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Abstract

The purpose of this research was to investigate whether the competitive television talent show 'The Voice UK' produced a priming effect on competitiveness levels in adolescents. Typically, the prime target audience of these shows consist of a young audience. Therefore, students aged between 16 and 18 years of age were selected to participate in this study. The experiment employed between-within group analysis with the pre-test and post-test experimental design. Gender, personality types and genre of a video clip were considered as possible contributing factors to the perception of competitiveness. Competitive and non competitive video clips were used in the priming task of the experimental and control groups. The Revised Competitiveness Index and The Revised Eysenk Personality Questionnaires were used to measure these variables. Firstly, it was hypothesized that levels of competitiveness will vary between groups and stages of the experiment. Secondly, levels of competitiveness will depend on different personality types across gender. Thirdly, levels of competitiveness will differ between males and females. The results revealed no significant effects of gender and group type (competitive or non-competitive priming intervention) on competitiveness scores. Nevertheless, minor differences of means in competitiveness scores were evident between males and females across groups. Personality types were found to have no effect on the levels of competitiveness. However, a negative relationship was found between a lie subscale and competitiveness. Meaning, that low the scores on the lie scale significantly predicted competitiveness. Further interpretation of these results highlighted a link between the lie, neuroticism and extraversion subscales that have a strong association with academic achievement.

Introduction

The importance of competition has been studied for many years. It plays a significant role in the achievement of success in all aspects of life (Gabor & Petersen, 1991). Competition occurs through increased social comparisons (Colpaert, Muller, Fayant, & Butera, 2015) and leads to the development of a range of competitive attitudes and behaviour towards others (Garcia, Tor, & Schiff, 2013). This could be the reason why competition is responsible for the development of adaptive traits such as the need for achievement (Sutton & Keogh, 2000). From an early age, children engage in competitive behaviour whether between siblings, on the playground or in school (Thye, 2013). Competition teaches children to learn about their abilities and develop problem-solving skills. In addition, they learn how to work in groups which pushes them to excel. Through exposure to competition, children acquire healthy attitudes towards winning and losing (Schneider, Wallsworth, & Gutin, 2014).

One of the important effects of competition relates to learning and academic development. Feelings of competitiveness are strongly linked to academic achievement in both boys and girls due to the increased amount of time that is spent on doing homework (Schneider, Wallsworth, & Gutin, 2014). The quality of revision and the time that is spent on doing homework influences learning outcomes (Murillo & Martinez-Garrido, 2014) and is significantly beneficial in test scores (Eren & Henderson, 2008). Therefore, competition is an essential aspect in increasing and encouraging higher grades.

In addition, messages associated with competition serve as an essential aspect of socialization in children (Lareau, 2011). Socialization is important for social adjustment and emotional expression in children and it has a direct effect on a child's emotional development (Tianyi Yu, Volling, & Weihua Niu, 2015). It is particularly important during adolescent development as it promotes adaptation in society and helps to reason and reflect on a complex environment associated with peers and parents (Wang, Benner, & Kim, 2015)

However, there is also a downside to competitiveness. When competitiveness is combined with narcissistic and antisocial personality traits, it may result in an unhealthy perception of competition and develop into hypercompetitiveness (Bing, 1999). Hypercompetitiveness is defined by the desire to win at all cost and is associated with high levels of neuroticism (Houston, Queen, Cruz, Vlahov, & Gosnell, 2015). Neuroticism is characterised by emotional liability and over reactivity. Individuals that score high in neuroticism have difficulty in returning to a normal state after emotional experiences (Eysenck & Eysenck, 1975). However, research associated with education and learning identified neuroticism as an important factor in academic achievement. It could be because neurotic personalities show a greater degree of adaptive flexibility in task strategy (Diseth, 2003). Neurotics were also found to have lower rates of examination failure (McKenzie, 1989). It is also important to point out that neuroticism combined with extraversion produces even higher academic scores (McKenzie & Tindell, 1993). Another important overlap of personality traits which is highly linked to perception of competition is between narcissism and extraversion (Sutton & Keogh, 2000). The supporting evidence shows the link between narcissistic and extroverted personalities as they both base their behaviour on specific intentions and hidden motives (Qureshi, Javeria Ashfaq, Masood ul Hassan, & Muhammad Imdadullah, 2015). This evidence leads to the conclusion that a person's response to a competitive cue depends on the personality type and emotional susceptibility of the individual (Branscombe & Wann, 1992).

Gender is another factor that may play a role in perception of competitive cues. Andersen et al. (2013) found that levels of competitiveness tend to significantly decrease in girls and increase in boys around puberty leading to the assumption that gender roles in traditional society start to form during puberty. This could be one of the determining factors

why men generally succeed to a greater degree outside household than women (Andersen, Ertac, Gneezy, List, & Maximiano, 2013).

There is limited research that evaluates the origins of competitive behaviour. However, competition or perception of it may come from different sources. One such source is competitive reality television shows (Holmes, 2014). Messages associated with competition are conveyed through TV programmes however, it is unknown what possible effects they have on the behaviour of the viewer. A widely researched area of behavioural priming is concerned with a phenomenon that can affect behaviour on the unconscious level. Meaning that, priming may occur automatically and influence behaviour with little or no awareness (Wentura & Rothermund, 2014). Bargh et al. (2001) suggests that the effect of priming is constant and is produced as a consequence of other people's behaviour (Molden, 2014). Other research has explored the perception-behaviour link in social interaction. Passive and unintentional mimicking behaviour that was produced by priming allowed people to fit into the environment of others (Chartrand & Bargh, 1999).

