

The Influence of Sad Music on Nostalgia, Happiness, and Optimism Levels.

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ABSTRACT

The purpose of this quantitative, correlational study was to explore the effects of music on nostalgia, and assess whether practicing nostalgia results in a happier and more optimistic person. The purposive sample of 90 participants comprising young Irish adults aged 20-30 (n=45) and older Irish adults aged 65-75 (n=45) partook in a quasi-experimental, cross-sectional study in two experimental groups plus a third control group. Sad and happy nostalgic music triggers were administered to experimental groups and in one setting, empirically measured by a written questionnaire to examine influences on the criterion variables: nostalgia proneness, optimism behaviours and happiness levels. The analysis showed significant effects of sad music on nostalgia. No significant relationships were found between nostalgia behaviour and happiness/optimism. Significantly, this is the first nostalgia study undertaken in an Irish context, and indicates the effectiveness of sad music to trigger nostalgia, which in itself is deemed to be beneficial to psychological functions.

INTRODUCTION

Nostalgia in its essence is complex, involving individuals recalling their past, and resulting in personal, varied emotions. This study examines the nostalgic experiences and behaviours of young and older adults in Ireland, and explores the effects of music on nostalgic practice and emotional outcomes. This chapter begins by explaining the definition and content of nostalgia, and examines the functions, benefits and therapeutic contributions of nostalgia. The study profiles the age and characteristics of those who indulge in nostalgia; the triggers of nostalgia, specifically music; and finally the impact of nostalgia on positive affects like happiness and optimism.

Nostalgia

The word *nostalgia* is of Greek derivation, *nostos* meaning to return home or to one's native land and *algos* referring to pain, suffering, or grief (Hofer, 1934; Daniels, 1985). Originally regarded as a cerebral disease by Hofer (1934), the symptoms of nostalgia were thought to include “persistent thinking of home, melancholia, insomnia, anorexia, loss of thirst, weakness, anxiety, palpitations of the heart, smothering sensations, stupor, and fever” (McCann, 1941, p. 165). In the early 19th century, the definition of nostalgia shifted from being linked with homesickness. A late 20th century sociologist, Davis (1979) defined nostalgia as a sentimental longing for the past or a yearning for yesterday. He found participants could discriminate between nostalgia and homesickness; they associated words like *warm*, *old times*, *childhood*, and *yearning* more often with nostalgia than with homesickness. However, even during this century, nostalgia is frequently regarded as a state-of-mind that stifles growth, because individuals cannot relinquish the past (Peters, 1985).

Wildschut, Sedikides, Arndt, and Routledge (2006) tell us that social-psychological research focuses on three main constructs: the content of nostalgic experiences, the triggers of nostalgia, and the psychological functions of nostalgia. This study will examine these constructs, and will provide a rationale for the current research.

The Content of Nostalgia

In order to understand nostalgia practices, it is pertinent to examine the content of nostalgia; what nostalgics are being nostalgic about; and what particular memories they are bringing to mind. According to Holbrook and Schindler (1991), nostalgia includes far more than bittersweet, poignant or sentimental impulses, but includes any/all liking for past objects that are no longer regularly experienced: nostalgia is “a preference (general liking, positive attitude, or favourable affect) towards objects (people, places or things) that were more common (popular, fashionable or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth)” Holbrook and Schindler (1991, p. 330). A more recent definition by Boym (2002) claims that nostalgia is a sentimental longing for the past, usually for a period or place with happy personal associations. This nostalgic behaviour is an enjoyable bittersweet experience in which the individual longs for another time of their lives. “Nostalgia appears to be a longing for a place, but it is actually a yearning for a different time — the time of our childhood, the slower rhythms of our dreams” (Boym, 2007, p. 8).

Nostalgia is a free pastime, and for many individuals just closing their eyes and bringing to mind good memories can be a release from the stressors and turmoil of everyday life. Stern (1992) differentiated historical nostalgia, in which the past is perceived as preferable or superior to the present, from personal nostalgia, when the past is remembered

wistfully. Most current research now focuses on the beneficial attributes of personal nostalgia (Batcho, 1998). “Nostalgic memories, rich and evocative as they are, they are, like other memories of the past, imaginary rather than real” (Belk, 1990, p. 672). These imaginary aspects of our nostalgic memories allow us to treat the past as a safe haven where we displace our hopes and ideals (McCracken 1988). Mead states “...the past (or some meaningful structure of the past) is as hypothetical as the future” (1932, p. 12). The decision on whether to indulge in nostalgia, to determine if it is a waste of time or a meaningful exercise, is ultimately a deeply personal one.

The current study will contribute to the previous research, and will also test new hypotheses about nostalgic practice. In the current study, the nostalgic levels of respondents will be rated on two scales of personal nostalgia: firstly, to evaluate which specific items of their past they miss the most; and secondly, to measure their regular nostalgic tendencies. In the Nostalgia Inventory (NI; Batcho, 1995), participants rate the extent to which they miss 20 aspects of their past (e.g. family, friends, childhood toys, places etc.) and in the Southampton Nostalgia Scale (SNS; Routledge, Arndt, Sedikides, & Wildschut, 2008), participants measure their own general tendency to experience nostalgia.

Nostalgia for Childhood or Late Adolescence?

At the end of the 18th century, Kant claimed, “what the nostalgic desires is not the place of his youth, but youth itself, his childhood. His desire is not directed at a thing that could be recovered but toward a time that is irretrievable” (cited in Probyn, 1996, p. 115). In more recent times, however, according to Havlena and Holak, (1991), nostalgia for periods of adolescence and early adulthood, rather than childhood, appear to be stronger.

Other research has correlated the theory that individuals demonstrate the most nostalgia for memories of events that have occurred in adolescence and early adulthood. In a longitudinal study by Rubin, Rahhal and Poon (1998) on two groups of adults tested 10 years apart, recall of the most vivid memories, the most autobiographical memories, and the most important memories was highest from 10 to 30 years old. “It is the period from which peoples’ favorite films, music, and books come, and the period from which they judge the most important world events to have originated” (Rubin et al., 1998, p. 3).

One of the main characteristics of nostalgia is that it involves emotional rather than cognitive memory processes. Belk (1990) defined nostalgia as a wistful mood, prompted by a scene, an object, a smell or strain of music. Unanimously, emotion theorists define nostalgia as an emotion (Sedikides, Wildschut, & Baden, 2004). Nostalgia is essentially a social emotion (Wildschut et al., 2006), and our social relationships are a valuable component when perceiving one’s life as meaningful (Mikulincer, Florian, & Hirschberger, 2003).

In addition to building on previous research, the current study will examine differences and make comparisons between the nostalgia practices of young and older adults, to build on previous research and particularly to evaluate habits of Irish adults in nostalgia behaviours.

Psychological Benefits and Functions of Nostalgia

Nostalgic memories and experiences demonstrate a varied series of benefits. Sedikides et al. (2004) proposed that nostalgia has beneficial psychological functions. Subsequently in a number of studies by Wildschut et al. (2006) of participants writing detailed autobiographical narratives, it was demonstrated that engaging in nostalgic activity

boosts self-esteem, elevates positive mood, makes social connectedness stronger and increases the appreciation of meaning in life. Other benefits of nostalgia include its ability to potentially boost optimism, foster creativity, and spark inspiration (Stephan, Wildschut, Sedikides, Routledge, & Arndt, 2008).

According to Wildschut et al. (2006), happy memories let us take a break from negativity, and indulging in a little reminiscence makes individuals feel less lonely and more inspired. Research has shown that after individuals recall a nostalgic experience, they feel more confident and trusting (Wildschut et al., 2006). Following reminiscing about nostalgic events, individuals' attitudes or perceptions of themselves improves and they become more aware of their desirable qualities (Vess, Arndt, Routledge, Sedikides, & Wildschut, 2012). Other research on the benefits of nostalgia has found that recollection of a nostalgic event generates positive affect and increased self-esteem (Stephan et al., 2008). According to Havighurst and Glasser (1972), adults who reminisce more often, report greater positive affect than those who spend less time reminiscing.

Havlena and Holak (1991) theorized that nostalgia allows individuals to maintain their identity even when faced with major transitions or discontinuities in the life cycle (such as identity changes from each developmental stage), and that practicing nostalgia helps humans feel more firmly anchored to their own identity. Davis (1979) found nostalgia to be an emotional reaction used to repair discontinuity in an individual's life: "nostalgia helps the individual construct continuity of identity by encouraging an appreciative stance toward former selves; excluding unpleasant memories; reinterpreting 'marginal, fugitive, and eccentric facets of earlier selves' in a positive light; and establishing benchmarks in one's biography" (p. 35-36).

When individuals experience this sense of continuity with the past, nostalgia tends to be beneficial (Iyer & Jetten, 2011), with individuals feeling capable and confident as a consequence. In contrast, when individuals do not experience this continuity with the past, nostalgia undermines their confidence. This kind of discontinuity has emotional consequences, such as “fears, discontents, anxieties, or uncertainties” (Davis, 1979, p. 34). Triggers of discontinuity include occupational crises such as health deterioration, unemployment, relationship breakups and the death of a loved one (Batcho, 1995).

Previous research shows repeated positive correlation between nostalgia and positive affects in adults in terms of self-esteem, mood, socialization and other beneficial outcomes. This research examines the effects of nostalgic practice on two specific, positive and beneficial affects: happiness and optimism.

Nostalgia in Therapy

Nostalgia is a key factor in reminiscence therapy in which patients vocally recall episodic memories from their past, providing them with a sense of continuity in terms of life events (Jonsdottir, Jonsdottir, Steingrimsdottir, & Tryggvadottir, 2001). Reminiscence therapy is used to improve the psychological well being with older people to help them maintain good mental health (Webster, 2002). The primary goal of reminiscence therapy is to strengthen the cognitive memory components; a secondary aim may be to encourage intrapersonal or interpersonal development. In nostalgia therapy, chronological memories from birth onwards are processed, and the patient focuses on, rather than simply recalling major significant life events (Hsieh & Wang, 2003). The main benefits of reminiscence therapy for elderly patients are: (1) improved cognitive function; and (2) improvement in their quality of life with a focus on enhanced emotions and overall happiness (Wang, 2007).

