCs showed similar

bumps for positive events in the second and third life decades across groups in line with previous studies (Bohn, 2010; Ottsen & Bernsten, 2014; Rubin & Berntsen, 2003; Tekcan et al., 2012).

In addition, there was also a bump for negative events across groups. Muslim females, Christian males and Christian females had their bumps situated in the teenage years in line with the young adults in the Tekcan et al. (2012) study. However, it is important to note that the events that caused the bump in the Tekcan et al. (2012) study were events that had to do with high school and university entrance exams. In the present study however, the events that caused the bump were non-transitional events like *own illness, accident, problems with friends* etc. Furthermore, it was interesting that Muslim males were the only group that had their bump skew more towards the 20's and also had a smaller bump in the 40's with the event mentioned being *own illness.* The reason for these differences might be due to interplay between factors that have not yet been determined.

In summary, despite minor variations noted, the findings above largely support the stability of the life script across gender and religion. Participants' life scripts were dominated by positive events and had a clear reminiscence bump for positive events. However, a bump was also observed for negative events contradicting the life script theory. In addition, the influence of religion on the life script that has been reported in previous studies (Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020), were also replicated alluding to the influence of religion on the life script.

4.2 Life stories across groups

First, the comparisons for the "Events in the life stories" revealed that there was an overlap of (58.33%) across the four groups compared. It was also revealed

that 4 of the 10 high frequency LST events mentioned were identical. These figures were similar to the Bohn (2010) study which showed a 42.50% overlap and an additional 3 out of 10 overlap for high frequency LST events between young and old groups. Additionally, new culture specific events were identified in this study including events like *loved one's marriage, skills acquisition, sports events; national youth service corps, recreational activities, starting a business, having property, receiving a gift,* and *embarrassing experience*. These findings are in line with studies that have identified culture specific events in the life story like the Usta (2010) study that identified *university entrance exams* and *military service* as part of the life story events of the Turkish people; and the Bohn and Bundgaard-Nielsen (2020) study that identified events like *Learning fishing, hunting and food gathering, Learning about Nunggubuyu culture* and *Teaching children about Nunggubuyu culture* as part of the life story events of the Nunggubuyu people.

To sum up, similar to the life scripts, it can be seen that the norms and structure of a society also structure the recall of autobiographical memories in line with the life script theory (Bernsten & Rubin, 2004). Additionally, while the life script guides the recall of autobiographical memories, it is a representative of an idealized life rather than actual life experiences, hence, events that are not in the life script can be a part of the life story (Bernsten & Rubin, 2004; Janssen et al., 2009). In the present study, these unscripted culture specific events were *recreational activities*, *having property*, *receiving a gift* and *embarrassing experience.*

Second, it was also found that the only difference in the religious events generated was found between Christian males and Muslim males with Christian males generating more religious events than Muslim males. These results contradict life script study by Tungjitcharoen and Berntsen (2020) that show that there were no

differences in religious events generated between Muslim and Christian participants. The difference in the present study could be due to the fact that Nigerian Christian males generally have more Christian events compared to Nigerian Muslim males. For example, while it is the case that Muslim males usually have Mosque prayers as their primary religious event. In Nigeria, you find that Christian males have various religious activities aside attending church services. Such activities include going for regular bible study sessions during the week, going for Christian conferences, church camp etc. All these activities add up and could be the reason why Christian men tend to mention more religious activities compared to Muslim men.

Additionally, just as predicted, participants' generated events specific to the religion they belonged to. For Muslim males and females these events included *begin Islamic school, Eid festival* and *Mosque prayers;* while for Christian males and females these events included *child dedication ceremony, Christmas* and *Church service*. However, it was also noticed that some participants mentioned religious activities from the other religion. Examples of Christian events mentioned my Muslim participants include *Christmas, Child dedication ceremony* and *Sunday school;* while the Muslim event mentioned by Christian participants was always *Eid festival.* While these findings are similar to the findings in the LSCs that were discussed in the previous section and also support the Tungjitcharoen and Berntsen (2020) study, it is important to note that Muslim males LSC religion specific events (15 events) were almost twice the number of their LST religion specific events (8 events). While these differences were not significant, it is similar to what was found in Muslim males in the Ottsen and Bernsten (2014) study where there were far less religious events in the life stories than the life scripts of Muslim males. In that study, the reason for this difference was alluded to childhood amnesia, a phenomenon

where individuals are unable to recall most events that occur within the first 4-7 years of their lives (Nelson, 1993; Rubin et al., 1986; Rubin, 2000). In the study, most religious events for Muslim males occurred in the early life period, giving credence to the suggestion that "childhood amnesia" might have been the reason that many of those LSC religious events weren't mentioned in the LSTs. It is suggested that it is the same case as the present study because it was observed that the average age for Muslim males' religion specific events rose from "8.27" in the LSCs to "16.00" in the LSTs. This suggests that a lot of the early life religion specific events for Muslims were not included in the LSTs probably due to childhood amnesia.