Significant research has studied priming effects of violent material on TV. Experts argued that there is more than one factor which may influence the behaviour of the viewer. This was highlighted by James (2003), who proposed that psychological effects are manipulated through physical processes. This means, that watching violent behaviour on TV may increase heart rate and blood pressure in turn activating psychological states that match these physiological responses like fear, anger and desire (Ahsan Bhatti & Ab Ul Hassan, 2014). However, it is suggested that positive expressions like smiling, help to preserve a homeostatic state of the body and facilitate quicker recovery from physiological arousal (Mizugaki, Maehara, Okanoya, & Myowa-Yamakoshi, 2015). Therefore, exposure to humorous material on TV may produce an opposite physiological effect.

Other behaviours are also subject to priming through TV programmes. This is highlighted by research which showed that voting intentions could be affected and influenced through TV campaigns (Druckman, 2004). Even though voting preference is highly personal and is based on an individual's values and beliefs. It is not resistant to the unconscious priming.

Additionally, Harris et al. (2009) tested the hypothesis that the type of food that is advertised during the viewing of TV shows will prime automatic eating behaviour. Indeed the findings returned significant results in both children and adults. External eating cues have a very strong influence on food consumption even in the absence of hunger. Furthermore, behaviour of other people i.e. watching food advertisements where people are eating and drinking served as a behavioural cue and increased food and drink consumption in the viewers (Harris, Bargh, & Brownell, 2009).

Television priming has the power to influence people's attitudes and subsequent behaviour. It has been hypothesised based on gratification framework that individuals select certain media in attempt to achieve optimum emotional arousal (Langstedt & Atkin, 2013). Television programmes are loaded with cognitive primes that can affect person's attention processing and draw more focus to certain messages than others (Schleuder, White, & Cameron, 1993). The above research demonstrates the importance of messages that come through television screens and that people's behaviour can be affected beyond conscious control.

To date, there are no studies conducted that look at the priming effects of television on feelings of competitiveness. Nevertheless, the amount of competitive material on TV has risen dramatically since the first singing talent competition 'Pop Idol' was aired (Holmes, 2014). The examples include 'The X Factor', 'Britain's Got Talent', 'The Voice UK

and Ireland' and many others. These programmes offer life-changing rewards and instant fame therefore encouraging participants to compete harder (Zwaan & ter Bogt, 2010).

Persons under 18 are generally the target audience of talent shows (Hill, 2005). One of the main reasons why the reality genre has been so powerful in the television market is because it appeals to younger viewers (Butsch, 2006). Some research suggests that this increased interest could be due to inability of the viewers to separate fictional TV from factual information (Hill, 2007).

The programme of interest for the current study is a competitive reality TV show 'The Voice UK'. The concept of this show is depicted in the stage presentation. Its setting and lighting is arranged in the similar way as a boxing ring. Similarly, vocabulary that is associated with singing is replaced by sport related lexicon some of the examples include 'knockout', 'the ring', 'the battle' and 'coaches'. The show is based on the sequence of stages or 'rounds'. In the battle round each participant is faced with an 'opponent'. This 'battle' subsequently leads to coaches' decision where one of the participants is progressing to the next round and the other participant is eliminated from the competition. It is the most competitive stage of the show as the participants not only compete with each other but the coaches are also waiting for an opportunity to 'steal' the remaining participant. 'The winner takes all' prize structure puts more at stake and subsequently increases competition (Slack & Parent, 2007).

Taking all of the above research findings into consideration the current study aims to expand the understanding of priming on competitive behaviour and whether it can be influenced by competitive material on television in the form of entertaining programmes. The design of the study carefully considered factors like the age of the participants, personality types, gender and the genre of the viewing material. The study was designed in two stages the pre-test and the post-test. This established the baseline of competitiveness levels and

facilitated a comparative analysis between participants and stages. Priming intervention consisted of competitive and non competitive video clips.

The following hypotheses are proposed regarding the current investigation.

Firstly, it is hypothesized that there will be a significant difference in the levels of competitiveness between the group that viewed the competitive video clip and the group that viewed non-competitive video clip. This may lead to a significant difference between the pre-test and post-test scores in the levels of competitiveness. Secondly, it is hypothesized that there will be a significant difference in levels of competitiveness across gender and different personality types. Thirdly, It is hypothesized that there will be a significant difference in levels of competitiveness between males and females.

Method

Participants

Participants were all students attending Mullingar Training and Development Agency, which is a part of the Westmeath/Longford Educational and Training Board. Initially the agency was contacted and communication was established with the head of the agency that granted permission to access the students (see Appendix B). Further, permission was sought through parental consent forms (see Appendix C). Parents received an information sheet (see Appendix D) that explained the aim and the procedure of the study. As a result, twenty-eight participants were recruited for this study. The ages of the participants ranged between 16 and 18 years of age, of which 10 were boys and 18 were girls. Prior to the experiment a power sample calculation using Cohen's table (Cohen,1992) recommended 64 participants per group. However, due to the time constraints and the nature of the experiment which relied on a two-time participation the number of participants was reduced.

Materials

The materials consisted of two questionnaires and two video clips. The first questionnaire was the Revised Competitiveness Index that consists of 14 questions associated with feelings of competitiveness. Participants responses ranged from 1 (strongly agree) to 5 (strongly disagree) on the Likert-type response scale. Examples of items include 'I like competition' and 'I get satisfaction competing against others'. Participants were asked to select a number that represented their feelings/opinion on the subject (see Appendix F). Harris and Houston (2010) reported acceptable test-retest reliability of the Competitiveness Index (14 items; $\alpha = .90$) (Harris & Houston, 2010). However, the Competitiveness Index questionnaire in the current study was introduced as an 'Attitude Questionnaire' (THYE, 2013) in order to preserve the true aim of the study.