Researchers have found benefits of reminiscence therapy in cohorts who suffer emotionally and socially, particularly the elderly, people with depression and those with chronic medical conditions (Jonsdottir et al., 2001; Cully, LaVoie, & Gfeller, 2001). Wu (2011) conducted group reminiscence therapy with elderly veterans, and demonstrated immediate effects on improving life satisfaction and self-esteem and decreased the depressive symptoms of the institutionalised war veterans. In one nostalgic therapy study, the patients' memory performance on the Wechsler Memory Scale-Revised improved (Yamagami, Oosawa, Ito, & Yamaguchi, 2007). Subsequently, the same patients appeared to communicate and interact more effectively.

With Alzheimer's patients, triggering nostalgia with familiar music or photos can revive memories that are slowly fading through dementia. Nostalgia may also be used in cognitive therapy "as a potent coping mechanism in situations of self-threat and social threat" (Zhou, Sedikides, Wildschut & Gao, 2008, p. 1028). Hill and Brettle (2005) studied the effects of counselling with older people and found it provides them with a sense of overall life satisfaction and coping skills. Furthermore, Watt and Cappeliez (2000), who integrated cognitive concepts in reminiscence therapy, found that their interventions led to marked improvements amongst older adults who were depressed. In contrast, Spector, Orrell, Davies, and Woods (2003) found insufficient evidence about the validity of reminiscence therapy with dementia patients.

Researchers on nostalgia therapy in Ireland claim that happiness and well being increase when older people are engaged in generativity through the sharing of life experiences and wisdom (McTiernan & O'Donnell, 2011). Professional reminiscence therapy in Ireland engages individuals in nostalgia through facilitated workshops.

The current research will demonstrate the significance of triggering nostalgia to encourage beneficial outcomes, and a comparison of nostalgic habits/proneness across younger and older adults will be analysed.

Triggering Nostalgia Via Music

Nostalgia can be triggered passively by external stimuli associated with an individual's past, either social stimuli such as friends, family and lost loved ones, or nonsocial stimuli (Havlena & Holak, 1991; Holak & Havlena, 1998; Holbrook, 1993; Holbrook & Schindler, 1994) such as an old song, a familiar scent or an "old photograph: torn, tattered, and stained, and faded to yellow in a brown leather frame" (Bogle, 1976/1979, track 1). In other research, loneliness has been found to be another nostalgia trigger (Wildschut et al., 2006; Zhou et al., 2008b).

Studies demonstrate that nostalgia as an emotional experience is triggered by music (Juslin, Liljestrom, Vastfjall, Barradas, & Silva, 2008; Zentner, Grandjean, & Scherer, 2008). Nostalgia is the third most frequent emotional descriptor during music-evoked autobiographical memories (Janata, Tomic, & Rakowski, 2007) and the power of music in nostalgic practice is evident from the research that demonstrates nostalgia being triggered more often in the musical than non-musical episodes (Juslin et al., 2008). Barrett, Grimm, Robins, Wildschut, Sedikides, and Janata (2010) found that nostalgia is a common emotional reaction to music in everyday life. Zhou, Wildschut, Sedikides, Chen, and Vingerhoets (2012b) concluded that higher levels of music-evoked nostalgia increased the participants' physical sensation of warmth. Batcho (1995) found that triggering nostalgia with familiar songs or old photos in Alzheimer's patients might revive the sense of self.

In their early papers, Holbrook and Schindler (1991) found that in terms of musical tastes, respondents specifically favoured popular music which was acquired during their late adolescence or early adulthood, with preferences peaking at critical periods, namely, at the age of 24. This finding supports Davis' (1979) hypothesis that adolescence or early adulthood are the most fertile periods for nostalgic reflection.

In terms of music valence, sad and happy music tend to have different emotional outcomes for listeners. Sad music is defined as that which employs smaller interval sizes (Huron, 2008), is quieter and lower in pitch (Huron, 2008), and features a slower tempo (Post & Huron, 2009). Balkwill, Thompson, and Matsunaga (2004) suggest that some acoustic properties of sad music appear to evoke sad connotations in listeners. However, other research disputed the theory that sad music makes us sad. Many individuals report enjoying sad music despite its negative emotional tone (Huron, 2011; Vuoskoski, Thompson, McIlwain, & Eerola, 2012).

There appears to be a lack of research pertaining to the differential impact of sad compared with happy music on levels of nostalgia. The current study helps bridge that gap. This study proposes that the influence of musical nostalgic triggers is something of interest and importance within the psychological discipline. Specifically, the research aims to identify which mood or valence of music as a stimulus leads to beneficial reminiscence. If it were found that the simple practice of listening to sad music to become nostalgic induced happiness, sad music triggers might represent an innovative and cost-effective intervention to increase positivity and levels of happiness.

Nostalgia across the Lifecourse

The tendency to engage in nostalgic practice varies over the individual's lifetime and there are mixed research findings on when the highest levels of nostalgic behaviour occurs in the lifecourse. Empirical nostalgia research by Havlena and Holak (1991) in the field of consumer psychology and advertising shows that *nostalgia proneness* peaks as the individual moves into middle age, and during their retirement years. However, Sedikides, Wildschut and Baden (2004, p202) found nostalgia to be "a universal experience, present and prevalent across the lifespan" and their findings contradict the notion of nostalgia being limited to well-functioning adults or the elderly (Batcho, 1995, 1998; Mills & Coleman, 1994). Subsequent research by Sedikides, Wildschut, Arndt, and Routledge (2008b) found that nostalgia is experienced between one and three times a week, virtually by everyone regardless of age or life stage. These changes in the last fifty years in nostalgic behaviour may be an indicator of the times we live in. The pressure and demands of today's society combined with the irreversible impact of 20th century technology has changed how we live, and to escape for a time by engaging in nostalgic feelings of simpler times is a welcome release from our busy lives.

Very little research has examined the functions of reminiscence and nostalgic habits in the everyday lives of younger adults. Younger adults have previously scored high in personal nostalgia in prior research (Batcho, 1995) and but it is unclear whether nostalgia features much in the lives of younger Irish adults, or whether they engage in nostalgic habits to the same extent as older adults. The current research will extrapolate on the study of nostalgia proneness, concentrating on the differences between younger and older cohorts, to investigate whether nostalgia is present and prevalent across the lifespan, or more frequently associated with individuals of a certain age, i.e. from 50 years onwards (Goulding, 2002).

The Reminiscence Bump and Emerging Adulthood

As previously discussed, nostalgia for adolescence and early adulthood appears to be stronger than for any other period (Havlena and Holak, 1991), which corresponds with the reminiscence bump - the tendency for adults to recall more autobiographical memories from adolescence and early adulthood (approximately from 15 to 25 years) than from adjacent lifetime periods (Janssen, Chessa, and Murre, 2005). Therefore, 'bump' memories are "more novel, more important for identity development, more distinct, and more likely to involve developmental transitions than memories from other age periods" (Demiray, Gulgoz, & Bluck, 2009, p. 708). Jansari and Parkin (1996) found that adolescence and early adulthood are the periods that individuals produce the most memories. The life events that occur during the period of the reminiscence bump, such as first relationships, first job, marriage, or the birth of a child, are novel, making them more memorable. The reason these memories are easily accessible is because they are linked to self-identity, and the particular events that happen in this life stage significantly contribute to an individual's life goals, attitudes, and beliefs. In support of this theory, Cohen and Faulkner (1989) found that 93% of vivid life memories were of either unique events or of first-time experiences, and the period between late adolescence and early adulthood is filled with novel life.

Davis (1979) conducted a study with individuals demonstrating that those who experience disruption in their lives tend to cling to the past more than individuals who experience continuity, which would correlate with the theory that nostalgic thoughts are dependent on past experience and life events. Later researchers, Best and Nelson (1985) and Batcho (1995) concur that nostalgia may be closely related to life stage. Although, Elnick, Margrett, Fitzgerald, and Labouvie-Vief, (1999) found that the majority of the reminiscence bump events were not necessarily novel per se, but were found to be distinctive to the

individual's personal interests and life circumstances, and tended to focus on events concerning family, relationships and work. These findings have modified the original reminiscence bump theory and a life-script hypothesis (shared expectations about the order and timing of life events) has become the stronger argument for the reminiscence bump. Research by Bohn and Berntsen (2011) revised the reminiscence bump theory, suggesting that the phenomenon is a cultural life-scripts-based hypothesis, and the period of young adulthood is so important in the way an individual regards life's journey, that it shapes the way we think of, and recall, our personal lives.

The other factor regarding the age the reminiscence bump occurs at is the emerging adulthood stage - the new developmental period between adolescence and young adulthood - introduced by Arnett (2000), which spans ages 18-25 years. Emerging adulthood primarily refers to young independent adults in developed countries who are exploring various life possibilities, who do not have children, have not purchased their own homes, or have insufficient income to become fully-independent in their early to late twenties. The overlap of the reminiscence bump years (15-25) and emerging adulthood (18-25) is permeated by novel experiences preserved in memory ensuring a long-lasting memorability. Fitzgerald (1996) found that *benchmark memories* (the three most significant life-changing events) were most likely to occur during emerging adulthood, and acknowledged the reminiscence bump in memories of significant life-events occurring slightly later; between the ages of 20 and 29 years.

In previous literature (Janata et al., 2007; Wildschut et al., 2006) claim the source of music-evoked nostalgic experience is believed to be the idiosyncratic associations that individuals have formed between particular songs and events in their past. However, later

research by Barrett et al. (2010), found no evidence that certain particular songs elicited high (or low) levels of nostalgia across listeners. The main characteristic of the reminiscence bump is that adults will have a better recall for memories from adolescence and early adulthood. In the current research, the participants will be exposed to music they would have encountered during the reminiscence bump; from the ages of 15 to 25 years old, which should prove memorable for the participants. If the theory is true, music from this period in their lives should be familiar, autobiographically salient and ultimately, have nostalgic significance.