Furthermore, the participants generated events specific to the religion they belonged to just as predicted. However, unlike in the life scripts where quite a number of participants mentioned religious events from the other religion; in the LSTs, only Muslim females mentioned Christian events as part of their life stories. These events mentioned include *Christmas, child dedication ceremony* and *Sunday school*. This finding is similar to the Tungjitcharoen and Berntsen (2020) study where some participants from other religions mentioned another religion's event as part of their life script. However, it is quite interesting that only Muslim females mentioned the other religion as part of their life stories.

Third, for the "event characteristics" of LSTs, effect of religion revealed no differences between Muslims and Christians in age estimates, event prevalence, event importance, event valence, typicality scores and idiosyncrasy scores. Similar to the LSCs, participants rated their LST events as highly prevalent, very important and mostly positive in line with previous literature (Janssen & Rubin; 2011; Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020). For effect of gender, there were no differences in the LST event characteristics age estimates and prevalence rating of

males and females in line with previous studies (Janssen et al., 2014; Tungjitcharoen & Berntsen, 2020). However, males rated their LSTs as more positive than females in line with previous memory studies that have shown than females tend to recall more negative memories than males (Ross & Latorre, 2010; Staugaard & Bernsten, 2021). Males rated their LST events as more important than females probably due to Nigeria being a patriarchal society that places the pressure of achieving personal landmarks on males than they do females (Makama, 2013). It was interesting to find that for the LSTs, females had a more typical life story than males while it was the opposite in the LSCs.

For interaction effects of religion and gender on LST event characteristics no differences were found for age estimates, importance and valence in line with previous studies (Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020). However, there were interactions found for prevalence with Muslim males producing higher prevalence rating than Muslim females, and Christian females producing higher prevalence rating than Christian males. However, it is important to note that the effect was minimal. Additionally, just like the LSCs, level of religiosity influenced importance ratings between religions. Again this was similar to the correlation found between religiosity and importance ratings of participants in the Tungjitcharoen and Berntsen (2020) study. For the typicality scores of LSTs, It was revealed that the level of religiosity had an effect on life story typicality. This comes as no surprise since religious people tend to have a more structured lifestyle and engage in more social and religious events with other people from their religion (Barnaz-Garza et al., 2013). This could be the reason why religious people will agree more with other religious people of their religion on what they consider important life events (Ottsen & Bernsten, 2014).

Fourth, for the "valence for the life story events", it was revealed that Muslim males, Christian males and Christian females produced more positive events than Muslim females. Muslim males and Christian males produced more positive events than Christian females; and Muslim males produced more positive events than Christian males. These findings are partially in line with previous studies that have shown that Males tend to recall more positive events and less negative events compared to females (Dewhurst et al., 2012; Gunn, 2014). However, it does not answer the question of why there were differences between positive events produced between Muslim males and Christian males and between Muslim females and Christian females. These differences could be due to some interaction effects of religion and gender.

Finally, aside from a skew towards the second decade of life noticed in Muslim females, the lifespan distribution of LSCs showed similar bumps for positive events in the second and third life decades in line with previous studies (Bohn, 2010; Rubin & Berntsen, 2003; Ottsen & Bernsten, 2014). There was also a bump for negative events across groups; however, while Muslim females, Christian males and Christian females' bumps were situated in the teenage age, similar to the LSCs from this study and the LSCs from the Tekcan et al. (2012) study, Christian males had their bump more equally distributed between their teenage years and their 20's. Again this might be due to interplay between religion and gender.

In summary, despite minor differences, the broad similarities across groups show that life stories are also stable across gender and religion. Participants' life stories were dominated by positive events and had a clear reminiscence bump for positive events. However, a bump was also observed for negative events contradicting the life script theory. In addition, the influence of religion on the life

script that has been reported in previous studies (Ottsen & Bernsten, 2014; Tungjitcharoen & Berntsen, 2020), were also replicated in the life story, showing that just like the life script, religion also plays a role in the life story strengthening the notion that life scripts structure the recall of autobiographical memory (Bernsten & Rubin, 2004).

4.3 Overlap between life scripts and life stories

This study revealed that more than half of all the life story events matched the life script events across all groups with no significant difference in overlap. The percentage overlaps were 61.29% for Muslim males, 78.79% for Muslim females, 68.97% for Christian males and 73.33% for Christian females. This results are similar to the Thomsen and Bernsten (2008) study where participants had a 61.00% overlap, the Rubin et al. (2009) study where participants had a 70.00% overlap, the Bohn (2010) study where young adults had a 65.70% overlap and the Zaragoza-Scherman et al. (2017) cross-cultural study where participants from, Greenland (66.00%), Denmark (68.00%) China (53.00%) and Mexico (64.00%) all showed significant overlaps for scripted life story events. It is also important to note that of all the scripted life story events, 94.74% came from the bump period for Muslim males, 92.31% for Muslim females, 95.00% for Christian males and 95.45% for Christian females, also in line with the Bohn (2010) study where 77.78% of scripted life story events of young people came from the bump period. This study's findings extends the understanding of the life script by proving that the life script guides the recall of autobiographical memories; it also gives evidence of the recall bias for events that occur in adolescence and early adulthood (Bernsten & Rubin, 2004; Bohn, 2010).