The second questionnaire was the Revised Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) which contains 48 questions associated with personality traits and characteristics that are presented as the subscales of Neuroticism, Psychoticism, Extraversion/Introversion and a Lie. Participant responses consisted of YES or NO answers and each response carried its own value. Examples include ‘are you an irritable person?’ and ‘do you enjoy co-operating with others?’ (see Appendix H). EPQ is a widely used measure of personality types. The test retest reliability produced satisfactory results with an interval of 6 months; extraversion 0.67 and 0.76, neuroticism 0.72 and 0.74, psychoticism 0.63 and 0.66 and a lie scale 0.65 and 0.66 (Roy, 2012).

The two video clips were of the current television programs : ‘America’s Funniest Home Videos’ S11E08 that lasted for 41 minutes and consisted of the humorous material that did not contain any competitive cues and ‘The Voice UK’ series 4 episode 8 Battle Rounds 1 UK 2015 that was shortened to 47 minutes.

Two separate classrooms were required for this experiment as the two video clips were played at the same time in each room. An Epson LCD8692B projector was used to project the videos from a laptop computer to the screen.

Research Design

The experiment employed between-within group analysis with the pre-test and post-test experimental design where gender, personality and group type were the between group variables and competitiveness levels was the within group variable. This research design employed random allocation of the participants to the control and experimental groups.

The control and experimental groups that consisted of a mix of gender and personality types served as the independent variables. The levels of competitiveness before and after the priming stage were the dependent variables within the design of the study.

The pre-test was the first stage of the experiment. At this stage, the Competitiveness Index Questionnaire was used to establish the baseline of the levels of competitiveness and The Revised Eysenck Personality Questionnaire was used to determine individual personality type. The Post-test was the second stage of the experiment where priming took place through the video viewing. The second round of the Competitiveness Index questionnaire was completed at this stage. One week of a cooling period was allowed between stages one and two.

Prior to conducting the experiment a power analysis was run. This determined whether the participant sample was big enough to detect any significant changes. When the mixed between-within group ANOVA was run through the SPSS system to evaluate the observed power of the presented sample it reported the value of .96, meaning that the sample size of 28 participants was big enough to measure the effect with 17 participants in experimental group and 11 participants in the control group.

Procedure

On arrival, all of the participants were informed that this study was designed to measure personal attitudes towards popular TV shows. This form of deception was necessary in order to avoid predisposing participants to the knowledge that may have affected their responses. The experiment consisted of two stages. During the first stage, all of the participants were asked to answer the Revised Competitiveness Index and the Revised Eysenck Personality Questionnaires. This stage lasted for approximately 20 minutes. The data was then collected and taken away. Seven days were allowed between the first stage and second stage of the experiment. During the second stage which took approximately 65 minutes, participants were randomly assigned to either group A (experimental condition) or group B (control condition) by drawing either a letter A or a letter B from an envelope. This resulted in the experimental group containing 17 participants consisting of 4 males and 13

females. The control group contained 11 participants of which 6 were males and 5 were females. Subsequent to group assignment, the control and experimental groups were separated to two classrooms for video viewing. The control group watched the 'America's Funnies Home Videos' that lasted for 41 minutes and the experimental group watched 'The Voice UK Battles Round' that lasted for 47 minutes. Post viewing of the programmes, the participants were asked to fill out the Competitiveness Index Questionnaire once again. After that, the data was collected. The participants were handed the debriefing sheet (see Appendix E) and were thanked for their participation.

To allow for the comparative analysis each participant had to fill out their name, date of birth and gender on a coding slip that was attached to each of the questionnaires at each stage of the experiment. Following the collection of the data from the first and the second stages each of the participant's names were coded and the original coding slip was destroyed in order to preserve anonymity.

The scores to the Revised Competitiveness Index Questionnaire were summed. The following questions were reversed scored in order to ensure consistency of responses: 3, 4, 5,6,7,8,9,10 and 14 (see Appendix G). A possible total score falls between 14 and 70, meaning, the higher the score the higher the level of competitiveness. The difference between the means of the control and experimental groups as well as the means of the pre-test and post- test levels of competitiveness were analysed using the mixed between-within group ANOVA. The same analysis was used for the gender and competitiveness comparison.

The Revised Eysenck Personality Questionnaire consisted of Psychoticism, Extraversion / Introversion, Neuroticism and a Lie subscales. By answering a YES or NO to certain questions helped to determine individual's personality type. Each of the YES or NO answers carried a value of 1 that was subject to change in each one of the questions (see Appendix I). As a result, each subscale had its own value that was unique to every participant.

The subscale that had the highest value ultimately determined the participant's personality type. An excel spread sheet was used to calculate the score value of each of the subscales for each of the participants. The values were then entered into the SPSS. Multiple regression was used to measure correlation between levels of competitiveness and each of the subscale of the personality types.

A multivariate ANOVA was performed in order to evaluate whether there was any difference between males and females and each of the subscale of the personality types.

Coding

To facilitate comparative analysis on the levels of competitiveness each of the participants received a code that was unique to them. This was done at the first stage of the experiment. The coding slip (see Appendix H) was attached to the top left corner of each of the Revised Competitiveness Index questionnaires as well as to the Revised Eysenck Personality questionnaire. The following information was needed: Student Code (researcher only), initials, date of birth and gender. Following this the participants handed back the questionnaire and the researcher allocated a unique code to each of the participants. At the second stage of the experiment, a similar coding slip was attached to the Revised Competitiveness Index questionnaire requesting the same information. Participants then handed back their final responses. Their initials, date of birth and gender were matched to their initial coding slips of the first stage of the experiment. Once the coding was completed, the bottom part of the coding slip that contained student initials, date of birth and gender were destroyed by shredding. This meant that each participant had a unique code that could not be traced back. No other record of their identities was kept on file. In this way, the anonymity of each of the participants was preserved throughout the study.