Nostalgia and Happiness

As Batcho (1998) demonstrated, individuals who frequently experience nostalgia also perceive themselves as more emotional, that is, their emotions are likely to be more intense. Furthermore, they prefer to indulge in activities with other people, consistent with the idea that nostalgia fosters a sense of social connection. Nostalgia appears to help social bonding, and Batcho (1995) proposed that individuals who are more personally nostalgic tend to be more pro-social in terms of their coping strategies in times of stress. In research with college students reminiscing about pleasant memories, Bryant, Smart and King (2005) found that the participants' emotional experience was more positive, suggesting, "interventions aimed at increasing the frequency of positive reminiscence will increase levels of happiness" (p. 251).

Recollections of nostalgic events evoke more frequent expressions of happiness, and nostalgia induces higher levels of happiness, than of sadness (Wildschut et al., 2006, 2009). In nostalgia, happy associations are commonly tinged with sadness or melancholic thoughts, since the happy time recalled does not exist in a historical silo, but every isolated memory has a rippling effect through the consequences, outcomes and results of that earlier time on one's

present life. The two emotions that music readily invokes are happiness and sadness (Gabrielsson & Juslin, 1996). The recall of nostalgic events features more recurrent expressions of happiness than of sadness, and induces higher levels of happiness than of sadness (Sedikides et al., 2008b). Vuoskoski et al. (2012) found that people enjoy listening to music that evokes sadness. Furthermore, Huron (2011) found that listening to sad music could cheer-up an individual. In the current study, happiness levels will be analyzed using the Lyubomirsky & Lepper (1999) Subjective Happiness Scale [SHS], following participation in active nostalgia, in both young and older adults to determine if nostalgia indeed can evoke happiness.

Nostalgia and Optimism

Nostalgia may boost optimism, spark inspiration, and foster creativity (Stephan, Wildschut, Sedikides, Routledge, & Arndt, 2008). Bryant, Morgan and Perloff (1986) found that the highly nostalgic college students, those who reminisced more, reported a greater sense of well being and optimism. They found in their research that using reminiscence to gain self-insight and perspective was associated with greater well being than simply using it to feel good and escape was associated with lower well being.

However, the practice of reminiscence and nostalgia are not the same, in reminiscence, an individual remembers the past with affection, but nostalgia is a sentimental yearning for the past, which may be a negative experience and therefore not be congruent with optimism. Richter (1886), as cited in Reik (1953), stated that our memories are the only paradise from which we can never be expelled. But since not every memory is positive, reminiscing about a particular memory can have emotional repercussions particularly if the memory is viewed in the context of the overarching life narrative that defines us. Batcho

(1998) found that participants who recalled autobiographical memories in which other people in their lives played a prominent role were rated higher in nostalgia, contentment and love. If nostalgia can strengthen a person's sense of self and connectedness to others, the good and bad elements of a person's past can remind an individual what they have survived, overcome, and defeated.

As previously discussed, in some cases, nostalgics may use positive perceptions about the past to maintain their sense of continuity and meaning their lives (Sedikides, Wildschut, Gaertner, Routledge, & Arndt, 2008a). However, ultimately there is a lack of research regarding nostalgia and optimism and conflicting studies to Stephan et al. (2008) conducted by Batcho (1998) found that high nostalgia groups reported more pessimism than optimism. Because there is a dearth of literature regarding nostalgia and optimism, the current study aims to bridge that gap by measuring self-worth and optimism levels in the participants using The Life Orientation Test (Scheier and Carver, 1985).

Current Study

In extensive research, no previous nostalgia behaviour study of an Irish population has been found. This study aims to produce findings in an Irish population to advance existent international findings regarding the impact of reminiscence and nostalgic behaviour on positive affective experiences; specifically, happiness and optimism.

It is accepted that retrospective life-reviewing promotes well being in older adults (Butler, 1963; Coleman, 1974; Falot, 1980), but no research has looked at younger Irish adults and their nostalgia habits. The current research is conducted amongst young (age 20-30) and older (age 65-75) Irish adults.

This quantitative experiment is a study between groups, with randomly assigned participants, in three independent treatment groups: control, sad music trigger and happy music trigger. Significant questions addressed include:

- What effect will listening to sad music have on nostalgic thoughts?
- Does nostalgia result in a happier and more optimistic person?
- What are the differences between younger and older Irish adults in relation to nostalgic practice?

A key objective of the study is to gauge the extent to which music has an impact on nostalgia and whether the research findings will advance previous research about the impact of nostalgia on happiness and optimism. As psychological, emotion and music researchers seem to disagree in particular on what type of music can induce genuine nostalgia in young and old participants, and there is very little research examining relationships between nostalgia and optimism, and no research whatsoever in the Irish context, the following hypotheses were formulated for direct testing:

Hypothesis One: Adults who are triggered with sad music will demonstrate higher levels of nostalgic behaviour than those triggered with happy music.

Hypothesis Two: Irish adults who indulge in nostalgia will demonstrate higher levels of happiness than those who do not.

Hypothesis Three: Irish adults who indulge in nostalgia will display more optimism than those who do not.

Hypothesis Four: There is a difference between the nostalgic behaviour of younger and older Irish adults.

METHODOLOGY

Participants

A purposive sample of 90 Irish participants (43 men and 47 women) was assessed for the study examining the impacts of sad and happy music on nostalgia, happiness and optimism. The 45 younger participants (19 male, 26 female) ranged in age from 20 to 30 years with a mean age of 24.3 years ($SD = 2.57$), and the 45 older participants (24 male, 21 female) ranged in age from 65 to 75 years with a mean age of 70.3 ($SD = 3.24$). All participants were from both rural and urban areas in Ireland and participation was voluntary. In a stratified random sampling; the young adult participants were recruited through posted information sheets in Waterford and Kildare and a subsequent opportunity sample of young adults was recruited from BA Psychology students in a Research class at Dublin Business School (DBS). The older adult participants were recruited through an older people's activity group in Dublin (see *Appendix A: Letter of access from South Dublin Older People's Network* granting access to older participants); and a number of older people were recruited from a wider network from Waterford. Participants received no reward for taking part in the study.

In order to qualify for the experiment, participants had to fit within the age category specified; agreed to participate; and understood study instructions. The exclusion criteria included any participants with auditory, visual or language impairments or any cognitive impairment (e.g., Alzheimer's, Parkinson's, memory difficulties). The study was given approval by DBS School of Psychology Research Ethics Committee and the researcher adhered to all ethical principles in the Code of Professional Ethics (2010).

Design

This was a quantitative correlational design which investigated relationships between the predictor variables: sad nostalgic music and happy nostalgic music, which were administered to the two experimental groups, and empirically investigated to examine their influence on the criterion variables: nostalgia proneness, optimism behaviours and happiness levels (high, medium or low). Another control group received no treatment. This study was quasi-experimental, cross sectional, between-subjects with groups of young and older adults measured in by a written questionnaire with five separate parts. Demographic variables measured were age and gender. *Figure 1* demonstrates the research model and demonstrates the relationships between and among the variables addressed.

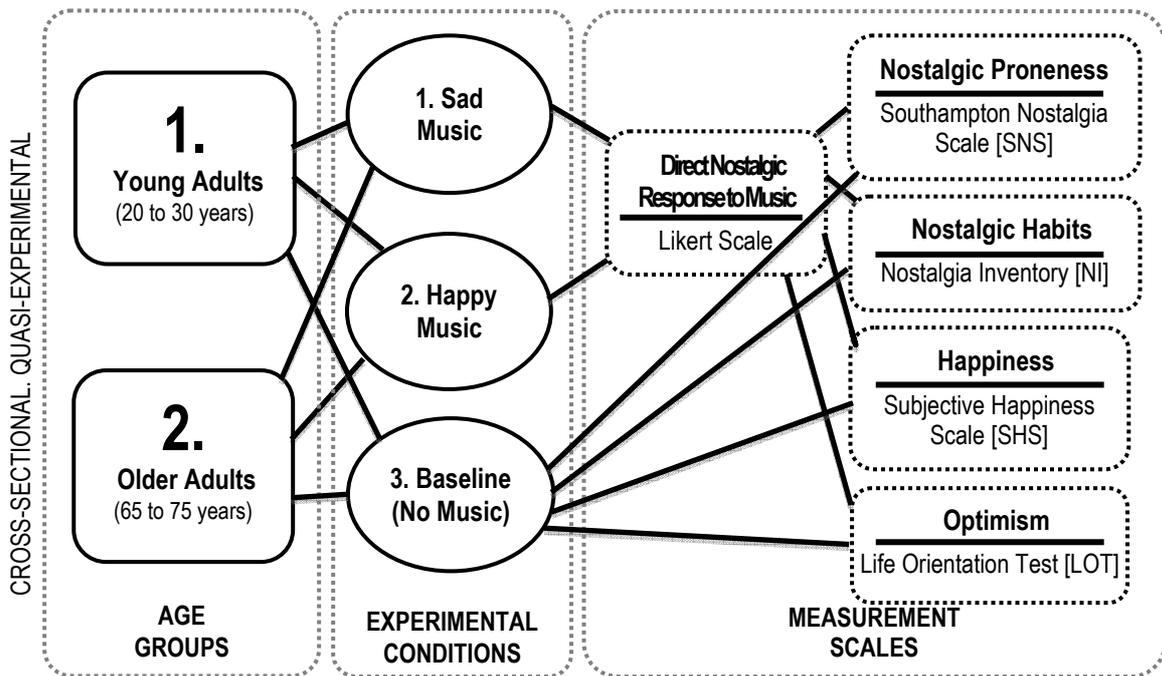


Figure 1

Research model demonstrating breakdown of age groups across experimental conditions and across the five scales used for analysis.