In addition, it is also important to note that the starting point of LSC events were slightly higher than those of LST events especially for Muslim males. This finding is similar to what was found in the Ottsen and Bernsten (2014) study, and just like that study, the events that were responsible for the elevated starting point was *religious events* for Muslim males and females and *begin school* for all the groups. The explanation for this phenomenon might be attributed to childhood amnesia, as this better explains why the 0 to 7 year events that peaked in the LSCs did not peak in the LSTs (Pillemer & White, 1989). Studies carried out on childhood amnesia have shown that people have difficulty recalling events that occurred from the first 4 to 6 years of their lives (Pillemer & White, 1989; Rubin et al., 1986). The Jack and Hayne (2010) study supporting the Newcombe et al. (2007) model of the two stage process of childhood amnesia found that participants had sporadic memory recall of events before 4 years of age and even up to the age of 7 memories were still sparse and isolated. This explains why events that occurred up to the age of seven had difficulty being recalled, and why events like "*begin school*" was mentioned almost three times less frequently in the LSTs compared to the LSCs across groups, and also why for Muslim participants religious events like "*begin Islamic school"* which made up the bulk of Islamic events mentioned in the LSCs was two times less frequently mentioned in the LSTs.

It was also found that Muslim females, Christian males and Christian females had more positive LSCs compared to LSTs as with previous studies proving that the life scripts are idealized while the LSTs represent reality (Bernsten & Rubin, 2002; 2004). However, it is interesting that Muslim males did not differ in the number of positive LSCs and LSTs.

4.4 Cross-cultural comparison of life scripts

The cross-cultural comparisons supported the notion for the stability of the life script as there were similarities drawn from the top ten events of the cultures compared just like previous studies (Berntsen & Rubin, 2004; Bohn 2010; Ottsen & Bernsten, 2014). For Muslim cultures, there were four common events mentioned by Turkish (Tekcan et al., 2012); Qatari (Ottsen & Bernsten, 2014), and Nigerian Muslim participants from the present study. These events include *marriage, begin school, begin university* and *begin working/job*. For Christian cultures, there were four common events mentioned by Danish (Bohn, 2010); American (Tungjitcharoen & Bernsten, 2020), and Nigerian Christian participants from the present study. These events include *having children, begin school, marriage, and religion specific events.*

Overall, the comparisons showed the dominance of positive events in the top ten events of the life scripts across cultures in line with previous studies (Bernsten & Rubin, 2004; Bohn, 2010, Rubin et al., 2009).

4.5 Relationship between a culturally coherent life story and psychological well-being

4.5.1 Group differences for mental well-being and depression scores

This study primarily defined a culturally coherent life story as a life story that is marked by more positive transitional life events than negative events. Therefore, the greater the number of negative events in the life story the lower the mental well-being scores; and the higher the depression scores (Bohn, 2010).

First, the analysis revealed that level of religiosity was significantly related to mental well-being scores. The higher the religiosity scores of participants, the higher their mental well-being scores. This is in line with previous studies that have shown that religiosity positively predicts mental well-being (Abu-Raiya et al., 2015; Kim-

Prieto &Miller, 2018; Yoon & Lee, 2004). However, level of religiosity was not related to depression scores. While this result contradicts some studies that have shown than religious individuals have lower depression incidence than non-religious persons (Brown & Gary, 1994; Koenig et al., 1992). It is important to note that after controlling for factors like demography and the comfort derived from religion, such associations are either weakened (Fehring et al., 1987; Hällström & Persson,1984); or are not observed at all (Mosher & Handel, 1997; Gupta et al., 2011).

Second the main effect analyses revealed that Christians provided higher mental well-being and lower depression scores than Muslims. This finding is in line with previous literature that has shown that Christians are more likely to speak up when they experience a mental health challenge and are also more likely to seek professional mental healthcare compared to Muslims (Ibrahim & Whitley, 2020). One of the possible reasons for seeking help when under mental stress is because at the religious level, there tends to be a culture of pastoral counseling and psychosocial rehabilitation in Christian communities (Bussema & Bussema, 2000); in addition to that, the collaboration between Christian clergy and Clinicians through healthcare outreach programs in churches make it easier for Christians to access mental healthcare when they are in need of it (Ryan et al., 2020; Wells et al., 2004). On the other hand, previous studies have found low rates for the referral of congregants by Muslim chaplains (Abu-Ras, 2011; Abu-Ras et al., 2011; Weatherhead et al, 2010). Another reason is that, Muslims more often than Christians tend to believe in the ability of spirit beings (jinn) to take over one's body influencing their actions and thought processes (Dein & Illaiee, 2013). As a result, mental health conditions like depression, anxiety etc. tends to be viewed as spiritual attacks that need spiritual intervention as opposed to Clinical treatment (Ibrahim &Whitley, 2020).

Third, no gender differences were found in mental well-being and depression scores. These finding is supported by the meta-analyses study by Salk et al. (2017). In their study of participants from over 90 nations, they found that while gender differences for depression were more pronounced during adolescence; in adulthood, the differences observed reduced and became stable. Additionally, they also found that in countries with more gender equity, gender differences were found only in major depression and not in minor symptoms of depression. Fourth, there were no interaction effects of religion and gender on mental well-being and depression scores, showing that in this sample, religion and gender do not significantly influence mental well-being or depression levels. These findings are similar to the Cokley et al. (2012) carried out on African American college students. In the study, gender did not moderate the relationship between religious engagement and mental health status.