Results

The current study proposed three hypotheses that were subsequently statistically analysed and interpreted. The first hypothesis stated that there will be a significant difference in the levels of competitiveness between the group that viewed the competitive video clip and the group that viewed non competitive video clip. This may lead to a significant difference between the pre-test and post-test scores in the levels of competitiveness. The Second hypothesis stated that there will be a significant difference in levels of competitiveness across gender and different personality types. The third hypothesis proposed that there will be a significant difference in levels of competitiveness between males and females.

To investigate the effects of gender and group type (competitive or non-competitive priming intervention) on competitiveness scores, one mixed between-within group ANOVA analysis was performed. *Table 1* contains means, standard deviations and sample size. The mean of overall competitiveness was the highest in the males in the post-test control group ($M = 48.33$). However the highest standard deviation was the highest in females in the post- test control group ($SD = 6.26$) indicating more variance among this group. *Table 1* illustrates how marginally the means differed among gender, time and group type. Interestingly, the means in both control and experimental groups had increased post priming stage. The highest increase of means was between males in control group pre-test ($M=39.83$) and post-test ($M=48.33$). Followed by the smallest increase of means in experimental group between females pre-test ($M=41.60$) and post-test ($M=44.76$). However, in general men showed a higher increase in means between the pre-test and post-test scores in both control and experimental groups.

Table 1. Descriptive Statistics. Difference in competitiveness between gender time and groups

Variables	Groups	Mean	SD	N
Time 1 Males	Control	39.83	4.35	6
	Experimental	42.50	5.07	4
Time 1 Females	Control	41.60	5.03	5
	Experimental	41.60	5.89	13
Time 2 Males	Control	48.33	5.13	6
	Experimental	47.50	3.51	4
Time 2 Females	Control	46.20	6.26	5
	Experimental	44.76	4.85	13

The analysis of one mixed between-within group ANOVA found that there was no significant interaction effect between time and gender ($F(1, 24) = 1.1, p = .304$) with an effect size of 4%. There was also no significant interaction effect between time and group type ($F(1, 24) = .81, p = .375$) with an effect size of 33%. In relation to main effects there was no significant difference between control and experimental group on the levels of competitiveness ($F(1, 24) = .004, p = .951, \text{effect size} = .000$) as well as there was no significant difference between gender and group type ($F(1, 24) = .23, p = .633, \text{effect size} = .001$). The relevant output from the mixed between-within group ANOVA is shown in *Table 2*.

Table 2. Interaction effect between time, gender and group type

Variables	df	F	P	Partial Eta Squared
Time*gender	1,24	1.102	.304	.044
Time*group type	1,24	.817	.375	.033
Time*gender*group	1,24	.141	.711	.006
Group*group	1,24	.004	.951	.000
Gender*group	1,24	.234	.633	.010

In order to examine potential gender differences in personality types a multivariate ANOVA analysis was performed. *Table 3* contains a detailed breakdown of means and standard deviation of personality subscales across gender. The highest mean is within

extraversion/introversion subscales with males having a higher mean ($M=6.90$) than females ($M=6.77$). However, the highest standard deviation is in males within Neuroticism subscale ($M=2.63$). The second highest subscale on the mean comparison is Neuroticism.

Table 3. Descriptive Statistics. Comparing personality types across gender

Subscales	Gender	Mean	SD
<i>Neuroticism</i>	<i>Male</i>	6.60	2.63
	<i>Female</i>	6.16	2.50
<i>Psychoticism</i>	<i>Male</i>	4.20	1.81
	<i>Female</i>	4.72	1.74
<i>Extraversion/Introversion</i>	<i>Male</i>	6.90	2.13
	<i>Female</i>	6.77	2.04
<i>Lie</i>	<i>Male</i>	5.00	2.10
	<i>Female</i>	4.66	2.14

The same results of multivariate ANOVA found that there was no statistically significant gender difference and EPQ scores ($F(4, 23) = .38, p = .820$, effect size $= .06$). The relevant output for multivariate ANOVA is shown in *Table 4*.

Table 4. Comparing Personality types and gender differences

Variables	df	F	p	Mean	SD
<i>Overall</i>	4,23	.381	.820		
<i>Neuroticism and gender</i>	4,26	.186	.670	6.32	2.51
<i>Psychoticism and gender</i>	4,26	.561	.460	4.53	1.75
<i>Extraversion/Introversion and gender</i>	4,26	.022	.882	6.82	2.03
<i>Lie and gender</i>	4,26	.157	.695	4.78	2.09

To explore a unique contribution of personality types on the levels of competitiveness a multiple regression analysis was performed. However, regression assumptions of multicollinearity were broken therefore the interpretation of results is taken with caution. The resulting regression model explained 7% of variance ($R^2 = .07, F(4, 24) = 1.5, p = .233$) reporting no significant findings between personality types and levels of competitiveness.

However, it was found that a lie sub scale did significantly predict competitiveness ($\beta = -.42$, $p = .037$, 95% CI=-1.96--.064). *Table 5* summarizes the overall effect of personality types on the levels of competitiveness as well as showing individual Beta and significance scores for each of the personality subscale.