Materials

Following the experiment, the variables measured were the direct nostalgic response to the music, nostalgia habits and proneness, optimism behaviours and happiness levels. These were measured in one setting with a five-part questionnaire: (1) Direct nostalgic response to music; (2) the Nostalgia Inventory [NI] (Batcho, 1995); (3) the Southampton Nostalgia Scale [SNS] (Routledge et al., 2008); (4) the Life Orientation Test [LOT] (Scheier & Carver, 1985); and (5) the Subjective Happiness Scale [SHS] (Lyubomirsky & Lepper, 1999). The baseline control group was administered with a four-part questionnaire (See *Appendix B: Psychological questionnaires used*) but *1. Familiarity with nostalgic music* listened to was omitted. All questionnaires used were pretested and are reliable and valid measures.

Direct nostalgic response to music

The participants' familiarity with the specific sad and happy music played was measured with a 2-item Likert Scale to measure overall nostalgic impact of the music (*1= not nostalgic, 9= very nostalgic*). A second scale determined if the songs were valid in terms of personal nostalgia (*1= not nostalgic, 9 = almost all were nostalgic*). This scale was only administered to those in the two control experimental groups (*sad music, happy music*).

Nostalgia

Nostalgia was measured with two scales. Habits of nostalgia practice was measured using Batcho's (1995) 20-item Nostalgia Inventory [NI], in which participants rate (*1= not at all, 7 = very much*) the extent to which they miss 20 aspects of their past (e.g., family, places, friends, childhood toys). Reported alpha coefficients have ranged between 0.77 (Holbrook & Schindler, 1994) and 0.86 (Zhou, Wildschut, Sedikides, Shi & Feng, 2012a). The second

measure, nostalgia proneness was measured using the 7-item Routledge et al. (2008) Southampton Nostalgia Scale [SNS] which consists of a definition of the word nostalgia followed by seven items (one reversed scored), that assess nostalgic tendencies and are anchored on a 7-point scale with higher scores reflecting higher levels of nostalgia proneness. Cronbach's alpha for the SNS ranges from 0.86 (Wildschut, et al., 2006) to 0.93 (Sedikides et al., 2008a). Nostalgia proneness is considered a trait-level construct, and the SNS is the best measure, as it is expected to reflect an individual's stable tendency to experience nostalgia (Barrett et al., 2010).

Optimism

Optimism was measured using Scheier and Carver's (1985) Life Orientation Test [LOT], a 10-item scale of dispositional optimism developed to assess individual differences in generalized optimism versus pessimism – that is, an individual's tendency to view the world and the future in positive ways. Each item is scored 0-4, so that high values imply optimism and the total score is the sum of all 6 (excluding four filler) items. Reported alpha coefficients have ranged between 0.63 and 0.76 (Scheier & Carver, 1987).

Happiness

Happiness was measured using the Lyubomirsky & Lepper (1999) Subjective Happiness Scale [SHS]. The 4-item SHS (7-point Likert scales) uses a single composite score for global subjective happiness computed by averaging responses to the four items (the fourth reverse-coded). The possible range of scores on the SHS is from 1.0 to 7.0, with higher scores reflecting greater happiness. The SHS alpha coefficient ranges from 0.79 to 0.94 with a mean of 0.86 (Lyubomirsky and Lepper, 1999).

Music stimuli

The independent variables of sad nostalgic music and happy nostalgic music were administered to the two treatment groups, and empirically investigated to examine their influence on the dependent variables. The control group received no treatment. There were two audio files (*sad, happy*) for the age 20-30 sample and two (*sad, happy*) for the age 65-75 sample (see *Appendix C: Tracklists of Nostalgic Music*). Each audio piece was a compilation mix of 18-23 songs (*sad, happy*) selected from the sample's late-teen to early adult lives.

The experimenter-selected, familiar sad music had to meet the following criteria: 1. it is familiar to the participants; 2. it must have been released between 1953 and 1973 to fit with the findings that in nostalgic-terms, individuals favour popular music which was acquired during their late adolescence or early adulthood (Holbrook and Schindler, 1989). 3. It conveys (a) sadness in a clear manner, featuring a slow, quieter tempo (Huron, 2008), or (b) happiness in a clear manner, featuring an upbeat, louder tempo. 4. The duration of the musical excerpt is at least eight minutes (in order to induce a sad or happy emotional state that would last for the duration of the indirect measures Västfjäll, 2002). It was important that the music was familiar to the participants as it has been found that irritation is experienced when listening to unfamiliar music (Zentner et al., 2008).

A selection of sad and happy music from the relevant generations were pre-tested with two pilot groups from each age category, and they did not participate in the research study. All songs were downloaded from iTunes, and mixed into a compilation using GarageBand. Each song clip in the mix was between 30 and 60 seconds in duration, the total music length was between ten to fifteen minutes long. Music genres chosen for the older adults were pop, folk, classical and included the theme music to the most popular radio show

of the 1980s, *The Gay Byrne Show* (1973-1998). Music genres chosen for the younger adults ranged from pop to rock and included rap.

In order to counter-balance the negative emotions (sadness, grief, loss) and to ensure a positive-neutral emotional state was reached by participants at the end of the experiment, particularly after listening to sad music; following the questionnaire being completed, a three minute video of an upbeat television show from the 1980s was played to each participant to relieve any negative effects. The video clip was pretested with a pilot group from each age category, and they did not participate in the research study.

Equipment

One laptop computer was used for the experiment, containing four audio files (.AVI) and one video file (.MPEG). Two external speakers and a set of studio-quality headphones were used to listen to the music. Other materials used were the A4 paper questionnaire response sheets (see *Appendix B: Psychological questionnaires used*) and pens. The questionnaires featured larger, clearer type fonts, specifically to cater for older adults. A private, quiet, well-lit room was used to experiment with the participants individually.

Procedure

The samples of young and older adults were randomly assigned into three conditions (*sad music, happy music, no music*). All participants had an equal probability of being selected for either the experiment group(s) or control group within their age category. For both younger (20 to 30 years) and older (65 to 75 years) groups, there were 15 participants in the experimental group for sad music, 15 participants in the experimental group for happy music and 15 participants in the control group (the latter results being used to produce

baseline comparisons). Once the participants had been designated into one of the three conditions, they were taken individually into the room.

The participants were briefed about the experiment, told that the experiment would explore nostalgia, happiness and optimism. The participants were verbally given a description of the testing procedures they would be expected to partake in, including the fact that the experiment might induce negative emotions (sadness, grief, loss) for the individual. Participants were told they had a right to withdraw at any stage without penalty or repercussions. Informed consent was obtained from all participants with a signed written consent form (see *Appendix D: Consent form*) before beginning the experiment.

Each individual participant in experimental groups (*sad music, happy music*) was seated in front of the computer. Participants were given a choice to listen to the music from the two external speakers connected either side of the computer, or through studio-quality headphones. Participants were assisted to adjust the sound volume (a test tone) to a comfortable level according to their own preferences. They were instructed to concentrate on listening to the music, and to close their eyes if it helped them to concentrate. Each audio piece was a selection of ten songs (*sad, happy*) selected from the sample's late-teen to early adult lives because nostalgic popular songs have a higher likelihood of familiarity and autobiographical salience with the sample (Holbrook and Schindler, 1989). The duration of the music track was between 15 and 20 minutes in length.

After listening to the music, the participants in the experimental group were given a questionnaire comprising five different measures. The experimental treatment was withheld for the control group, to provide a baseline performance of common nostalgia habits, with

which the experimental group's performance were compared, therefore the participants in the control group were not played music, they just filled in the four-part questionnaire. All participants were instructed to complete the questionnaire, and offered assistance if necessary. The participants completed the questionnaire with a pencil/pen taking between 5 and 15 minutes to complete. When questionnaires were completed, their response sheets were collected.

A video file (MPEG-4) of an upbeat television show from the 1980s was played after the questionnaires were completed for the experimental groups in order that positive-neutral emotional state was reached by participants at the end of the experiment. After the experiment was finished, and the subsequent questionnaire was filled out, all participants were fully debriefed and given the contact details of the researcher if they would needed to make contact following the experiment. Each participant was thanked for their time and input and left the room.

Data Analysis

Descriptive statistics (median, mean, standard deviation) and some frequencies were used. An alpha level of .05 was used for all statistical tests. The data was analyzed by a one-way analysis of variance (ANOVA) to investigate the music conditions. This was followed up by a Bonferroni's multiple comparisons test for the unrelated samples with the conditions sad music and happy music as the independent variables. Independent samples t-tests were used to examine differences in the variables. Positive correlations between the dependent variables of nostalgia proneness, optimism behaviours and happiness levels were analyzed using Pearson's correlation coefficient.

RESULTS

The purpose of this research was to investigate if music has an effect on nostalgic levels, whether optimism and happiness are outcomes of nostalgic practice and if the nostalgic habits of younger and older Irish adults are comparable. Data was analyzed using PASW (Predictive Analytics SoftWare), Version 18.0. This research project used a one-way analysis of variance (ANOVA), independent samples t-tests and Pearson correlation coefficients. A Bonferroni test of multiple comparisons was used to examine relationships between the music predictor variables and their effect on the criterion variables of nostalgia, happiness and optimism. A brief demographic questionnaire captured participant age and gender details.

Hypothesis One stated that adults who were triggered with sad music would demonstrate higher levels of nostalgic behaviour than those triggered with happy music. As a check on the nostalgia measures used, a Pearson correlation coefficient was employed to check whether nostalgic habits was related to nostalgic proneness. This was found to be significantly correlated ($r(73) = 0.39, p = .00$).

A further analysis was conducted on the direct nostalgic response to the music played, was based on the sum total of responses from questionnaire item (1) *Direct nostalgic response to music*, for the younger group (mean = 10.40, $SD = 2.29$) and the older group (mean = 10.42, $SD = 2.84$). These were not considered statistically different using an independent samples t-test, ($t(59) = -.029, p = .977$). A frequency of 40% of participants felt that *lots, almost all or all of the songs were nostalgic*, and 44.5% of participants felt that overall, the music was *a good bit, very or super nostalgic*. As a check on the nostalgic

strength of the music used to trigger nostalgia, a Pearson's coefficient was used to check the direct response to the music found that both questions were highly correlated, ($r(61) = 0.76, p = .00$).