4.5.2 Predictors of mental well-being and depression scores

In order to perform a hierarchical analysis, the predictors of mental well-being and depression scores were identified. The level of religiosity scores was added to the first step as a covariate. While the main predictor variable of study, number of negative LST events, and additional predictor variables like LST typicality scores, LST idiosyncrasy scores and number of scripted LST events were added to the second step of the regression model.

4.5.3 Mental well-being

For mental well-being, in the first step, level of religiosity predicted mental well-being scores for Muslim males and females. This is in line with previous studies that have shown that religiosity plays an important role in life satisfaction and subjective mental well-being (Ellison et al., 1989; Ellison, 1991; Koegnig, 2012). This is due to the fact that for some individuals, religiosity might be a helpful way to

cope with negative life events thereby acting as a protective factor towards the adverse effects that might come with life stressors. It could also be the case that for some religious people, negative life events enhances their faith thereby making them more resilient to life stressors (Connor et al., 2003). Conversely, as in the case of Christian males and females, it is true that religiosity might not always predict mental well-being as there are several moderators and mediators that could influence the relationship between religiosity and mental well-being like perceived social support, self efficacy and sense of coherence (George et al., 2002). Additionally, studies have also shown that the impact of religiosity on mental health is also more evident in people who are experiencing stressful circumstances at present, so previous negative events might not be affected by religiosity as much as present challenges will be (Moreira-Almeida et al.,2006).

For the second step, it was revealed that aside from Christian females who had the number of negative LST events predict mental well-being, none of the variables in the second step predicted mental well-being in the other three groups. While the number of negative LST events predicting mental well-being for Christian females is similar to previous studies (Rubin et al., 2009; Bohn, 2010), and LST typicality scores and LST idiosyncrasy scores not predicting mental well-being was in line with the Bohn (2010) study. The fact that number of negative LST events and number of scripted LST events did not predict mental well-being in all groups shows that there are moderators at play. This is due to the fact that various studies have shown that protective factors like individual (Masten, 2007; Reinelt et al., 2015); and social factors (Harms et al., 2018) play a part in the development of resilience in individuals that help them manage life stressors.

For example individual factors like coping styles or how neurocognitive structures in the brain respond to stressors can influence how an individual manages negative events or stressors in daily life; hence, even when faced with negative or traumatic events, they are able to resist or bounce back from such challenges (Feeney & Collins, 2014). This is the same case with social factors; studies have shown that when individuals have a strong social support network, they tend to cope better with major life stressors like divorce, job loss or a chronic illness (Harms et al., 2018; King et al., 1996). Hence, resilience built as result of protective factors could be a major reason why number of negative LST events or number of scripted LST events did not always predict mental well-being (Cohn, et al., 2009; Liu et al., 2014).

4.5.4 Depression

For depression, it was revealed that first, for Muslim males and Muslim females, none of the variables in the first and second step including level of religiosity which previously predicted mental well-being scores predicted depression scores. This finding compliments previous studies that have used the Depression-Happiness scale with the attitudinal measure of religiosity (Lewis et al., 1997; Lewis et al, 2000; Lewis, 2002). This supports the view that depending on the measurements used and the samples studied, the relationship between religiosity and depression/happiness can vary (Robbins & Francis, 1996).

Second, for Christian males, number of negative LST events and the number of scripted LST events predicted depression scores just like in the Bohn (2010) and Rubin et al. (2009) studies respectively; however, the surprising thing is that while the number of negative LST events positively predicted depression scores consistent with literature, the number of scripted LST events also positively predicted depression scores, i.e. the higher the number of scripted life story events the higher

the depression scores which is the reverse of what is found in the life scripts literature. However, in positive psychology literature, studies have shown that having an ideal life might not always determine happiness, life satisfaction or well-being. According to Misra and Srivastava (2021), while having an ideal life might in some cases lead to life satisfaction and better mental health, happiness usually depends on what one views as priorities in life and cannot be measured solely based on success metrics the society places. Additionally, a meta-analysis carried out by Lyubomirsky et al. (2005) showed that instead of success being the determining factor for happiness or well-being, it is happiness and well-being that influence individuals to pursue behaviours that lead to success in school, health, work and relationships. Furthermore, factors that have been clearly associated with life satisfaction and overall mental health include pro social behavior, creativity, positive perceptions of self and others and effective coping skills as opposed to having an idealistic life. Finally, the level of religiosity negatively predicted depression scores for Christian females just like in previous studies (Koegnig, 2012; Moreira-Almeida, 2006).

In summary, the findings above show us that while a culturally coherent life story has been consistently shown in literature to predict psychological well-being (Baerger & McAdams, 1999; Berntsen & Rubin, 2006, 2007; Bohn, 2010; Rubin et al., 2009); contrary to what was predicted, the findings in this study revealed that this is not always the case due to moderating and mediating factors.

Chapter 5

CONCLUSION

The cultural life script theory has been viewed as the best explanation for the presence of a bump for positive autobiographical events and an absence of a bump for negative autobiographical events (Berntsen & Rubin, 2002). This has been attributed to the influence of cultural expectations on the structure of the life course (Berntsen & Rubin, 2004; Zaragoza-Scherman, 2013; 2017). For this reason, individuals tend to recall positive events more than negative ones and due to most of these events being situated in the second and third decades of life, there is a reminiscence bump for this time period (Berntsen & Rubin, 2004; Rubin & Berntsen, 2003).