Table 5. Personality types as predictors of competitiveness

Subscales	B	p	F	df	Adj. R Square
<i>Overall</i>		.233	1.506	4.24	.070
<i>Neuroticism</i>	.288	.209			
<i>Psychoticism</i>	-.279	.294			
<i>Extraversion/Introversion</i>	-.162	.472			
<i>Lie</i>	-.428	.037			

R Squared = .208

Discussion

The goal of this study was to measure the effects of television priming on competitiveness levels in adolescents. The importance of studying television priming and competitiveness stems from a desire to understand how susceptible children are to the competitive cues that may not be so explicit. That is, whether simply viewing competitive material on TV is a strong enough stimulus to affect competitiveness levels in adolescents. Previous research was able to demonstrate how behaviour could be subject to unconscious primes and controlled beyond conscious awareness (Wentura & Rothermund, 2014). If competitiveness could be primed the findings may have implications in educational and learning settings. Individuals that are high in competitiveness usually excel in school and achieve higher grades (Schneider Wallsworth, & Gutin, 2014). They also find it easier to adjust to the environment and tend to be more emotionally expressive (Wang, Benner, & Kim, 2015). However, competitiveness is not a straight forward concept to grasp. Different factors are involved in interpretation of competitive cues and perception of it. Some of these factors as demonstrated by the previous research involve personality types (Branscombe & Wann, 1992) and gender (Andersen, Ertac, Gneezy, List, & Maximiano, 2013).

The following hypotheses were forwarded to help to investigate the proposed topic. Firstly, it was hypothesized that there will be a significant difference in the levels of competitiveness between the group that viewed the competitive video clip and the group that viewed non-competitive video clip. This may lead to a significant difference between the pre-test and post-test scores in the levels of competitiveness. However, the results did not support this hypothesis. This study did not find any significant changes in levels of competitiveness between the control and experimental groups before and after the prime took place. Therefore, there was no evidence that demonstrated the effect of television priming on competitive levels in adolescents. Furthermore, this study overestimated the strengths of the television priming

effects that were demonstrated by the previous research. It is argued that the effect of priming is constant (Molden, 2014) and automatic (Wentura & Rothermund, 2014). This means, that the behaviour is affected by primes beyond conscious control. This argument, however, is lacking in description of any other variables that may be involved in the production of priming effect. Bargh et al. (2001) proposed that in order for the prime to occur it is enough to observe other peoples behaviour (Molden, 2014). Further development of this theory by Bargh, Chen et al. (1996) suggested that unintentional mimicking of behaviour occurs as a result of perception-behavioural link. However, this research did not provide any evidence of perception manipulation or its definition (Chartrand & Bargh, 1999). The importance of individual's perception should not be underestimated. Perception and cognition could be influenced to a certain degree by individuals beliefs and expectations (Hubbard, 2015). Some research found that people vary in extent they use normative information in order to make a behavioural decision (Manning, 2011). This means, that individual differences and person's attitudes affect how people perceive information. Individual differences however, may be moderated by other peoples opinion and perception of approval from others (Latimer & Martin Ginis, 2005). Social motivation was found to be one of the determining factors in direct effect on behaviour (Manning, 2011). This means that people may behave in a different way than they normally would. However, there is evidence that suggests that unconscious social motivation may impact on the information processing strategies and observable, purposive social behaviour (Forgas, Williams, & Laham, 2005). Therefore, the intention to engage in a particular behaviour is preceded by many determinant factors that form attitudes and subjective norms. Present findings demonstrated that human behaviour is not easily susceptible to primes as previously suggested. Environmental and individual factors may influence the priming outcome.

Secondly, this study explored the effects of personality types and gender on the level of competitiveness. It was hypothesized that there will be a significant difference in levels of competitiveness across gender and different personality types. Due to limitations caused by the violation of multicollinearity assumption the results of the multiple regression analysis are interpreted with caution. There was no indication of significant difference in males and females in personality type. Therefore, the hypothesis was rejected. However, further evaluation of relevant research on personality types and gender differences uncovered conflicting findings. Some research suggests that levels of neuroticism is higher in females (Chapman, Duberstein, Sörensen, & Lyness, 2007) and narcissism is higher in males (Grijalva et al., 2015). Considering the role neuroticism plays in academic achievement and the fact that girls perform better in school than boys (Fairlie, 2016) supports this view of personality types and gender differences. In addition, as it was highlighted by previous research narcissism and extraversion share common traits and motives (Bing, 1999). Considering the results of the present study which revealed that boys scored higher than girls on the extraversion subscale provides further supporting evidence of gender and personality differences. However, narcissism and neuroticism are closely linked to each other as they both overlap with extraversion (Houston, Queen, Cruz, Vlahov, & Gosnell, 2015), (Qureshi, Javeria Ashfaq, Masood ul Hassan, & Muhammad Imdadullah, 2015). In light of this evidence it can be suggested that girls share narcissistic personality traits and boys share neurotic personality traits. Therefore, in conclusion, there should be no difference between personality types and gender as it was evidenced by the current research.

Further interpretation of multiple regression analysis highlighted a significant negative correlation that was found between competitiveness and a lie subscale. This means, the lower the score is on the lie scale the higher the competitiveness levels. Interestingly when comparing the means across gender and personality types the results indicated that

neuroticism and extraversion/introversion subscales were the highest. A close examination of the individual answers on the EPQ questionnaire indicated that the participants that scored low on the lie subscale scored high on the neuroticism and extraversion subscales. There is a growing body of evidence that suggests that people scoring high on the lie scale wish to mask their tendency towards neuroticism (Francis, Loudon, Robbins, & Rutledge, 2000). Since, the result of this study indicated that there is a negative correlation between the lie subscale and competitiveness; the following interpretation may be put forward. Elaborating further on the findings of the lie subscale it is possible to assume that the participants that responded more truthfully scored higher in competitiveness. Substantiated by previous research the lie and neuroticism subscales are interrelated and it may be assumed that participants who scored high in neuroticism and extraversion also scored high in competitiveness. If this interpretation was accepted then the second hypothesis could not be rejected. In this case, it could provide potential support for the previous research findings on the relationship between associated personality types and competitiveness.