A one-way analysis of variance showed that the experimental conditions (sad, happy, no music) had a significant effect on nostalgia levels, $F(2, 75) = 7.49, p = .001$. See *Table 1 Descriptive statistics for young and older groups in their experimental conditions across psychological measures*. A Bonferroni test indicated that participants exposed to sad music ($M = 6.29, SD = 1.22$) scored significantly higher on nostalgia habits [NI] than those that were exposed to happy music, $p = .007$, as well as those that were exposed to no music, $p = .003$.

Table 1

Descriptive statistics for young and older groups in their experimental conditions across psychological measures

Experimental condition	Age group	Nostalgia habits (NI)		Nostalgia proneness (SNS)		Optimism (LOT)		Happiness (SHS)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Sad Music	Young	6.64	0.92	5.41	1.48	14.60	4.35	5.50	1.41
	Older	5.88	1.42	5.62	0.91	14.13	4.35	5.83	1.02
	Total	6.29	1.22	5.51	1.21	14.37	4.28	5.67	1.22
Happy Music	Young	5.50	1.51	4.21	1.33	12.27	2.28	5.19	1.27
	Older	4.86	1.20	4.85	1.47	12.31	4.15	5.25	1.05
	Total	5.18	1.37	4.55	1.42	12.29	3.32	5.22	1.13
No Music	Young	5.31	0.80	4.47	1.52	12.73	5.52	5.03	1.14
	Older	4.83	1.52	4.01	1.29	13.36	3.54	4.80	1.29
	Total	5.07	1.21	4.25	1.41	13.03	4.60	4.92	1.19

A one-way ANOVA indicated that the experimental conditions had a significant effect on nostalgic proneness [SNS], $F(2, 86) = 6.94, p = .002$. See *Figure 2 Impact of music across both groups on nostalgia proneness*. Participants who were exposed to sad music scored significantly higher on nostalgic proneness compared to those exposed to happy music ($M = 4.55, SD = 1.42, p = .022$), $p = .021$, as well as higher than those exposed to no music ($M = 4.25, SD = 1.41, p = .002$). Happy music and the baseline condition of no music demonstrated no significant difference ($p = 1.00$). Therefore, the null can be rejected. The 95% confidence limit shows that the population mean difference of the variables lies between 0.38 and 1.83 on nostalgia habits, and between 0.27 and 1.65 on nostalgia proneness.

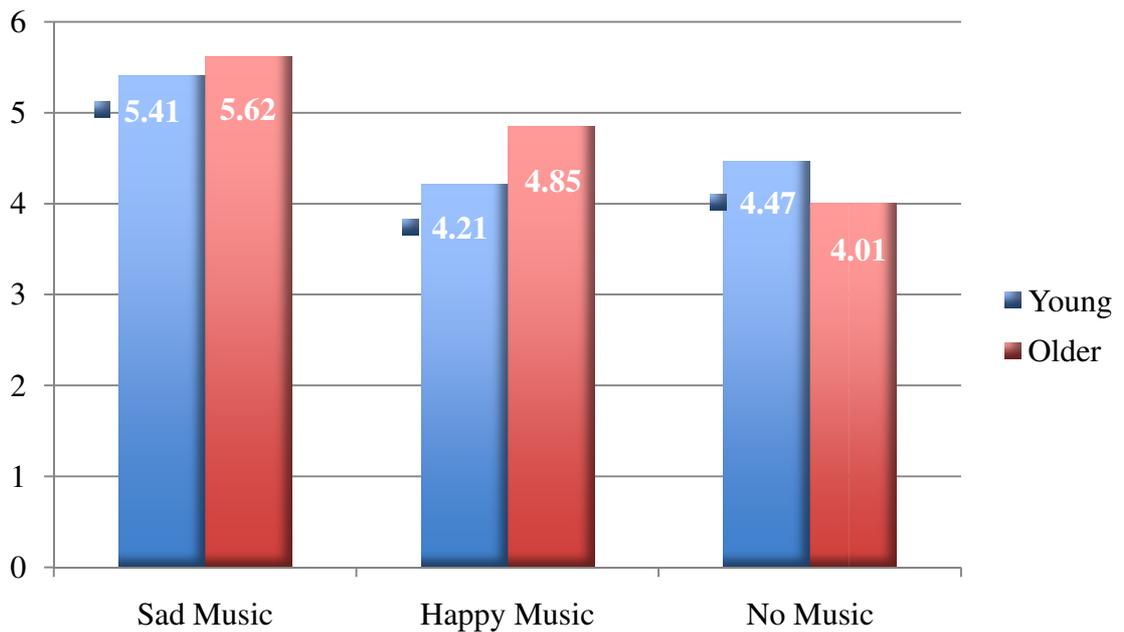


Figure 2

Impact of music across both groups on nostalgia proneness.

In the results demonstrating nostalgia habits, sad music has a more significant effect on nostalgia (mean = 6.29, $SD = 1.22$), than happy music (mean = 5.18, $SD = 1.37$). In a Bonferroni post-hoc analysis, differences were significant in nature ($F(2, 81) = 7.06$, $p = .001$) between the groups who listened to sad music (mean = 5.51, $SD = 1.22$) and the groups who listened to happy music (mean = 4.55, $SD = 1.42$, $p = .022$). Groups who listened to sad music (mean = 5.51, $SD = 1.22$) had significantly higher nostalgia habits than the groups who listened to no music (mean = 4.55, $SD = 1.42$, $p = .002$). There were no differences between the happy music group and the baseline (control) group, who did not listen to any music ($t(58) = 2.81$, $p = 1.00$).

Hypothesis Two stated that there would be higher levels of happiness in Irish adults who indulge in nostalgia than those who do not. There was no significant relationship found between happiness and participants who indulge in nostalgia. A Pearson correlation found that there was no significant relationship between happiness and nostalgic habits ($r(74) = -0.07$, $p = .56$) and no significant relationship between happiness and nostalgic proneness ($r(86) = -0.02$, $p = .88$). See Table 2 *Group statistics on nostalgia habits, nostalgia proneness and happiness*. Therefore the null cannot be rejected.

Table 2

Group statistics on nostalgia habits, nostalgia proneness and happiness

	N	Mean	SD
NI Nostalgia habits	74	5.56	1.37
SNS Nostalgia proneness	86	4.79	1.44
SNS Happiness	88	5.28	1.21

Hypothesis Three stated that Irish adults who engage in nostalgia would display more optimism than those who do not. The mean scores for optimism was 13.22 ($SD = 4.14$) and nostalgic habits 5.56 ($SD = 1.37$) and nostalgic proneness 4.79 ($SD = 1.44$). A Pearson correlation coefficient found that there was no significant correlation between optimism and nostalgic habits ($r(76) = 0.07$, $p = .53$) and nostalgic proneness ($r(87) = 0.12$, $p = .26$). See Table 2 *Group statistics on nostalgia habits, nostalgia proneness and optimism*. Therefore the null cannot be rejected.

Table 3

Group statistics on nostalgia habits, nostalgia proneness and optimism

	N	Mean	SD
NI Nostalgia habits	76	5.56	1.374
SNS Nostalgia proneness	73	4.79	1.441
LOT Optimism	76	13.22	4.140

Hypothesis Four stated that there is a difference between the nostalgic behaviour of younger (20 to 30 years) and older (65 to 75 years) Irish adults. Younger adults ($M = 5.21$, $SD = 1.44$) were found to have more nostalgic habits than older adults ($M = 5.88$, $SD = 1.24$), ($t(74) = 2.18$, $p = .03$). Therefore the null cannot be rejected.

However, there was no significant difference between younger and older participants on nostalgia proneness ($t(85) = -.48$, $p = .63$). The 95% confidence limits shows that the population mean difference of the variables lies between 0.06 and 1.29 on nostalgia habits, and between $-.77$ and $.47$ on nostalgia proneness. Therefore the null cannot be rejected.

DISCUSSION

The study aimed to produce findings in an Irish population to advance existent International findings regarding the impact of music on nostalgic behaviour, and the positive affective experiences of nostalgia; specifically, happiness and optimism. No previous nostalgia study was found to have been conducted in an Irish population.

The study looked firstly at the impact of sad, happy and no music on the nostalgic behaviour of both younger (age 20-30) and older Irish adults (age 65–75), and it was found that these triggers had significant effect on nostalgia levels, which supported the hypothesis: adults who were triggered with sad music demonstrated higher levels of nostalgic behaviour than those triggered with happy music or no music at all.

Secondly, the study hypothesized that Irish adults who indulge in nostalgia would demonstrate higher levels of happiness than those who do not. However, no significant relationship was found between happiness and the nostalgic habits or proneness of the participants.

Thirdly, the study sought to assess whether Irish adults who indulge in nostalgia displayed more optimism than those who do not, but this research found no significant correlation between optimism and nostalgic habits or proneness.

Fourthly, the study looked at the differences between the nostalgic behaviour of younger and older Irish adults. Even though nostalgic habits were significantly correlated with nostalgic proneness, younger adults were found to have more nostalgic habits than older

adults. There was no significant difference between both groups on nostalgia proneness.

Hypothesis One – Music Effects on Nostalgia

The findings of this study support the hypothesis that adults who are triggered with sad music will demonstrate higher levels of nostalgic behaviour than those triggered with happy music. The research supports previous findings that nostalgia is a common emotional reaction to music (Barrett et al., 2010) and that nostalgia is triggered more often in the musical than non-musical episodes (Juslin et al., 2008).

Previous researchers disagree on what type of music induces nostalgia, thus the current study experimented with both happy and sad music to examine the difference in outcomes. It is accepted that the music used in this research was nostalgic as highly correlated results were found in the direct nostalgic response to the music played for both young and old. The effectiveness of the music used as a trigger to nostalgia stems from the fact that the kind of music chosen for this research was pilot tested for salience and familiarity with a two focus groups, thus leading to ultimately higher nostalgic significance. Barrett et al. (2010) found that the participants' familiarity with a song significantly predicted the strength of nostalgia experienced while listening to that song.