In order to build upon previous works that have been carried out supporting the cultural life script theory, the present study is the first to provide evidence that shows that despite minor variations, life scripts and life stories are consistent across religion and gender in a less WEIRD demographic of Nigerian young adults. The main and interaction comparisons of religion and gender revealed that most LSCs and LSTs were positive, viewed as quite prevalent, very important and expected to take place within the second and third life decades. There were also marked influences of religion by the presence of religious events in the life script. However, the presence of a reminiscence bump for negative events in the life scripts and life story suggests that a modification that considers the role of cultural differences is needed in the life script theory (Berntsen & Rubin, 2002; 2004); as a similar

reminiscence bump for negative events was also observed in the Tekcan et al. (2012) study.

Second, this study showed that despite cultural differences, the life script is stable across cultures with noticeable similarities of events mentioned across cultures. Finally, the fact that a culturally coherent life story did not always predict mental well-being and depression scores shows that psychological well-being is determined by the interplay of several factors. So while there are certain predictors of mental well-being and depression, the presence of moderators and mediators like social support, level of religiosity, resilience can also influence the relationships. In summary, the findings from this study suggest that the life script is mostly stable across religion, gender and culture; the life script plays an important role in the recall of the life story; and finally, psychological well-being is not always predicted by a culturally coherent life story.

5.1 Limitations and future directions

The first limitation of the present study is that while the distribution for Christians (53.45%) and Muslims (46.55%) were not different from each other and distribution for females (51.15%) and males (48.85%) were not different from each other; the sample sizes for males and females within each religion were unequal. Christian males (61.20%) participated more than Muslim males (38.80%), and Muslim females (53.90%) participated more than Christian females (46.10%). This unequal distribution of participants might be due to the high number of questionnaires that were excluded from the final analysis due to incomplete responses. However, even with this limitation, there have been several life script studies where group comparisons have been made using unequal sample sizes (Bohn 2010; Tekcan et al., 2012, Štěpánková et al., 2020), the fact that these studies keep

replicating the findings in the life script literature shows that despite these limitations, these findings are justifiable.

The second limitation is that there were age differences between the Muslim females (*M*= 23.96, *SD*= 0.55) and the Christian males (*M*= 26.75, *SD*= 0.52). However it is important to note that the difference is less than three years and these groups are not compared solely with each other but also with two other groups that they do not differ with, these groups are Muslim males (*M*= 25.73, *SD*= 0.66) and Christian females (*M*= 25.63, *SD*=0.52). Furthermore, age has been shown to have little influence on the life scripts as findings show that people across different ages produce similar life scripts (Bohn, 2010; Janssen & Rubin, 2011).

The third limitation is the age of participants used for this study. The participants of this study were from the ages of 18-34. Due to the fact that life scripts studies have shown differences (albeit minor ones) between younger participants and older participants (Bohn, 2010; Janssen et al., 2014; Tekcan et al., 2012); this sample might limit the generalizability of the findings from this study.

Therefore, for future studies, it will be interesting if middle aged and older participants are recruited and have their life scripts and life stories examined. This is because; older Nigerians are generally more conservative and adhere to religious values more strictly than younger Nigerians. Hence, it will be interesting to see how their life scripts and life stories compare to younger Nigerians. Second, the life script and life story instructions can be modified to emphasize ethnic identification; then after participants complete the tasks, the life scripts and life stories of the major Nigerian ethnic groups (i.e. Hausa, Igbo and Yoruba) will be compared to see if there are any differences. This will help determine if priming ethnic identification could influence how life scripts and life stories are produced. Third, future studies

should also take into account the moderating and mediating factors that influence the relationship between a culturally coherent life story and mental well-being or depression scores. Fourth, future studies should compare Nigerian Muslims and Christians with those who adhere to indigenous religions or are unaffiliated with any religion in order to determine if differences will be observed.

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APPENDICES

Appendix A: Ethics Approval Letter

Reference No: ETK00-2020-0191 05.08.2020

Subject: Your application for ethical approval.

Re: Rahila Rachael Jatau (18500551)
Department of Psychology

EMU's Scientific Research and Publication Ethics Board (BAYEK) has approved the decision of the Ethics Board of Psychology (date: 04.08.2020, issue: 13) granting Rahila Rachael Jatau from the Department of Psychology to pursue with her work titled **"Cultural life scripts, personal life stories and psychological well-being of Nigerian young adults"** supervised by Assist. Prof. Dr. Burcu Kaya Kızılöz.

Prof. Dr. Yücel Vural
Chair, Board of Scientific Research and Publication Ethics - EMU

YV/ns.

Appendix B: Informed Consent Form

ABOUT STUDY (NOTE: Please participate only if you are from 18-34 years old)

What is this study about? This study is about "The typical life events and experiences of Nigerian young adults". It aims to investigate the life events of young Nigerians aged from 18-34 and the experiences gotten as a result of such events.

How long does it take to complete? It should take an average of 20-25 minutes to complete.

Risks for participating in this study: There are no projected risks for participating in this study.

Benefits/Incentives for participating: There will be no financial incentive for participating in this study, however, by participating in this study, you will be lending your support to a study that aims to understand the life experiences of the Nigerian youth and thus will be contributing to expanding academic literature in this field.

Is participation voluntary? Yes it is completely voluntary, you are not obliged to participate in this research and are free to refuse to participate. You may also withdraw from the study at any point without giving any reasons. In this case, all of your responses will be omitted from the research.

Confidentiality- If you agree to participate and complete the study, all responses you give will be treated confidentially. We will also not be asking for your name or any identification so all your responses will be given anonymously. The data collected will be used strictly for research purposes, therefore after data is collected and analyzed, a report of the findings may then be submitted for publication. It will then be stored securely for a maximum of six years after study.

Research Team
Main Researcher : Rahila Rachael Jatau (racheljatau@gmail.com)
Supervisory Researcher: Dr. Burcu Kaya Kızılöz (burcu.kaya@emu.edu.tr)
Institution: Institute of Graduate studies and research, Department of Psychology, EMU.
To signify your voluntary participation, please complete the consent form below.

CONSENT FORM
Please tick the boxes to confirm that you agree to each statement.

I confirm that I have read and understood the information sheet for this study and have had the opportunity to ask any questions. ☐

I understand that my participation is voluntary and that I may withdraw from the study at any time without explanation. ☐

I agree to take part in this study. ☐

_____ _____.....
Date Signature

If you have any concerns about the ethical conduct of this study, please inform Dr. Şenel Husnu Raman, Chair of the Psychological Research & Ethics Committee at EMU in writing, providing a detailed account of your concern (shenelhusnu.raman@emu.edu.tr).

Appendix C: Demographic Information Form

Instruction: Kindly tick/fill in the blank spaces below:

Gender: Male ( ) Female ( ) Intersex ( ) Other ( ) I do not want to answer ( )

What year where you born (Please write only the year and not the age - e.g. 1989)……

Religion: Islam ( ) Christianity ( ) Other ( ) I do not have a religion ( )

Ethnicity/ Tribe……

State of origin……

Are you currently living or based in Nigeria? Yes ( ) No ( )

Have you ever been diagnosed with a mental disorder in the past? Yes ( ) No ( )

If yes, did you take any mood stabilizers or undergo therapy in the past? Yes ( ) No ()

Have you presently been diagnosed with a mental disorder? Yes ( ) No ( )

If yes, are you presently taking any mood stabilizers or undergoing therapy? Yes ( ) No ( )

Are you taking any type of medication at present? Yes ( ) No ( )

If yes, what is the name of medication? .....

Appendix D: The life script questionnaire (Berntsen & Rubin, 2004)

INSTRUCTION: Imagine an ordinary infant of the same gender as you are (imagine a boy if you identify as male and imagine a girl if you identify as female). It cannot be a specific infant that you know, but a typical infant in your culture with an ordinary life course ahead (by ordinary we mean the usual/ typical life course). Your task is to write down the seven most important events that you imagine are most likely to take place/occur throughout his/her whole lifetime.

Write the events in the same order as they come to your mind in each of the spaces provided below. Give each event a short title that specifies/describes its content.

Event 1: _____

Event 2: _____

Event 3: _____

Event 4: _____

Event 5: _____

Event 6: _____

Event 7: _____

Please answer the following questions one by one <u>for each event</u> you have stated above.

A. Event 1

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old do you think this person will be when they experience the event you specified?(Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			neither important or unimportant			most important

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	- 2	-1	0	1	2	3
very negative			neither positive or negative			verypositive

B. Event 2

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old do you think this person will be when they experience the event you specified?(Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			neither important or unimportant			most important

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	- 2	-1	0	1	2	3
very negative			neither positive or negative			verypositive

C. Event 3

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old do you think this person will be when they experience the event you specified?(Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			neither important or unimportant			most important

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	- 2	-1	0	1	2	3
very negative			neither positive or negative			verypositive

D. Event 4

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old do you think this person will be when they experience the event you specified?(Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			neither important or unimportant			most important

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	- 2	-1	0	1	2	3
very negative			neither positive or negative			very positive

E. Event 5

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old do you think this person will be when they experience the event you specified?(Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			neither important or unimportant			most important

D. Do you think this event is emotionally positive or negative from a scale of -3 to3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

F. Event 6

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100)

_____

B. How old do you think this person will be when they experience the event you specified?(Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	**2**	**3**	**4**	**5**	**6**	**7**
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

G. Event 7

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100)

_____

B. How old do you think this person will be when they experience the event you specified?(Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	- 2	-1	0	1	2	3
very negative			**neither positive or negative**			**very positive**

Appendix E: The life story questionnaire (Thomsen & Berntsen, 2008, p. 424)

INSTRUCTION: This task is about your own personal life story. You should decide which events are most central or important in the story of your life. Naturally, it should be events that you have personally experienced. There is no right or wrong answer because you know best what has been central or important in your life.

Imagine that you are to tell your life story to a new friend, whom you have just met and who does not know anything about your past. It is an imaginary friend, whom you trust completely and with whom you can be totally honest. Your task is to record the seven memories from your life (from your birth to your present age) that you think are most important or central to your life story. The memories should be about actual events from your life, not general themes or stories. That is, the memory should refer to an event lasting no more than a day. Write the events in the same order as they come to mind. You do not need to describe them in detail. Just give each event a brief heading, sentence or some keywords.

Please write each incident with a short/brief title and a few sentences.

Event 1 : _____

.....

.....

.....

.....

.....

.....

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old were you when you experienced this event? (Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	- 2	-1	0	1	2	3
very negative			**neither positive or negative**			**very positive**

Event 2 : _____

.....

.....

.....

.....

.....

.....

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old were you when you experienced this event? (Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	2	3	4	5	6	7
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

Event 3 : _____

.....

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.....

.....

.....

.....

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old were you when you experienced this event? (Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	**2**	**3**	**4**	**5**	**6**	**7**
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

Event 4 : _____

.....

.....

.....

.....

.....

.....

.....

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old were you when you experienced this event? (Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	**2**	**3**	**4**	**5**	**6**	**7**
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

Event 5 : _____

.....

.....

.....

.....

.....

.....

.....

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old were you when you experienced this event? (Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	**2**	**3**	**4**	**5**	**6**	**7**
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

Event 6 : _____

.....

.....

.....

.....

.....

.....

.....

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old were you when you experienced this event? (Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	**2**	**3**	**4**	**5**	**6**	**7**
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

Event 7 : _____

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.....

.....

.....

A. How common is this event? Out of 100 people, how many do you think will experience this event at least once during their lives? (Please rate from 0-100) _____

B. How old were you when you experienced this event? (Please specify a single age, no age range) _____

C. How important do you think this event is from a scale of 1-7? (Please circle the appropriate number)

1	**2**	**3**	**4**	**5**	**6**	**7**
not important			**neither important or unimportant**			**most important**

D. Do you think this event is emotionally positive or negative from a scale of -3 to 3? (Please circle the appropriate number)

- 3	**- 2**	**-1**	**0**	**1**	**2**	**3**
very negative			**neither positive or negative**			**very positive**

Appendix F: Warwick-Edinburgh Mental Well-being Scale (Tennant et al., 2007)

Instruction: Please tick the box that best describes your experience over the past two weeks.

S/N	Statements	None of the time	Rarely	Some of the time	Often	All of the time
1.	I have been feeling optimistic about the future.	1	2	3	4	5
2.	I have been feeling useful.	1	2	3	4	5
3.	I have been feeling relaxed.	1	2	3	4	5
4.	I have been feeling interested in other people.	1	2	3	4	5
5.	I have had energy to spare.	1	2	3	4	5
6.	I have been dealing with problems well.	1	2	3	4	5
7.	I have been thinking clearly.	1	2	3	4	5
8.	I have been feeling good about myself	1	2	3	4	5
9.	I have been feeling close to other people.	1	2	3	4	5
10.	I have been feeling confident.	1	2	3	4	5
11.	I have been able to make up my mind about things.	1	2	3	4	5
12.	I have been feeling loved.	1	2	3	4	5
13.	I have been interested in new things.	1	2	3	4	5
14.	I have been feeling cheerful.	1	2	3	4	5

Appendix G: Beck Depression Inventory, BDI – II (Beck, Steer, & Brown, 1996)

Instructions: This section consists of 21 groups of statements. Please read each group of statements carefully. And then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Please do not choose more than one statement for any group.

Group 1- 0. I do not feel sad.

1. I feel sad much of the time.
2. I am sad all the time.
3. I am so sad or unhappy that I can't stand it.

Group 2- 0. I am not discouraged about my future.

1. I feel more discouraged about my future than I used to.
2. I do not expect things to work out for me.
3. I feel my future is hopeless and will only get worse.

Group 3- 0. I do not feel like a failure.

1. I have failed more than I should have.
2. As I look back, I see a lot of failures.
3. I feel I am a total failure as a person.

Group 4- 0. I get as much pleasure as I ever did from the things I enjoy.

1. I don't enjoy things as much as I used to.
2. I get very little pleasure from the things I used to enjoy.
3. I can't get any pleasure from the things I used to enjoy.

Group 5- 0. I don't feel particularly guilty.

1. I feel guilty over many things I have done or should have done.
2. I feel quite guilty most of the time.
3. I feel guilty all of the time.

Group 6- 0. I don't feel I am being punished.

1. I feel I may be punished.
2. I expect to be punished.
3. I feel I am being punished.

Group 7- 0. I feel the same about myself as ever.

1. I have lost confidence in myself.
2. I am disappointed in myself.
3. I dislike myself.

Group 8- 0. I don't criticize or blame myself more than usual.

1. I am more critical of myself than I used to be.
2. I criticize myself for all of my faults.
3. I blame myself for everything bad that happens.

Group 9- 0. I don't have any thoughts of killing myself.

1. I have thoughts of killing myself, but I would not carry them out.
2. I would like to kill myself.
3. I would kill myself if I had the chance.

Group 10- 0. I don't cry any more than I used to.

1. I cry more than I used to.
2. I cry over every little thing.
3. I feel like crying, but I can't.

Group 11- 0. I am no more restless or wound up than usual.

1. I feel more restless or wound up than usual.

2. I am so restless or agitated; it's hard to stay still.

3. I am so restless or agitated that I have to keep moving or doing something.

Group 12- 0. I have not lost interest in other people or activities.

1. I am less interested in other people or things than before.

2. I have lost most of my interest in other people or things.

3. It is hard to get interested in anything.

Group 13- 0. I make decisions about as well as ever.

1. I find it more difficult to make decisions than usual.

2. I have much greater difficulty in making decisions than I used to.

3. I have trouble making any decisions.

Group 14- 0. I do not feel I am worthless.

1. I don't consider myself as worthwhile and useful as I used to.

2. I feel more worthless as compared to others.

3. I feel utterly worthless.

Group 15- 0. I have as much energy as ever.

1. I have less energy than I used to have.

2. I don't have enough energy to do very much.

3. I don't have enough energy to do anything

Group 16- 0. I have not experienced any change in my sleeping.

1a I sleep somewhat more than usual.

1b I sleep somewhat less than usual.

2a I sleep a lot more than usual.

2b I sleep a lot less than usual.

3a I sleep most of the day.

3b I wake up 1-2 hours early and can't get back to sleep.

Group 17- 0. I am not more irritable than usual.

1. I am more irritable than usual.

2. I am much more irritable than usual.

3. I am irritable all the time.

Group 18- 0. I have not experienced any change in my appetite.

1a My appetite is somewhat less than usual.

1b My appetite is somewhat greater than usual.

2a My appetite is much less than before.

2b My appetite is much greater than usual.

3a I have no appetite at all.

3b I crave food all the time.

Group 19- 0. I can concentrate as well as ever.

1. I can't concentrate as well as usual.

2. It is hard to keep my mind on anything for very long.

3. I find I can't concentrate on anything.

Group 20- 0. I am no more tired or fatigued than usual.

1. I get more tired or fatigued more easily than usual.

2. I am too tired or fatigued to do a lot of the things I used to do.

3. I am too tired or fatigued to do most of the things I used to do.

Group 21- 0. I have not noticed any recent change in my interest in sex.

1. I am less interested in sex than I used to be.
2. I am much less interested in sex now.
3. I have lost interest in sex completely.

Appendix H: The Revised Religious Orientation Scale (Gorsuch & MacPherson, 1989).

Instruction: Please tick the box that best describes your feelings regarding the following statements.

S/N	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I enjoy reading about my religion	1	2	3	4	5
2.	I go to church/mosque because it helps me to make friends.	1	2	3	4	5
3.	It doesn't matter what I believe so long as I am a good person.	1	2	3	4	5
4.	It is important to me to spend time in private thought and prayer.	1	2	3	4	5
5.	I have often had a strong sense of God's presence.	1	2	3	4	5
6.	I pray mainly to get relief and protection.	1	2	3	4	5
7.	I try hard to live all my life according to my religious beliefs.	1	2	3	4	5
8.	What religion offers me most is comfort in times of trouble and sorrow.	1	2	3	4	5
9.	Prayer is for peace and happiness	1	2	3	4	5
10.	Although I am religious, I don't let it affect my daily life.	1	2	3	4	5
11.	I go to mosque/church mostly to spend time with my friends.	1	2	3	4	5
12.	My whole approach to life is based on my religion.	1	2	3	4	5
13.	I go to church/mosque mainly because I enjoy seeing people I know there.	1	2	3	4	5
14.	Although I believe in my religion, many other things are important in life.	1	2	3	4	5

Appendix I: Debrief form (Here we discuss the details of the study)

Thank you very much for participating in this study with the title "Cultural Life scripts, personal life stories and psychological wellbeing of Nigerian young adults". Please take a few more minutes to read the following information, which will explain the aims of the research further. If you have any questions, please feel free to email the researchers whose contact details have been provided below.

This research is investigating religious and gender differences in the life scripts (expected life events) of Nigerian young adults. It also aims to understand how a culturally coherent life story influences the psychological wellbeing of Nigerian adults. Previous research in this field of Autobiographical memory has investigated age, gender and cultural differences in the life scripts of people from the American, Danish, Turkish and Japanese cultures. We are extending these works to investigate the similarities or differences between those cultures and the Nigerian culture in the aforementioned regard and also find out how a coherent life story (exemplified by positive memories) influences the psychological well-being of Nigerian young adults. If after participating in this study you felt any distress or discomfort and you would like to speak to a mental health professional, please find provided below the contact for two mental health organizations that offer free counseling sessions or contact either of the researchers listed in the contact information.

Mental health specialists	**Research Team Contact**
Mentally aware Nigeria (0809111MANI)	Rachael Jatau (racheljatau@gmail.com)
Safe place Nigeria (0800 800 2000- call toll free)	Dr. Burcu Kaya (burcu.kaya@emu.edu.tr)

To signify your voluntary participation and consent for the use of your responses for strictly research purposes, please complete the consent form below.

CONSENT FORM
Please tick the boxes to confirm that you agree to each statement.

I confirm that I have read and understood the debrief for this study and have had the opportunity to ask any questions. ☐

I understand that my participation is voluntary and that I may withdraw from the study at any time without explanation. ☐

I have agreed to take part in this study. ☐

_____ Date

_____ Signature

Once again thank you for your valuable contribution to this research. Your participation is greatly appreciated.