Finally, the third hypothesis proposed that there will be a significant difference in the levels of competitiveness between males and females. The results returned insignificant findings; therefore, the hypothesis was rejected. These results are not supportive of the study by Andersen et al. (2013) that reported significant difference in competitiveness levels between adolescent boys and girls. It is thought that puberty is the cause for this difference (Andersen et al., 2013). Puberty is marked by major psychological, endocrine and physical changes and is related to psychosocial outcomes (Marceau, Ram, Houts, Grimm, & Susman, 2011). The rate of maturation greatly influences risk factors associated with emotional problems like depressive and other internalizing symptoms (Blumenthal et al., 2011). Adolescence is also the key period during which social anxiety may develop and intensify. Social anxiety is characterised by pervasive fear of negative evaluation by others and

development of behavioural inhibitions (Svihra & Katzman, 2004). It is reported to affect more girls than boys during developmental stages (Deardorff et al., 2007). Studies that explored the effects of high anxiety on competition found that individuals that fell outside the optimum levels of anxiety underperformed significantly than others (Salminen, Liukkonen, Hanin, & Hyvönen, 1995). An examination of the means produced by the analysis of the mixed between-within group ANOVA indeed indicated that girls scored lower than boys on competitiveness in both stages. However, the difference was not substantial enough to report the significance of findings. Nevertheless, it cannot be disputed that there is a potential link between age, gender and competitiveness.

Limitations

There were a number of limitations to this study that may have affected the results. A noticeable limitation was the number of participants that took part in the study. According to the Cohen's Table (Cohen, 1992) the suggested number for getting a significant result was 64 participants per group. Unfortunately, due to the nature of the study that required student participation in school during the class hours, the access was gained to only 28 students in total. The number of participants used in this study was below the suggested figure, and thus, the effects in this study should be treated as relatively preliminary.

When conducting multiple regression analysis the assumptions of multicollinearity were broken. There was no other alternative of non-parametric test available the interpretation of the results was approached with caution.

In order to conduct comparative analysis participant's initials, date of birth and gender were required. All of the participant information was coded and original identifying information was destroyed in order to preserve anonymity. Nevertheless this may have affected participant responses to certain questions on the questionnaires. In addition, due to the time constrains the time that was allowed between the stages was limited to 7 days. This

may not have been sufficient amount of time as some of the participants may have remembered their previous answers to the same questions of the Revised Competitiveness Index Questionnaire, therefore allowing no changes to their answers.

Another limitation that should be considered is the length of the experimental clip. The video of the Battles Round of 'The Voice UK' was shortened to 47 minutes in order to match the length of the video in the control group. This alteration does not reflect the true exposure of the viewers to the program at home. Therefore, this limitation may have reduced the required length of time of the exposure to the stimuli in order for the changes to take place

The original idea for the experiment was to focus on the current episodes of 'The Voice UK', in order to avoid participant familiarity with the 2015 episodes. However, as this study was part of the final year's thesis it was not possible to delay the experiment in order to meet the submission deadline. As a result participant's attention and engagement in the video viewing may have been weakened due to the awareness of the programme's outcome.

Finally, as the talent show programmes usually last for several weeks the viewers get to know the contestants and the coaches. Certain amount of emotional investment in the programme may develop as the viewers pick their favourite contestant that they want to win. Therefore, by viewing a detached clip of the show may not have had the same effect on the viewer.

Implications and Future Research

The findings associated with competition can be applied in developmental and learning settings as competition promotes efficiency and growth (Bueno de Mesquita, Morrow, Siverson, & Smith, 2001). If there is a link between neuroticism, extraversion personality types and perception of competitiveness then these results may have implications on the future learning and development styles that are tailored to each personality. There is evidence that suggests that there is a relationship between personality type and a learning

style (Threeton & Walter, 2009). Since there is a close interaction between student and teacher, factors like culture, diverse background and different learning styles should be taken in to consideration (Kothari & Pingle, 2015). However if the teaching style is selected appropriately it could deliver effective teaching in spite of differences (Diaz Larenas, Rodríguez Moran, & Poblete Rivera, 2011). Some studies explored dimensions of information gathering, decision making and relationship with surrounding and it was found that students that learn through sensing, feeling and judging are more extraverted and like to learn in groups (Ashraf, Fendler, & Shrikhande, 2013). Myer- Briggs type indicator identified four dimensions that describe student profile. These include extraversion vs introversion, sensing vs intuition , thinking vs feeling as well as judging vs perspective (Goby & Lewis, 2000). Different teaching approaches should apply to students that fit certain profiles. Other studies looked at the performance of the short term and long term memory in extraverts and introverts, and found that high arousal in extraverts aids formation of the long term memory but impairs the short term memory performance (Beattie & Corr, 2010).

On the subject of exploring different personality types, further research is required to explore the role of the lie subscale of the EPQ questionnaire. Originally, the lie subscale was introduced to identify individuals who are ‘faking good’ and desire to appear in favourable light (Eysenck & Eysenck, 1975). Currently there are two separate views on the concept of lying. One emphasizes that lying takes time and the other suggests that it takes longer to give an honest answer (Tatalović Vorkapić, 2015). Therefore, it could be suggested that persons that score high on the lie scale may have other factors involved that influenced their answers. Some explanations argue that the score on the lie scale is indicative of individuals with a lack of self insight or it could be simply defined as an act of conformity (Francis et al., 2000). Future research may explore the possibility that the lie scale is a separate personality type in its own right, identifying the traits and features that underline its characteristics.

The current research was first inspired by television effects on behavioural priming. It is proposed that future research may explore it in a different way. The inspiration is taken from the study of stereotype priming where participants were primed with words associated with old age and this priming exercise subsequently affected participant's walking speed (Bargh, Chen, & Burrows, 1996). Future research in the area may consider the use of words associated with competition in the priming task. Words could be taken from competitive television programmes, for example 'boot camp', 'judges', 'coaches', 'battle', 'knockouts' and 'eliminations'. A priming exercise could be followed by a task that would help measure any changes in competitiveness. The task could involve cognitive or physical activity. Variations of the future experimental design, procedure and measures could be further explored and evaluated.

In conclusion, the findings demonstrated that priming does not occur simply through exposure to competitive material on TV. Further understanding of the mechanisms that produce a priming effect is necessary. Factors that are involved in the interpretation of information like personality differences, emotional and psychological states play a significant role in motivation to engage in certain behaviour. In addition, this study highlighted the delicate relationship of individual perceptions that are based on personality types. Subsequently, this may have played the role in interpretation of the competitive cues. However, the considerable amount of conflicting findings in the previous research highlighted the needs for further investigation. Development of understanding of different personality types and their role on gender and competitiveness is essential. Otherwise, considering one research over another may potentially lead to an erroneous conclusion on the subject.

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Appendix A

Statutory Declaration



13/14 Aungier Street
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DUBLIN BUSINESS SCHOOL / DBS SCHOOL OF ARTS STATUTORY DECLARATION

I KSENJA NESTEROVA of BLACKROCK, Co. DUBLIN

aged 18 years and upwards do solemnly and sincerely, declare that:

1. I am not and have never been engaged in any conduct which could result in a conviction for any offence under the Child Pornography Act 1998. I understand that the offences under the Act comprise child trafficking, the taking of children for the purposes of sexual exploitation, allowing children to be used for the production of child pornography, the dissemination of child pornography, and the possession of child pornography.
2. I have never been convicted of any criminal offence for assault, battery, rape, murder, false imprisonment or unlawful carnal knowledge.
3. I have also never been convicted of any criminal offence relating to the trafficking or possession of drugs for supply.
4. I have never been excluded from working with children.
5. I have read and agree to abide by the code of ethical conduct set out by the Psychological Society of Ireland currently in force at the date of making this Declaration and I agree to abide by this code as subsequently amended from time to time.
6. I have read and agree to abide by the guidelines as set out in the DBS Ethics Policy.
7. I have been informed and understand that if I make a false declaration regarding any of these matters Dublin Business School will immediately terminate my research in the department and that any qualifications from the School will be negated.

I make this declaration for the satisfaction of Dublin Business School believing the same to be true and by virtue of the Statutory Declarations Act 1938.


Signature

DECLARED before me by the said Ksenja Nesterova

Who is personally known to me
(or who is identified to me by.....)

Who is personally known to me) at Mynd Street (Dublin)

In the City of Dublin this 10th day of October 2015


Commissioner for Oaths / Practising Solicitor

Appendix B

Letter of Correspondence

Study

Inbox x



Ksenija Nesterova <knesterova27@gmail.com>

Oct 16 (2 days ago)

to GeorGINAHouric.

Dear Georgina

Re: TV priming and competitiveness levels on adolescents;

Following our conversation earlier I'm delighted to hear that your school are willing to facilitate my study. I would appreciate if you could reply to this email confirming that permission has been granted. I will forward my proposal at an early stage next week.

Kind Regards,

Ksenija Nesterova



georGINAHourican@gmail.com

Oct 16 (2 days ago)

to me

We are delighted to participate in your study Ksenija.

Kind regards ,

Georgina Hourican (transition year co-ordinator)

Colaiste Mhuire, mullingar

Sent from my iPhone

Appendix C

Consent Form

Purpose of this study

If you agree, your child will be asked to participate in a research study about attitudes towards television shows.

This research is being conducted by Ksenija Nesterova, a degree student at the Dublin Business School (contact: knesterova27@gmail.com, or (01)6993764, under the supervision of Ms. Aoife Cartwright (contact: aoife.cartwright@mumail.ie, or (01)7084786). It is the responsibility of this student to adhere to professional ethical guidelines in their dealings with participants and the collection and handling of data. If I have any concerns about my child's participation I understand that I may refuse my child's participation or withdraw at any stage, I understand that any data provided cannot be withdrawn and destroyed once my child leaves the experimental setting. All data from the study will be treated confidentially and my child's data will not be identified by name at any stage of the data analysis or in the final report. The data will be compiled, analysed and submitted in a report to the Psychology Department, Dublin Business School.

What is my child going to be asked to do?

If you allow your child to participate in this study, they will be asked to:

- Fill out attitude and personality questionnaires
- Watch a video clip of the current television show
- This study will take approximately 1 hour and 20 minutes over two days that are one week apart, and there will be over 25 of other participants in this study.

I understand that no clinical judgement can be made of my child on the basis of his/hers participation or performance during this research. Individual answers are coded on the submission and any possible identification of the participants is destroyed immediately, therefore , my child's individual responses on the questionnaires cannot be provided to me at the end of my child's participation.

At the conclusion of my child's participation, any questions or concerns I have will be fully addressed.

Signed:

_____ Parent

_____ Researcher

_____ Date

Appendix D

Participant Information Sheet

INVITATION

You are being asked to take part in a research study investigating adolescent attitudes toward television shows

This research is being conducted by Ksenija Nesterova, a Psychology degree student of Dublin Business School, under the supervision of Ms Aoife Cartwright.

WHAT WILL HAPPEN

In this study, you will be asked to complete two short questionnaires. This stage of the research allows the researcher to assess your personality type and your general attitudes toward television shows. These tasks will take approximately 10-15 minutes each to complete. One week later you will be asked to watch a television show after which you complete a short questionnaire. These tasks will take approximately 1 hour and 10 minutes

Once you have finished the last questionnaire, the full purpose of the experiment and what we may learn from it will be fully explained. At that point you will also get the chance to ask any questions that you may have.

TIME COMMITMENT

The study will typically take about 60 – 75 minutes to complete, and will require a two-time involvement on your behalf.

PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time without explanation. You have the right to ask that any data you have supplied to that point be withdrawn/destroyed.

You have the right to omit or refuse to answer or respond to any question that is asked of you, or to skip specific items/questions should they cause discomfort.

You have the right to have your questions about the procedures answered. If you have any questions as a result of reading this information sheet, you should ask the researcher before the study begins.

RISKS

There are no known risks for you in this study.

COST, REIMBURSEMENT AND COMPENSATION

Your participation in this study is voluntary, and can be terminated at any time.

CONFIDENTIALITY/ANONYMITY

No personal information will be stored in conjunction with the data we collect from you at any stage in the research project, and all data is analysed at a group level (i.e., will be anonymised, and no identifying features will be used in any analyses of the data). This is assured in all stages of the research process, including any publications and conference presentations that arise from these findings.

Appendix E

Experiment Debriefing Sheet

About this study

The aim of this experiment was to explore possible priming effects of the television talent shows. Priming acts on the unconscious level and is known to affect behaviour or actions without person's awareness.

Competition is one of the vital factors in achieving success. Competition is evident in almost every aspect of human life. It is precisely why this study is interested in finding out whether competitive material on TV is a strong enough stimuli to affect feelings of competitiveness in individual. In this instance the popular singing competition 'The Voice UK' was chosen in order to measure any possible effects on the levels of competitiveness. However, competitiveness can be affected by other variables. Therefore the following factors were also considered; (i) individual's personality (ii) gender. The age of the participants was also significant. As under 18's is the targeted audience of these programs it was important for the study to recruit participants within the desired age limit.

In order to determine personality type you were asked to answer the Eysenck Personality Questionnaire, a commonly used psychometric measure of personality. Furthermore, in order to measure any changes in the levels of competitiveness you were asked to complete the Competitiveness Index Questionnaire before and after the experiment. The experiment required two groups (i) control (ii) experimental in order to facilitate comparative analysis. If you were in the control group you watched non competitive clip of 'The Worlds Funniest Videos' and if you were in the experimental group you watched the competitive clip from the battles round of 'The Voice UK'. You were told that this experiment will try to measure personal attitudes towards media in order to preserve experimental validity.

The goal of this research

It is hoped that this experiment will help to further expand the research of television effects and whether feelings of competitiveness could be primed through exposure to the competitive material shown on TV. The age of the participants is also a significant factor for possible applications of this study's findings in the fields of education and development.

Further Questions

If you seek any additional information about this study or this research more generally, please feel free to contact me via email

Thank you again for your co-operation and for volunteering to take part in this study!

Kind regards,

Ksenija Nesterova

Contact Information

For further information regarding this research, please contact my supervisor, Ms Aoife Cartwright at aoife.cartwright@mumail.ie, or at ()

Additionally, I can be contacted by at or at () .

Appendix F

The Revised Competitiveness Index

Instructions: Use the following response scale in answering the items below. Make sure to read each item carefully and circle the number that best represents your answer.

1 = Strongly Disagree

2 = Slightly Disagree

3 = Neither Disagree Nor Agree

4 = Slightly Agree

5 = Strongly Agree

- | | |
|--|-----------|
| 1. I get satisfaction from competing with others. | 1 2 3 4 5 |
| 2. I am a competitive individual. | 1 2 3 4 5 |
| 3. I will do almost anything to avoid an argument. | 1 2 3 4 5 |
| 4. I try to avoid competing with others. | 1 2 3 4 5 |
| 5. I often remain quiet rather than risk hurting another person. | 1 2 3 4 5 |
| 6. I find competitive situations unpleasant. | 1 2 3 4 5 |
| 7. I try to avoid arguments. | 1 2 3 4 5 |
| 8. In general, I will go along with the group rather than create conflict. | 1 2 3 4 5 |
| 9. I don't like competing against other people. | 1 2 3 4 5 |
| 10. I dread competing against other people. | 1 2 3 4 5 |
| 11. I enjoy competing against an opponent. | 1 2 3 4 5 |
| 12. I often try to out perform others. | 1 2 3 4 5 |
| 13. I like competition. | 1 2 3 4 5 |
| 14. I don't enjoy challenging others even when I think they are wrong. | 1 2 3 4 5 |

Appendix G

Competitiveness Index Scoring

The responses to Revised Competitiveness Questionnaire are Likert scale. Participants responses range from 1(strongly disagree) to 5(strongly agree)

Scores will be summed.

The following questions will be reversed scored: 3,4,5,6,7,8,9,10, and 14.

Differences between the mean will be analysed.

The Revised Competitiveness Index Questionnaire will be proposed as the Attitude Questionnaire (Houston, 2015) for the purpose of deception.

Appendix H
The Revised Eysenck Personality Questionnaire

Appendix I

The Revised Eysenck Personality Questionnaire Abbreviated Scoring