The music elicited autobiographical associations for the participants, with 40% of participants rating more than half of the songs they heard as nostalgic. This outcome might be related to responsiveness to the specific lyrics of the music chosen, as the songs tended to have evocative lyrics, covering themes of love and personal loss. In the current study, the sad music would have had a higher rate of sentimentality than the happy music. If a song from

the nostalgic-heavy key years of the adult's life features lyrics (either sad or happy) which the participants are emotionally engaged with, the nostalgic level might be higher than using music without meaningful lyrics, or with different musical attributes.

Sedikides et al. (2004, 2008b) found while studying the content of nostalgia, that autobiographical memories have been identified as a key component of nostalgic experiences. While Janata et al. (2007) suggest that pieces of music intertwine with specific episodes in our lives and that even after a long time, hearing the piece of music can induce autobiographical memories and their associated emotions. However, this suggests that any music linked to autobiographical memories might evoke a nostalgic emotion, but the current research demonstrates that even though both sad and happy music were familiar, they do not attain the same response in the individual.

Contemporary researchers have found that individuals report enjoying sad music despite its negative emotional tone (Huron, 2011; Vuoskoski et al., 2012) but it would be wrong to assume that individuals cannot distinguish between their real-world emotions of happiness and sadness, and the subjective states following listening to music specially selected to express these emotions. Participants in a study by Konecni, Brown, and Wanic (2008) recalled lower ratings of experienced sadness after listening to sad music than when they recalled sad autobiographical events. This author suggests that because the sad nostalgic music demonstrated higher ratings of nostalgia in this study, it cannot be assumed that this nostalgic-induced state of mind is one of sadness rather than happiness.

Looking at other aspects by way of explanation and discussion, the link between high nostalgia levels and sad music might be more related to the individual's sense of identity.

Previous research about song lyrics has found that when individuals report difficulties trying to understand or define their identities, they are more likely to regard song lyrics as nostalgic, thus evoking wistful memories of their past (Batcho, DaRin, Nave, & Yaworsky, 2008). It could be concluded that individuals who have not yet defined their identities would be more reactive to evocative lyrics, or alternatively, that individuals with identity issues might be more prone to being nostalgic.

However, nostalgia might instead be linked with personality type. The characteristics of a person who is highly prone to experiencing nostalgia could be one of two kinds of people; one who retreats to the past to escape the present, that is, a personality demonstrating neuroticism and sadness, or, alternatively, the type of person who has an interest in the interconnectedness of life, time, present and past would show personality traits of conscientiousness and openness interacting with autobiographical salience, song familiarity, and arousal (Barrett et al., 2010). Individuals who are nostalgia-prone report more intense music-evoked nostalgia (Barrett et al., 2010) but in the current research, the baseline control group reported lower nostalgia than both the sad music and happy music group, which seems to indicate that sad music has an effect on those who are prone to nostalgia and those who are not. The current study found that sad music demonstrated more nostalgia in the participants than happy or no music, which conflicts with Barrett et al. (2010) who found no evidence that certain particular songs elicited high (or low) levels of nostalgia across listeners. Overall, the results demonstrate that the nostalgic outcome achieved might indicate that participants were emotionally engaged in the music, that the music was intertwined with specific episodes in their lives, and it induced a nostalgic state via autobiographical memories in the participants.

Hypothesis Two – Nostalgia and Happiness

In the current research, it was hypothesized that there would be a correlation between Irish adults who indulge in nostalgia and their happiness levels, as found in previous research (Wildschut et al., 2006, 2008). However, no significant relationship was found between happiness and participants who indulge in nostalgia.

Nostalgia has been found to induce higher levels of happiness than of sadness (Sedikides et al., 2008b) and has also been described as a happiness-related emotion (Wang, 2007) that gives rise predominantly (albeit not exclusively) to positive affect, including feelings of joy, love, and pride (Barrett et al., 2010). Findings in the current study are more consistent with recent research by Barrett et al. (2010) who found that mixed emotions, not just happiness, were more frequently endorsed during nostalgic experiences; and sadness-related emotions such as sadness, disappointment, suffering, and sympathy were more prominent during nostalgic experiences. Gabrielsson and Juslin (1996) claim that the two emotions that music readily invokes are happiness and sadness; and Zentner et al. (2008) proposed that many different emotions blend together while listening to music, making it difficult for the listener to draw distinctions between specific emotions elicited between experiences.

Vuoskoski et al. (2012) undertook research which found that listening to sad music can induce changes in emotion-related memory and judgment, in particular, induce sadness. The participants in the current study may have experienced sadness as a result of the nostalgic-inducing music, but this theory would be affected by the autobiographical memories recalled, the individual's personality attributes and the music's relevance to the listener.

Individuals who experience disruption in their lives tend to cling to the past more than individuals who experience continuity (Davis, 1979). This author suggests that higher nostalgic behaviours will be demonstrated by those individuals who have experienced disrupting life events. Sedikides et al. (2008b) found that thinking nostalgically helped to maintain continuity with the past, but their important caveat was that this was only in the cases of individuals who were feeling happy at the beginning of the study. In other words, if an individual is feeling down, thinking back to a happy time might make the present seem rather unpleasant in comparison. This author suggests that in some cases, sad people might indulge in nostalgic behaviour because they resent the present and yearn for the past, when time were better. Zhang and Howell (2011) found that individuals with personality traits that are conducive to being nostalgic about the past demonstrate higher life satisfaction. This means that highly extroverted individuals are happier with their lives because they tend to hold a positive, nostalgic view of the past; which makes them the cohort least likely to have negative thoughts and regrets.

Nostalgia might cause happiness in some individuals but the relativity of happiness is dependent on the individual's outlook, the context of the autobiographical memories they are recalling, the individual's mood at the time and their personality type.

Hypothesis Three – Nostalgia and Optimism

It was hypothesized that Irish adults who indulge in nostalgia would demonstrate higher levels of optimism than those who do not, but this study found no significant relationship between nostalgia habits or proneness - and optimism, which diverges from previous research (Bryant et al., 1986; Stephan et al., 2008). A generally positive and hopeful outlook on the future is the defining characteristic of optimism. This positivity has

previously been linked to nostalgic behaviours, as found in Bryant et al.'s (1986) study with highly nostalgic college students, whose sense of well-being and optimism was reported as higher the more they reminisced. The current study administered the optimism scale post-experiment, and even though a baseline control group received no music trigger, the optimism levels were not correlated with nostalgia behaviours. Analysis shows the implications of participants' mood state prior to inducing nostalgia, as participants who begin nostalgia studies in a more negative mood, reported more intense music-evoked nostalgia across songs (Wildschut et al., 2006). A tighter control of pre-experiment mood states might have produced different results on the current research.

The effects of nostalgia on optimism levels cannot be explained simply. In terms of personality traits, on the Big Five model, optimism is positively correlated with extraversion, agreeableness, and conscientiousness, and significantly negatively correlated with neuroticism (Sharpe, Martin, & Roth, (2011). Supporting this theory further, optimism is correlated with extroversion; it has been found that both extroverts and individuals with a past-positive and a present-hedonism time perspective were more satisfied with their lives and neurotics with a past-negative time perspective were less satisfied with their lives (Zhang & Howell, 2011). If optimists tend to be extroverts and do not have high neuroticism, and, supported by findings by Barrett et al. (2010), that nostalgic-prone individuals demonstrate neuroticism and sadness; this author suggests that individuals who are nostalgic-prone are neither optimists nor extroverts. This correlates with the Batcho (1998) findings that high nostalgia groups report more pessimism than optimism. If highly nostalgic individuals hold negative views of the past and have the potential to be pessimistic, extroverts might be happier people because they have optimistic nostalgic habits and are less likely to have negative thoughts.

Research stresses the benefits of the nostalgic emotional experience (Sedikides et al., 2008b; Wildschut et al., 2006) and the positive affects of nostalgia. However, it has been found that individuals were worriers, or who had a strong habit of habitual worrying, demonstrated anxiety and depression symptoms after nostalgia was induced (Verplanken, 2012).

As previously discussed, nostalgia evokes a sense of social connectedness (Batcho, 1998) but in individuals with avoidant attachment who tend to have difficulty with intimacy and relationships (Hazan & Shaver, 1987), nostalgia will stimulate memories of close relationships and elicit discomfort and distrust (Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010). In those with avoidant attachment there is an assumption that other individuals will be unsupportive, so they choose not to rely on them. Nostalgia has been found to induce memories of close relationships, but for avoidant attachment individuals these memories might cause unease, which would encourage social exclusion rather than connection.

In summary, optimism levels within nostalgic behaviour are complex, with individual differences in mood, personality type, attachment style and worrying tendencies all having an effect on demonstrations of optimism in a nostalgic context.

Hypothesis Four – Age Variances

In the current research, it was hypothesized that there would be a difference between the nostalgic behaviour of younger (20 to 30 years) and older (65 to 75 years) Irish adults. Younger adults were found to have more nostalgic habits than older adults. However, there was no significant difference between younger and older participants on nostalgia proneness.

Relatively little research has examined reminiscence in the everyday lives of younger adults and it is unclear whether reminiscence serves a comparable function for younger adults or whether indeed they engage in reminiscence in the same ways (Bryant et al., 2005).

There are many reasons why the younger adults in the current research might have higher levels of nostalgia habits than older adults. In previous studies, students who were homesick were found to have high levels of nostalgic memories (Stroebe, van Vliet, Hewstone, & Willis, 2002). Havlena and Holak (1991) found that individuals demonstrate the most nostalgia for memories of events that have occurred in adolescence and early adulthood and younger adults have previously scored high in personal nostalgia (Batcho, 1995). Davis (1979) found that adolescence or early adulthood are the most fertile periods for nostalgic reflection. The age of the younger adults in the current research limits the time span of nostalgic memories as they are not as far removed as the older adults are, from the recalled memories. Therefore the higher levels of nostalgia habits in the younger Irish population might be explained by the fact that they are recalling more recent memories. Also, the tendency for adults to recall more autobiographical memories from age 15 to 25 years (the reminiscence bump) may help to explain why younger individuals demonstrated more nostalgic habits than their older counterparts. The reminiscence bump memories are linked to self-identity and are more novel, important and distinct; and in the younger group, are more recent and therefore more frequently and easily recalled.

The retention of detail in music-related memories shapes the life story in adolescence. These song excerpts act as memory retrieval cues, by being familiar and by being associated with critical periods in their adolescent lives when the songs were popular (Janata, 2005). In the mere-exposure effect, or familiarity principle, individuals tend to develop a preference for

things merely because they are familiar with them (Schellemborg, Peretz & Vieillard, 2008). However, adolescents of today reinvent themselves and their choices of music on a daily basis and this paradox of choice (Schwartz, 2005) means that the sheer choice of music available to young adults (more than 6 million songs on iTunes at present) has an effect on successful nostalgic music.

The selection of music is more diverse amongst younger adults as they have so many artists to choose from to then relate to their autobiographical memories. In terms of listening to music that accurately represents important life-events, nostalgia levels would be higher if the music listened to is more relevant and salient. It could be concluded that higher nostalgia habits were expressed by the younger group because there was an effective impact of nostalgic music on their autobiographical memories, and subsequent admission of frequencies of nostalgic habits.

In the current study, no significant differences were found between the two groups on nostalgia proneness which correlates with the findings of Sedikides et al (2004) that nostalgia is a universal experience, prevalent across the lifespan. Contrary studies have found nostalgia proneness to peak as the individual moves into middle age (Havlena & Holak, 1991) from the age of 50 years onwards (Goulding, 2002) and during their retirement years (Holbrook & Schindler, 1991). If nostalgic behaviour is linked more so to the kind of person being nostalgic in terms of personality, rather than their age, nostalgia proneness beliefs might not be seen in age differences.

According to Wilson (2005), in this age of rapid social, economic and technological change, there is a deep longing amongst many people for the perceived simpler times of

decades past. One of the limitations of previous research was that cultural differences in nostalgia proneness have not been analyzed thoroughly, and there has been no previous research on the cultural comparisons of Irish adults with other countries.

Strength and Weaknesses of Study

This was the first research study looking at the effects of music on nostalgia behaviour in Irish adults. One of the main strengths of the study was that it had a large sample size (n= 90) and unlike much previous research, the participants were not all college students. The participants were balanced gender-wise and there was a good variation in age. Another notable strength of the current study is that it extends the previous research by comparing older and younger samples and it uses an Irish population for the first time. In terms of nostalgia and music preference research, it has succeeded in validating previous research, by expanding on the research, which has been understudied so far.

A potential weakness in the study is the disparity of results for the younger population. This might be due to the circumstances of the questionnaire completion. Some of the younger college student population might have rushed their answers, or not paid much attention, as several participants chose the same score for many of the questions, while the reversed questions meant that variance in answering should have occurred.

A strength of the current study is that the kind of music used was piloted in advance to help nostalgic music validity. However, another weakness might be differences in personal unfamiliarity with the music played to evoke nostalgic behaviour, and particularly with the younger sample whose exposure to varied music genres and a multitude of different artists and songs means that their nostalgic associations with music of their past can be overloaded

because of choice order effects (Levav, Reinholtz, & Lin, 2012). In the age group 20 to 30 years, the sheer volume of music the participants have been exposed to and their associated nostalgic weight might affect results. Even if participants are familiar with the music, they may not have emotional associations with the songs, which may hamper the nostalgic responsiveness to the music.

The nature of analyzing the area of nostalgia is loaded with individual differences, and the study of emotions such as nostalgia is inextricably linked to the participant's autobiographical past, which is completely subjective. Understandably, the results of nostalgia may cause mixed emotions in the recipient which cannot be verified or extrapolated on within the confines of a specific Likert scale.

In terms of the effects of nostalgia on happiness and optimism, the conclusions drawn in the current research differ from the hypotheses. This might be related to personality or mood implications. A relationship has been found between personality and music preferences (Rentfrow & Gosling, 2003), which was not an aspect addressed in this study. Personality traits have been found to be indicators of an individual's tendencies to experience given mood states such as extraversion or neuroticism and negative moods predict higher nostalgia (Barrett et al., 2010; Wildschut et al., 2006). Negative mood states also act as momentary triggers of nostalgia (Wildschut et al., 2006).

Therefore, both personality and mood seem to have implications in triggering nostalgia and overall nostalgic levels. However, in the current study, the moods of participants before the experiment were not regulated, and the negative or positive aspects of the life-events recalled were neither discussed nor probed.

Other factors that might have resulted in different levels of response include room temperature, which was not monitored in the current study. Research has shown that nostalgia is triggered by physical coldness and participants feel more nostalgic on colder days (Zhou et al., 2012b). In the current study, the participants listened to the music using speakers or headphone and were seated directly in front of the monitor, assuming balance of audio. However Kimura (1973) has found that in general, musical patterns are better processed and better recognized later when played to the right hemisphere (Kimura, 1973).

Future Research

Because the area of nostalgia and indeed music preference is subject to individual differences, in future studies it would be useful to include further scales such as cognitive ability, music preference and personality type in the context of music triggers. According to Tully (2012), there has been limited research looking at the effect of age on music preference and personality. Future research might focus on music preferences across personality types.

Statistical surveys about nostalgia yield certain results, but a qualitative approach might be equally, if not more beneficial, particularly when researching music preference and personality. If interviews were conducted with individuals about their music preference, this kind of qualitative research would also demonstrate a greater understanding of the kinds of emotions and reactions to both music and nostalgic activity. Qualitative research might yield more significant insights into the personality of individuals, leading to more insight about nostalgia behaviours. As already discussed, individuals with identity definition difficulties are more likely to regard songs as nostalgic (Batcho, 1998), inferring that nostalgia-proneness might be linked to identity. It would be useful to include an identity scale to test links between identity and nostalgia.

In terms of procedural measures, in future studies, the room temperature could be stabilized, or even modified, to achieve different results in responsiveness to nostalgia. Regarding musical patterns and responsiveness, future research might benefit from audio being played in just the left ear of participants. In analysis terms, the gender differences were not addressed in the current study, but could provide interesting statistics on the differences between males and females in an Irish nostalgic context.

Collective nostalgia, a sentimental yearning felt by entire cultures, generations, or nations (Baker & Kennedy, 1994) is thought to be generation specific (Belk, 1990) therefore younger cohorts would prefer different music or other cultural expressions than their parents. Besides generational differences, religious and cultural differences in terms of nostalgia behaviours have been previously researched (Hirsch, 1992). Cultural studies have found nostalgia to be a widespread structure of feeling in Western modernity (Tannock, 1995), and Zhou et al. (2008) demonstrated correlations between loneliness and “huaijiu” (nostalgia) in an Asian culture.

The sample of the current study was Irish adults between the age of 20 to 30 years and 65 to 75 years. This raises important questions concerning what the expected outcomes might be in different age groups and what kind of difference in outcome would be expected in different cultures. Finally, the conclusions in the current research are limited by the fact that, like most previous research, this is a single study between subjects. Replications with different manipulations of nostalgia, multiple dependent variables, and more varied samples would strengthen the external validity of the present conclusions. In future research, a within-subjects design conducting nostalgic, happiness and optimism analysis without triggering music, and repeating the experiment using music might reduce the errors associated with

individual differences. Also, a repeated measures study with the same sample, or longitudinal studies might yield interesting results about how the variables of music and nostalgia behaviour interact and evolve over their lifespan.

Implications and Application

In nostalgia therapy, the individual does not simply recall, but focuses on significant life events (Hsieh & Wang, 2003). It has been found that nostalgia is beneficial; making individuals feel less lonely, more inspired, and allows individuals to take a break from negativity (Havighurst & Glasser, 1972; Stephan et al., 2008; Wildschut et al., 2006). Following nostalgic behaviour, positive affects and increased self-esteem has been found (Stephan et al., 2008) and individuals' attitudes or perceptions of themselves improves (Vess et al., 2012). However, the current research raises questions about the individual differences of personality and mood in the context of nostalgia.

Nostalgia and reminiscence therapy studies claim that this kind of therapy is an inexpensive and potentially beneficial approach to helping the elderly age in a happier way (Hill & Brettle, 2005; Zhou et al., 2008). It could be concluded that outside of nursing homes and retirement groups, engaging in nostalgia should be encouraged in the privacy of the home, for its inexpensive and beneficial results. This would not be restricted to the elderly, but children and adolescents too. In a clinical or indeed home perspective, individuals could be helped to practice nostalgia and trained to benefit from the restorative attributes of nostalgia, particularly if loneliness is present, or social support is believed to be lacking. Interestingly, the only research disputing the validity of nostalgia therapy was conducted with dementia patients whose cognitive abilities might have impacted on the results (Spector et al., 2003).

The findings in the current study have implications, not only for social psychology, but also for health and developmental psychology. From the perspective of social psychology, triggering nostalgia with music raises issues such as, what the negative and positive consequences of triggering nostalgia with music are; and who would benefit most from nostalgia practice. This author suggests that people who practice higher levels of nostalgia would experience beneficial consequences, regardless of age. It could be concluded that triggering nostalgia is relatively easy if the music used is autobiographically salient for the individual, and this might lead to personal benefits including self-esteem and fulfillment. Nostalgia might be invoked as a relaxation technique, a coping strategy (Batcho, 1995) or as a discourager of loneliness, but this might not be effective if successful nostalgia depends on how sad or neurotic the individual is.

This research documents the powerful effects of sad music to trigger nostalgia and constitutes an initial step towards establishing music-evoked nostalgia as potential beneficial practice for adults of all ages.

Conclusion

Giffin (2004) praises the benefits of music to evoke nostalgia, saying “it's amazing how much can be conjured with a few notes of a song or a solitary whiff of a room. A song you didn't even pay attention to at the time, a place that you didn't even know had a particular smell” (p. 367).

This study was successful in elaborating on previous studies of the effects of music on nostalgia. It was found that adults who are triggered with sad music will demonstrate higher levels of nostalgic behaviour than those triggered with happy music or no music. No

significant relationship was found between happiness or optimism and participants who indulge in nostalgia. These findings suggest that there is a definite relationship between sad music and nostalgia. With more specific analysis on personalities and moods, the outcomes of optimism and happiness levels following nostalgia can be examined further. The current research helps to build a foundation for examining the role of sad music-evoked nostalgia plays in the development of autobiographical memories across the life span. Important real-world implications of nostalgia therapy in an Irish population are suggested, but further research in this area is required.

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APPENDICES

Appendix A: Letter of access from South Dublin Older People's Network

Appendix B: Psychological questionnaires used

Thank you for taking the time to complete this questionnaire. Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

DEMOGRAPHIC INFORMATION

Gender: Male Female

Age: _____ years old OR born in _____

OR between 20 and 30 years of age

1. DIRECT RESPONSE TO MUSIC

Please **CIRCLE** a number to rate how nostalgic you found the music you just listened to:

Not Nostalgic

Somewhat Nostalgic

Very Nostalgic

1 2 3 4 5 6 7 8 9

Did you feel that in terms of evoking nostalgia, the songs you heard were:

Not Nostalgic			Some were Nostalgic			Almost all were Nostalgic		
1	2	3	4	5	6	7	8	9

2. NOSTALGIA INVENTORY [NI]

Using the following Nostalgia Inventory (Batcho, 1995), CIRCLE a number to indicate what you miss about when you were younger and how much you miss it.

				1 = Not at all					9 = Very Much
<hr/>									
Family									
1	2	3	4	5	6	7	8	9	
Heroes or Heroines									
1	2	3	4	5	6	7	8	9	
Not having to worry									
1	2	3	4	5	6	7	8	9	
Places									
1	2	3	4	5	6	7	8	9	
Music									
1	2	3	4	5	6	7	8	9	
Someone you loved									
1	2	3	4	5	6	7	8	9	
Friends									
1	2	3	4	5	6	7	8	9	
Things you did									
1	2	3	4	5	6	7	8	9	
Toys									

1 2 3 4 5 6 7 8 9

The way people were

1 2 3 4 5 6 7 8 9

Feelings you had

1 2 3 4 5 6 7 8 9

1 = Not at all

9 = Very Much

TV shows, movies

1 2 3 4 5 6 7 8 9

School

1 2 3 4 5 6 7 8 9

Having someone to depend on

1 2 3 4 5 6 7 8 9

Holidays

1 2 3 4 5 6 7 8 9

The way society was

1 2 3 4 5 6 7 8 9

Pet or pets

1 2 3 4 5 6 7 8 9

Not knowing sad or evil things

1 2 3 4 5 6 7 8 9

Church or Temple, etc.

1 2 3 4 5 6 7 8 9

Your house

1 2 3 4 5 6 7 8 9

- _____ Approximately once a week
 _____ Once or twice a month
 _____ Once every couple of months
 _____ Once or twice a year
-

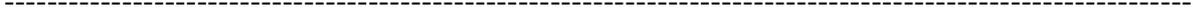
4. LIFE ORIENTATION TEST [LOT]

Using the following Life Orientation Test (LOT) (Scheier, Carver, & Bridges, 1994)

CIRCLE a number to indicate:

I agree a lot	I agree a little	I neither agree nor disagree	I Disagree a little	I Disagree a lot
4	3	2	1	0

1.	In uncertain times, I usually expect the best.	
2.	It's easy for me to relax.	
3.	If something can go wrong for me, it will.	
4.	I'm always optimistic about my future.	
5.	I enjoy my friends a lot.	
6.	It's important for me to keep busy.	
7.	I hardly ever expect things to go my way.	
8.	I don't get upset too easily.	
9.	I rarely count on good things happening to me.	
10.	Overall, I expect more good things to happen to me than bad.	



5. SUBJECTIVE HAPPINESS SCALE [SHS]

Using the following Subjective Happiness Scale [SHS] (Lyubomirsky & Lepper, 1999)

For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1	2	3	4	5	6	7
Not a very						A very
happy person						happy person

2. Compared to most of my peers, I consider myself:

1	2	3	4	5	6	7
Less happy						More happy

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

1	2	3	4	5	6	7
Not at all						A great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

1	2	3	4	5	6	7
Not at all						A great deal

Appendix C: Tracklists of nostalgic music

HAPPY MUSIC

Young Adults (20 to 30 years)

1. Baby one more time – Britney Spears
2. Barbie Girl – Aqua
3. Macarena – Los Del Rio
4. Save Tonight – Eagle Eye Cherry
5. Where is the love – Black Eyed Peas
6. Saturday Night – Whigfield
7. Everytime – Britney Spears
8. Fireflies – Owl City
9. Wannabe – Spice Girls
10. Blue (Da Ba Dee) – Eiffel 65
11. Real Slim Shady - Eminem
12. MMMBop – Hansen
13. Genie in a bottle – Christina Aguilera
14. All I wanna do – Sheryl Crow
15. Keep on Moving – Five
16. Spice up your life – Spice Girls
17. Best of You – Foo Fighters
18. Naïve – The Kooks
19. How Bizarre – OMC

Older Adults (65 to 75 years)

1. Tico's Tune (Gay Byrne Theme) - Manuel and the Music of the Mountains
2. Que Sera Sera – Doris Day
3. Jamaica Farewell – Harry Belafonte
4. Raindrops Keep Falling On My Head – B.J. Thomas
5. A Little Bitty Tear – Burl Ives
6. He'll Have To Go – Jim Reeves
7. I Love You Because – Al Martino
8. True Love Ways – Buddy Holly
9. And I Love You So – Perry Como
10. It Had To Be You – Dick Haymes
11. I Only Have Eyes For You – The Flamingos
12. Can't Get Used to Loving You – Andy Williams
13. Distant Drums – Jim Reeves
14. Release Me – Engelbert Humperdinck
15. Spanish Eyes – Al Martino
16. Rhythm Of The Rain – The Cascades
17. Blueberry Hill – Fats Domino
18. The Hucklebuck – Brendan Bowyer
19. Y Viva Espana – Sylvia Vrethammar
20. Do You Want Your Own Lobby Washed Down – Brendan Shine
21. After The Ball – Showboat Original Cast
22. When The Sun Says Goodbye To The Mountain – Susan McCann
23. Those Were The Days – Engelbert Humperdinck

SAD MUSIC

Young Adults (20 to 30 years)

1. Can you Feel The Love Tonight – Elton John
2. Don't Speak – No Doubt
3. My heart will go on – Celine Dion
4. Iris – Goo Goo Dolls
5. Back for Good – Take That
6. Flying Without Wings – Westlife
7. I believe I can fly – R. Kelly
8. No Matter What – Boyzone
9. Stay Another Day – East 17
10. Escape – Enrigue Iglesias
11. The Scientist – Coldplay
12. Never Had A Dream Come True – S Club 7
13. Never Ever – All Saints
14. Paparazzi – Lady Gaga
15. Umbrella – Rhianna
16. Bittersweet Symphony – The Verve
17. Don't Look Back in Anger – Oasis
18. Goodbye – Spice Girls
19. Friends Forever – Vitamin C

Older Adults (65 to 75 years)

1. Somewhere My Love (Lara's Theme from Dr Zhivago) – Ray Conniff & Singers
2. For The Good Times – Ray Price
3. Honey – Bobby Goldsboro
4. As Time Goes By – Vera Lynn & Roland Shaw Orchestra
5. Over The Rainbow – Judy Garland
6. The Green Fields Of France – The Fureys
7. The End of The World – Skeeter Davis
8. The Twelfth Of Never – Johnny Mathis
9. A Bunch Of Thyme – Foster & Allen
10. Every Step Of The Way - Dickie Rock & The Miami Showband
11. Grace – Jim McCann
12. Scarlet Ribbons - The Furey's & Davey Arthur
13. Cheek To Cheek – Fred Astaire
14. Beautiful Dreamer – Roy Orbison
15. The White Cliffs Of Dover – Maureen O'Hara
16. Love's Old Sweet Song – John McCormack
17. When You and I Were Young Maggie – John McCormack
18. We'll Meet Again – Vera Lynn & Roland Shaw

Appendix D: Consent form

(Note: This was the Consent Form given to participants in the experimental conditions. The Consent Form for the control group was identical, minus music/experiment references).

Page 1/

Dear Participant,

My name is Dominique Ellickson and I am a final year undergraduate student in Dublin Business School. I am conducting a research study on Nostalgia Behaviours as part of a BA Honours Degree Programme in Psychology. My Research Supervisor is Jonathan Murphy.

Purpose of the Research: This Research Project intends to measure nostalgic behaviours in young and older Irish people. I will be playing a 15-20 minute piece of music after which, you will be required to answer a five-part questionnaires overleaf (in addition to the Demographic questions below) which measure the direct response to music played, nostalgia levels (habits and proneness), happiness and optimism.

Research Description: The whole research will take approximately 30 minutes to complete in total. Participation in this study is completely voluntary, and you may stop completing the questionnaires at any time, or withdraw your participation. If at any time you feel uncomfortable listening to the music played, you may ask for it to be turned off. If you are uneasy about being in a nostalgic mindset, you need not participate. If you don't want to answer a question, you can refuse to answer it. If you decide to participate, you will have the option to withdraw at any stage without penalty or repercussions.

Confidentiality: You will not be identified in any of the questionnaires or demographic sheet and all answers given will be treated in the strictest confidence by the researcher. Only those in the age bracket 20 – 30 years old should complete the questionnaire.

If you have any further questions about the study, please feel free to ask me. If you would like me to provide you with the results of my findings, please contact me on the email below. Thank you very much for your participation and time.

Reseearcher’s Details: Dominique Ellickson.
T: [REDACTED]. Email: [REDACTED]

Supervisor’s Details: Dr Jonathan Murphy.
Email: [REDACTED]

Written Consent:

I understand the information contained in this letter.

Name:

Date:

I am willing/not willing to take part in this study.

Name:

Date: