Pearson

International Advanced Level Psychology

Summary of Studies Unit 2

WPS02

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Summary of Studies: Unit 2 WPS02

Contents

Introduction

1.1 About this booklet

This selected studies summary booklet has been produced to enable teachers delivering the IAL Psychology to support their students with the published research studies that are named in the specification but may not be easily accessible to centres.

The booklet includes the classic and contemporary studies from the topics in the specification. Some of the studies included are compulsory classic and contemporary studies, and some are optional contemporary studies - this is clearly highlighted where appropriate.

1.2 How to use this booklet

This booklet initially gives brief guidance on how classic and/or contemporary studies may be assessed in the International AS and A level Psychology qualification.

Each study contained within this booklet includes a summary of each study including the aim, procedure, findings, and conclusions. To prepare candidates appropriately for assessment this booklet should be used in conjunction with the other resources available on the Pearson website:
http://qualifications.pearson.com/en/qualifications/edexcel-international-advanced-levels/psychology-2015.coursematerials.html#filterQuery=Pearson-UK:Category%2FTeaching-and-learning-materials

Candidates may be assessed on any of the assessment objectives (AO1, AO2, AO3) or a combination of these where appropriate.

1.3 Assessment

Candidates may be asked to consider issues of validity, reliability, credibility, generalisability, objectivity, and subjectivity in their evaluation of studies. They may also be asked to draw on their understanding of ethics where this is appropriate to a study. Candidates should be able to suggest improvements to studies, where appropriate, that could draw on these issues.

Candidates should understand the classic and contemporary studies sufficiently to be able to provide specific details, such as the aim, procedure, results and conclusions.

Assessment of a study can take the form of short-answer questions and extended open response questions. They can be assessed in the written examination using any of the taxonomy (command) words as appropriate.

Assessment Objective 1 (AO1) involves demonstrating knowledge and understanding of the study. This could be regarding the aim(s), procedure, results, and/or conclusion(s) of the study.

AO1 could be assessed as a short answer question (less than 8 marks) or as part of an extended response question (8 marks or more).

Extended response questions use certain taxonomy (command words) to specify the assessment objectives required. For example, if students are asked to 'evaluate' a classic study for 8 marks this will be assessed using a Levels Based Mark Scheme and both AO1 and AO3 material will be required to be able to achieve 8 marks.

Assessment Objective 2 (AO2) involves application of a classic or contemporary study. This could involve the use of the study to explain a novel stimulus, or to apply to Issues and Debates.

AO2 could be assessed as a short answer question (less than 8 marks) or as part of an extended response question (8 marks or more).

Extended response questions use certain taxonomy (command words) to specify the assessment objectives required. For example, if students are asked to 'discuss' a classic study in relation to a novel stimulus for 8 marks this will be assessed using a Levels Based Mark Scheme and both AO1 and AO2 material will be required to be able to achieve 8 marks.

Assessment Objective 3 (AO3) involves analysing, interpreting, or evaluating the study to make judgements or to suggestion improvements.

AO3 could be assessed as a short answer question (less than 8 marks) or as part of an extended response question (8 marks or more).

Short answer questions (less than 8 marks) will typically use a combination of AO1/AO2 with AO3 as there is the identification or application of material before a judgement/conclusion is made or an improvement is reasoned.

Extended response questions use certain taxonomy (command words) to specify the assessment objectives required. For example, if students are asked to 'evaluate' a classic study in relation to a novel stimulus for 12 marks this will be assessed using a Levels Based Mark Scheme and AO1, AO2, and AO3 material will be required to be able to achieve 12 marks.

1.4 Further support

A range of materials are available to download from the Psychology page of the Pearson website to support you in planning and delivering the new specifications.

Centres may find it beneficial to review this document in conjunction with:

- **IAL Psychology Sample Assessment Material**
- Assessment Objectives descriptors in the specification
- **Taxonomy (command words)** descriptors in Appendix G of the specification
- **Levels Based Mark Band** guidance
- **Component guides** that exemplify the topics in the specification.
- **Exemplar responses** to the SAMs materials provided for each paper.
- **Examiner reports**
- **TeachingPsychology@pearson.com**

http://qualifications.pearson.com/en/qualifications/edexcel-international-advanced-levels/psychology-2015.coursematerials.html#filterQuery=Pearson-UK:Category%2FTeaching-and-learning-materials

TOPIC C: Biological Psychology

Classic study

Raine et al. (1997) Brain abnormalities in murderers indicated by positron emission tomography.

Aim(s)

The aim of the study was to see whether there was different brain functioning in a group of murderers compared to a control group of participants.

The expectation was that the murderers would show evidence of brain differences in their prefrontal cortex as well as in other areas that are thought to be linked to violent behaviour.

This expectation came from previous research which suggested that:

- Violent offenders had poorer brain functioning
- Damage to the prefrontal cortex was linked to aggression
- Abnormal function of the hemispheres in violent offenders
- Possible dysfunction to the corpus collosum in violent offenders
- The limbic structures (amygdala and hippocampus) are linked to aggression

Procedure

The study examined the brains of 41 people (39 males and 2 females) who were charged with murder (or manslaughter) but pleaded 'Not Guilty by Reason of Insanity' (NGRI) and compared them with the brains of 41 control participants.

The murderers had a mean age of 34.3, were not receiving medication at the time of the brain scan (and had been medication-free for two weeks prior), and urine scans supported this.

The control participants were the same sex as the murderers, similar age (mean 31.7), did not take medication, and had no history of psychiatric illness (other than 6 participants with schizophrenia who were compared with murderers diagnosed with schizophrenia).

All participants were injected with a glucose tracer, and were required to work at a continuous performance task (CPT) that was based around target recognition for 32 minutes.

They were then given a PET scan (ten minutes before injection they were given practice trials).

The participants were compared on the level of activity in right and left hemispheres of the brain using two techniques called 'cortical peel' and 'box'. A cortical peel compares the absolute glucose values for each region of the brain that is being scanned, and is expressed as a measure that is relative to other areas within that slice of the brain. The box techniques involves locating the area of specific interest and a region of interest box places on the cortical and subcortical structures at each level of the areas of the brain being studied.

Results

Table 1 highlights the key findings.

Key findings	Possible role of this brain region
NGRIs had less activity in their prefrontal brain regions	The difference in activity in the prefrontal cortex can be linked to research which has found that damage to this region can result in aggressive acts through impulsive behaviour, loss of self-control, immaturity, altered emotional reactions, and the inability to change behaviour.
NGRIs had less activity in their parietal brain regions	The difference in activity in the parietal regions may be linked with deficits in learning deficits, such as low verbal ability, and could contribute to problems with processing social and cognitive information. This could ultimately predispose the individual to educational and difficulties in employment which could predispose someone to crime and violent behaviour.
NGRIs had more activity in their occipital areas	
NGRIs had an imbalance of activity between the two hemispheres in amygdala, hippocampus, and thalamus • Less activity in the left side and more activity in the right side of the amygdala and the hippocampus • More activity in the right side of the thalamus, though no difference in the left side.	The difference in activity in the amygdala can be seen to support theories of violence that suggest it is due to unusual emotional responses such as lack of fear.
NGRIs had less activity in the corpus callosum	The difference in corpus callosum activity can be matched up to evidence of people with a severed corpus callosum which show they can have inappropriate emotional expression and an inability to grasp long-term implications of a situation.

Table 1

In addition to the above, there were no differences found in their temporal areas, no differences on the continuous performance task (CPT), and the differences in brain activity did not appear to be due to any differences in age, gender, schizophrenia, handedness, ethnicity, or history of head injury.

From all of these findings Raine et al. (1997) argue that their research supports previous findings about the role of certain brain structures in violent behaviour.

Conclusions

It is clear from the findings that violent behaviour cannot be attributed to a single brain region and that multiple areas are involved. It is speculated that the differences in brain function do not directly cause violent behaviour but predispose those with dysfunction when combined with other social, psychological, and environmental predispositions to violent or aggressive behaviour.

Contemporary study

Brendgen et al. (2005) Examining genetic and environmental effects on social aggression: a study of 6-year-old twins.

Aim(s)

To investigate:

- To what extent social aggression can be explained by genetic factors, shared environmental factors or non-shared environmental factors in comparison to physical aggression.
- To determine if any covariance between physical and social aggression can be explained by having the same genetic factors, shared environmental factors or non-shared environmental factors. Or can it be explained by the direct effects of one type of aggression on the other type of aggression.

Procedure

The participants were all part of a longitudinal study and were all pairs of twins from Montreal, Canada. Same sex twins were assessed for physical resemblance at 18 months old to determine if they were monozygotic or dizygotic twins, with a proportion of same sex twins also being checked using their DNA.

The majority of the families were of European descent.

When the children were six years old data was collected to assess their social adaptation in kindergarten. Written consent was gained from the parents before any data was collected. Peer reports and teacher ratings were also collected.

The peer reports involved all the children in a class being given photographs, and the children were asked to circle the photograph of the three children who best fit a description of a behaviour. Social aggression was measured by the descriptors "tells others not to play with a child" and "tells mean secrets about another child". Physical aggression was measured by the descriptors "gets into fights" and "hits, bites or kicks others".

Teachers had to rate the social and physical aggression of the twins in their class using the Preschool Social Behaviour Scale and the Direct and Indirect Aggression Scales. The social aggression scale measured the extent the teachers rated the children as trying to make others dislike a child, becoming friends with another child as an act of revenge, and spreading nasty rumours about another child. Physical aggression was measured by the extent teachers thought the children got into fights, hit bit or kicked others and physically attacked other children.

Results

Brendgen et al. found that when it came to physical aggression the correlation for monozygotic twins was almost twice as high as it was for dizygotic twins, and this was true for both peer ratings and teacher ratings, suggesting physical aggression is mainly influenced by genetic factors with shared environment having little effect on physical aggression.

The correlations for both types of twins for social aggression were similar for both peer ratings and teacher ratings. This suggests that social aggression is influences by shared environmental factors.

Non-shared environmental factors influence both physical and social aggression as in neither case was the correlation high.

When teachers rated physical aggression, it seems that genetic factors account for 63% of the variance and non-shared environmental factors account for 37% of the variance.

When the teachers rated social aggression 60% of the variance is due to non-shared environmental factors, whilst genetic factors and shared environmental factors each account for 20% of the variance of social aggression.

The same trends were found for the peer ratings, with physical aggression the variance was 54% genetics and 46% non-shared environmental factors; social aggression was 54% non-shared environmental factors and genetic factors and shared environmental factors accounted for 23% of the variance in social aggression each.

Conclusions

In conclusion, physical aggression is influenced by a mixture of genetic factors and environmental factors that were not shared between the twins.

Environmental factors have a greater influence on social aggression.

Non-shared environmental factors have the greatest influence, with genetic and shared environmental factors having an equal influence as each other, but they have less of a combined influence on social aggression than non-shared environmental factors.

Whether children will use physical or social aggression seems to be determined by the environment the children are exposed to.

Candidates should study **ONE contemporary study** from the following **TWO** choices.

Contemporary study (option 1)

McDermott et al. (2008) Monoamine oxidase A gene (MAOA) predicts behavioural aggression following provocation.

Aim(s)

McDermott et al. aimed to study the underlying causes of aggression and punishment by studying if genetics predispose participants to carry out aggressive behaviour that is costly to the participant when they are environmentally provoked. They specifically aimed to investigate whether the MAOA gene affected aggression when environmentally provoked.

Procedure

Genetic samples were gained from 78 male participants. The participants were the divided into two groups, one group had high MAOA activity (MAOA-H) and one group had low MOAO activity (MAOA-L).

Aggression was measured by the amount of an unpleasant hot sauce participants would give to an opponent in a 'power-to-take' game when they knew the opponent did not like the taste of the hot sauce. The more of the hot sauce that was given, the more aggressive the participant was deemed to be.

Participants played a power-to-take game where they made earnings from a vocabulary task. A portion of these earnings were then taken by an anonymous person (who was in fact not real). Participants could then punish this anonymous person by giving the person some hot sauce.

The participants played four rounds of the game and they were told their opponent was a different person in each round. Participants were told they had a new supply of hot sauce in each of the four rounds, and they could use the hot sauce to punish their opponent or they could trade it in for money.

The amount of earnings that could be taken from the participants by their opponent was manipulated by the experimenters and was either 'high take' with 80% of the money being taken or 'low take' with 20% of the money being taken.

Results

It was found that high take participants were aggressive to their opponent more often than low take participants, and that they administered more hot sauce than low take participants.

66% of the participants gave some hot sauce to their opponent when 80% of their earnings were taken compared to 39% when only 20% of their earnings were taken.

Table 1 shows the percentage of MAOA-H and MAOA-L participants who gave some hot sauce to their opponents.

	% of participants who gave some hot sauce when 80% of the earnings were taken.	% of participants who gave some hot sauce when 20% of the earnings were taken.
MAOA-H	62	34
MAOA-L	75	40

Table 1

There was a significant difference between the two groups when 80% of the earnings were taken, but there was no significant difference between the two groups when 20% of the earnings were taken.

Table 2 shows the percentage of MAOA-H and MAOA-L participants who gave the maximum amount of hot sauce.

	% of participants who gave the maximum amount of hot sauce when 80% of the earnings were taken.	% of participants who gave the maximum amount of hot sauce when 20% of the earnings were taken.
MAOA-H	19	6
MAOA-L	44	12

Table 2

There was a significant difference between MAOA-H and MAOA-L participants' administration of the maximum amount of hot sauce in both high take and low take conditions.

Conclusions

They concluded that the greater the provocation, through monetary loss, the more aggressive people are towards the person they see as responsible for their loss.

It was also concluded that genes interact with the environment when it comes to aggression as participants who had a low MAOA activity were more aggressive when 80% of their earnings were taken compared to participants who had high MAOA activity, showing genes do influence aggression. However there was not as much difference between the two groups when only 20% of the earnings were taken showing that environment also influences aggression.

MAOA plays a role in aggression when there is environmental provocation.

Contemporary study (option 2)

Hoefelmann et al. (2006) Behaviors associated to sleep among high school students: cross-sectional and prospective analysis.

Aim(s)

The study aimed to investigate factors affecting sleep in high school students. It aimed to investigate the effects of life style factors on the quality of sleep in high school students, in order to verify that the two are associated.

Procedure

The study analysed data from a randomised control trial whose purpose was to promote healthy behaviours in students aged 14-24 years old from Brazil. At the start of the study 2000 students were randomly selected from 20 schools, and 989 students completed the initial assessment and the post-intervention assessment.

A longitudinal approach was taken with 949 students giving data about sleep quality and 950 students giving data about sleep duration. Hoefelmann et al. used this data to study the amount of negative sleep quality and insufficient sleep duration due to factors such as playing video games (unexposed students) and due to lifestyle factors such as eating snacks (prospective data).

The students answered a questionnaire, on two separate occasions, about physical activity, eating habits, sleep duration and quality, and other lifestyle factors, such as alcohol consumption.

There was a nine-month gap between the applications of each questionnaire. The questionnaire included closed-answer items and was based on the PACE+ project questionnaire.

Sleep quality was measured by the question "How often do you think you sleep well?" 'Always' and 'almost always' were counted as positive answers, 'sometimes', 'almost never' or 'never' were counted as negative answers.

Sleep duration was measured by the question "How many hours, on average, do you sleep per day?" 8 or more hours was counted as enough sleep duration, less than 8 hours was counted as not enough sleep duration.

Lifestyle factors were measured through the number of times students exercised for at least an hour a day in a week; the number of times students did exercise for muscular strength and endurance per week; the amount of time per day spent watching television and playing computer games, how many snacks and soft drinks were consumed in a week, and the how may days alcohol was drunk in the last month.

Results

Table 1 summarises the % of students for sleep duration and quality and life style factors.

Variables	Cross sectional %	Prospective %
Sleep quality		
Positive	54.3	54.2
Negative	45.7	45.8
Sleep duration (hours per day)		
≥ 8	23.3	22.5
< 8	76.7	77.5
Physical activity for 60 minutes per day (days/week)		
≥ 5	45.3	32.9
< 5	54.7	67.1
Muscular strength/endurance exercises (days/week)		
≥ 1	40.2	43.0
None	59.8	57.0
Snack consumption (days/week)		
< 5	74.5	79.6
≥ 5	25.5	20.4
Soft drink consumption (days/week)		
< 5	64.9	70.6
≥ 5	35.1	29.4
Alcohol consumption (days/month)		
None	46.2	52.5
≥ 1	53.8	47.5
Time spent watching TV (hours/day)		
< 2	37.8	41.5
≥ 2	62.2	58.5
Time spent using computer/video games (hours/day)		
< 2	76.2	70.7
≥ 2	23.8	29.3

Table 1

Students who did not do muscular strength/endurance exercise, who often ate snacks and who watched excessive amounts of television were less likely to say they did not get enough sleep.

Students who played excessive amounts of computer games were more likely to say they did not get enough sleep. However, when the results were adjusted for confounders no behaviour was associated with the amount of sleep the students said they had.

Five in every 10 students said they had poor sleep quality and eight in every ten said they did not get enough sleep, these figures remained the same over the nine-month period.

It was found that the frequency of physical activity was associated with poor sleep quality; watching television was positively associated with the amount of sleep per night; frequent snack and soft drink consumption were associated with poor sleep quality and reduced amount of sleep.

In the prospective analysis none of the behaviours could predict either sleep quality or duration.

Conclusions

It was concluded that if it was perceived that quality of sleep was poor and sleep duration was not enough that this perception remained stable over time.

The cross-sectional analysis shows that some behaviours are associated with sleep quality and duration, this was not confirmed by the prospective analysis.

TOPIC D: Learning theories and development

Classic study

Watson and Rayner (1920) Little Albert: conditioned emotional reactions.

Aim(s)

To investigate whether emotional responses could be conditioned in a controlled laboratory setting.

Specifically to investigate whether fear could be conditioned in a young baby aged from nine to eleven months old. They wanted to see if:

- Fear of a white rat could be conditioned in a young child using the loud sound of a hammer hitting a steel bar.
- Whether the fear response, if one was conditioned, would transfer to similar objects.
- The effects of time on a conditioned fear response.
- If the fear response did not disappear after an amount of time could it be deconditioned.

Procedure

The study was carried out on a healthy, emotionally stable child called Albert, who was nine months old at the start of the study. At about nine months of age Albert was presented with a white rat, a rabbit, a dog, a monkey, masks with and without hair and burning newspapers. Albert did not show fear towards any of the objects presented to him.

At eight months and 26 days old Albert was exposed to a hammer hitting a suspended steel bar, causing Albert to startle. The third time this was carried out Albert cried.

11 months 3 days. Albert was presented with a white rat and just as his hand touched the rat the metal bar was hit by the hammer. This was done a second time and albert jumped violently and began to whimper.

11 months 10 days: The rat was presented to Albert with no sound. He was also presented with blocks after the rat was taken away. He played with the blocks. Then the rat was presented and the sound made, Albert was startled and fell over. This was done another two times before the rat was presented on its own again. There were a further two joint presentations before the rat was presented on its own for the third time.

11 months 15 days: Albert was shown the rat on its own two times, he played with the blocks between each presentation. Albert was the shown the rabbit on its own, followed by the dog, a seal fur coat, cotton wool and Watson's head to see if Albert would play with his hair. He was also presented with a Santa Claus mask. Blocks were given to Albert between each item for him to play with and calm him down.

11 months 20 days: Albert was presented with the rat alone, and then the rat was placed on his hand and the steel bar hit. After this he was presented with the rat alone two more times, followed by the rabbit. After being given the blocks to play with the rabbit was again presented, and as Albert reached for it the steel bar was hit by the hammer, and then the rabbit was presented on its own. The same procedure was carried out for the dog.

On the same day Albert was taken to a well-lit lecture room where he was presented with the rat alone, the rabbit alone, the dog alone, then the rat a second time followed by the rat and the loud noise. Albert was then shown the rat on its own twice followed by the rabbit and the dog

1 year 21 days: Albert was presented with the Santa Claus mask followed by the fur coat, the rat, the rabbit and the dog, with blocks being given to Albert between the presentations of each object.

Results

11 months 10 days: Albert did not reach for the rat at first. When the rat's nose touched his hand he withdrew his hand. When the rat was presented on its own for the second-time Albert whimpered and moved his body ways from the rat. On the third presentation of the rat on its own Albert began to cry, turned away from the rat sharply and began to crawl away from the rat.

11 months 15 days: Albert began to whimper when he saw the rat the first time, and turned away from it. The second time he saw the rat he crawled away from it. The rabbit caused Albert to lean away from it before he began to cry and crawl away from it. He did not have such an extreme reaction to the dog, but he did try and move away from it when it came too close to him, and he began to cry when the dog was made to get close to Albert's head. When shown the seal fur coat he withdrew his body from it and began to fret. When the cotton wool was place near Albert's feet he kicked it away, and he withdrew his hand was it was placed there. Albert would not play with Watson's hair, but he would play with the hair of two other observers. Albert also showed a negative reaction to the Santa Claus mask.

11 months 20 days: The first time the rat was presented on its own Albert withdrew his body from the rat, but did not cry. After the steel bar had been hit Albert's reaction was almost as strong as the previous trial but he did not cry, and the second time it was presented he tried to crawl away to avoid the rat whilst gurgling and cooing. When the rabbit was presented he leant over away from it and began to whimper, but his reaction was not as strong as previous trials. When the rabbit was presented on its own after the steel bar was hit Albert's response again moved his body away from it and began to whimper.

When Albert was moved to the lecture theatre he showed no initial fear of the rat the first time it was presented but he did hold his hands out of the way of the rat. He has a slight fear reaction to the rabbit, and he turned away from the dog and cried. After the rat had been paired with the sound again Albert drew his body away when the rat was presented on its own and whimpered, he whimpered and fell over when the rabbit was presented and at first did not cry when the dog was presented. When the dog barked it caused Albert to fall over and cry.

1 year and 21 days: Albert withdrew from the Santa Claus mask and whimpered when he was forced to touch it. He wrinkled his nose at the fur coat and moved his hands away from it. When he accidently touched the coat he began to cry, and he whimpered when the coat was put on his lap. When the rat was presented he sat very still, even as the rat was moving towards him. When the rat was put on his arm Albert moved his arm away as quickly as possible, and when it crawled against his chest he began to fret and covered his eyes. Albert did not try to avoid the rabbit at first, but after a few seconds he puckered his face and began to push the rabbit away with his feet. Albert cried after a few second of the dog being presented to him

Conclusions

It was concluded that emotional transfer does take place.

It was also concluded that conditioned emotional responses last for at least a week, and that conditioned fears can generalise to other similar objects.

Watson and Rayner also concluded that emotional disturbances in adults can be traced back to conditioning.

Contemporary study

Capafons et al. (1998) Systematic desensitisation in the treatment of fear of flying

Aim(s)

To investigate whether systematic desensitisation is an effective treatment of maladjusted fears.

Specifically to investigate whether systematic desensitisation is an effective treatment for a fear of flying.

Procedure.

The sample consisted of 41 people who had a fear of flying. 2o were randomly put in the treatment group and the other 21 were in the control group receiving no treatment. The participants were volunteers who had responded to a media campaign.

The patients gave an interview on their life history and aspects of their fear of flying using the IDG-FV. Anxiety in relation to different flight situations was measured using the EMV and the EPAV=A and EPAV-B were used to measure the frequency of catastrophic thoughts and physiological symptoms that may present in different flight situations. Heart rate, muscle tension and skin temperature were also measured. The EMV scales looked at fear during flying, fear of flight preliminaries and fear of flying without any direct involvement. The EPAV scales measured catastrophic thoughts and physiological anxiety.

A video tape of a plane trip was used which followed a person on a trip made by a plane from packing a case to touch down at the destination.

Patients were asked a series of questions pre- and post- treatment. They were asked to rate how afraid of flying they were, if they travelled by plane if there were no alternative and what symptoms they had whilst flying.

Patients were interviewed on their own. In the first interview, they completed the IDG-V, and the other scales were completed on further interviews. They then came back to watch the video and have a psychophysiological assessment.

Before they saw the video the patients had three minutes without the presence of the phobic objects and then watched the video after being told to feel as involved as possible. After watching the video another appointment was made to either have the treatment or for the next assessment (control group).

Patients had about 2 one hour sessions per week as part of a standardised desensitisation programme, they all had at least twelve sessions with the maximum number of sessions being fifteen. The treatment involved the use in vivo and imagination techniques with an emphasis on the hierarchy. They used the techniques of stop thinking and brief relaxation.

Results

There was no difference in any of the measurement between the control groups and the treatment groups before treatment.

Table 1 summarising the significance levels in post-test measurements for the differences between the control groups and the treatment groups post treatment.

Measurements	Significance levels
Fear of flying.	0.001
Fear of preliminaries.	0.001
Fear with no involvement.	No significant difference
Catastrophic thoughts.	0.01
Subjective physiological anxiety.	0.01
Fear level.	0.001
Avoidance behaviour.	0.01
Disagreeable responses.	0.001
Heart rate.	0.01
Temperature.	No significant difference.
Muscular tension.	0.05

Table 1.

It was found that there was a significant difference between the control group and those who had treatment on all measures apart from the fear when there was no personal involvement and palm temperature.

Table 2 summarising the significance levels in treatment groups measures before and after treatment.

Measurements	Significance levels
Fear of flying.	0.001
Fear of preliminaries.	0.001
Fear with no involvement.	No significant difference
Catastrophic thoughts.	0.001
Subjective physiological anxiety.	0.001
Fear level.	0.001
Avoidance behaviour.	0.001
Disagreeable responses.	0.001
Heart rate.	0.05
Temperature.	No significant difference
Muscular tension.	0.05

Table 2.

Only 10% of patients who had the treatment did not have a significant reduction in their fear level concerning flying.

Conclusions

It was concluded that systematic desensitisation is effective is reducing the fear of flying.

It was also concluded that the simple passage of time did not help reduce phobias as there was no improvement in the control groups.

Contemporary study Option 1

Prot (2014) Long-term Relations Among Prosocial-Media use, Empathy, and Prosocial Behaviour

Aim(s)

Study 1:

- To investigate relations between prosocial-media use empathy and helping in seven countries.
- To explore the effects age, gender and culture have as moderators of empathy and prosocial behaviour on those who use pro-social media.

Study 2:

- To investigate the relations among prosocial and violent media use, empathy and helping in children and adolescents.

Procedure

Study 1

Samples were gained from Australia, china, Croatia, Germany, Japan, Romania, and the United States. There were 2202 adolescents and adults in the sample.

Participants answered a questionnaire on media usage, where they had to name their three favourite television shows, three favourite movies and three favourite video games. They also had to use a five point scale to state how often they watched and played in a month.

Participants had to rate their listed television shows and movies for prosocial and violent content as well as answer how often they helped others in their listed video games and how often they tried to physically injure others in the game.

Empathy was measured by the empathic concerns and perspective taking subscales from the IRI and an average was worked out from 14 items. Prosocial behaviour was measured using the Brief Prosocial Scale, with an average being worked out from the 10 items.

The countries were divided into three groups for analysis, individualistic Western cultures (Australia, Germany and the United States); collectivist East European countries (Croatia and Romania); collectivist East Asian countries (China and Japan).

Study 2

This was a two year study, with data collected at three different points in time. The participants were all children and adolescents from Singapore. The sample size started at 3034 participants, and there were 2232 participants left at the last data collection point.

Participants were asked to name their three favourite video games and to state how many hours they spent playing video games on school days and at weekends. Participants also said how often there was violence in their listed video games.

Empathy was measured using the Children's Empathic Attitudes Questionnaire. Prosocial behaviour was measured using the helping and cooperation subscales from the Prosocial Orientation Questionnaire.

Results

Study 1

Table 1 summarising the mean scores for media use, empathy and prosocial behaviour.

Variable	Country						
	Australia	China	Croatia	Germany	Japan	Romania	United States
Prosocial media use.	110.2	91.07	62.27	61.29	93.94	66.57	74.28
Violent media use	82.00	55.02	52.07	38.13	58.80	43.84	70.40
Total screen time.	21.60	18.56	15.17	13.32	20.93	16.74	22.01
Empathy.	4.64	3.69	3.41	3.77	3.46	3.42	3.63
Prosocial behaviour.	5.17	5.09	4.89	5.33	4.92	4.88	5.01

Table 1.

The higher the prosocial use the higher the levels of prosocial behaviour and empathy in all three groups.

Whilst the results showed differences in the use of prosocial media and prosocial behaviour between the three groups the results suggest cross cultural generalisation of the links between prosocial media use and prosocial behaviour and empathy. The increase in empathy was used to explain the increase in prosocial behaviour.

Study 2.

Table 2 summarising the mean scores for media use, empathy and prosocial behaviour.

Variable	Data Collection Point		
	1st	2nd	3rd
Prosocial media use.	1.34	1.28	1.35
Violent media use	1.39	1.27	1.15
Total screen time.	3.53	4.05	3.88
Empathy.	2.32	2.32	2.33
Prosocial behaviour.	3.05	3.05	3.05

Table 2.

Each time the data was collected there was a positive correlation between prosocial media use and empathy and prosocial media use and prosocial behaviour. The use of violent media was negatively correlated with both empathy and prosocial behaviour. The increase in empathy was used to explain the increase in prosocial behaviour.

Prosocial video use at Time 1 had a significant positive effect on prosocial behaviour at Time 3. Violent video game use at time 1 had a significant negative effect on prosocial behaviour at Time 3.

Conclusions

Study 1

It was concluded that prosocial media use was linked with helping behaviour due to changes in empathy. However due to the fact the study was cross sectional it was hard to conclude that there was a strong causation between them.

Study 2

The use of prosocial media has a positive long term effect on prosocial behaviour whilst the use of violent media has a negative long term effect. The effects on prosocial behaviour are due to changes in empathy. This was true across all genders, ages and cultures studied.

The more time that was spent on media the less prosocial behaviour there was, regardless of whether the media was prosocial or violent.

Contemporary study Option 2

Bastian et al. (2011) Cyber-dehumanization: Violent video game play diminishes out humanity

Aim(s)

To investigate whether playing violent video games has dehumanising consequences in relation to others and the self. The focus is on the self-perception of those who play violent video games and their perception of others.

Study 1 aimed to investigate the effects in a violent video game context where players were violent towards each other.

Study 2 aimed to investigate whether playing violently against computer avatars rather than human opponents had any effect on self-perceived humanity.

Procedure

Study 1

The game was Mortal Kombat where player play against each other. There were 106 participants, who were all undergraduates aged from 17 to 34 years old. The participants were randomly assigned to one of two groups.

Participants viewed the same screen but were separated by a wall so they couldn't see each other. 52 of the participants played Mortal Kombat and 54 of the participants played Spin Tennis, a non-violent game. Participants were asked how much the enjoyed the game and how frustrating they found the game, both on a scale of 1 to 7.

Participants then had to rate themselves on eight human Nature items and rate their opponent on the same four items. When answering the items, they had to think about their experiences whilst playing the game. Four of the items were positive e.g. 'I felt that I was emotional, like I was responsive and warm' and four of the items were reversed e.g. 'I felt like I lacked self-restraint, like an animal'.

Study 2

Participants played Call of Duty 2 with another player against a computer-generated avatar. The screen was split into two so the participants could see their own view point and their co-players viewpoint.

There were 38 participants, all undergraduates, who were randomly assigned to one of two conditions, playing either Call of Duty or Spin Tennis.

After they had played the game the participants were asked to rate how enjoyable and frustrating the game was, and to rate themselves and their co-player on their humanness using the same items as in study 1.

They had to think about their experience of playing the game as they answered the items on humanness. The self-esteem and mood of the participants were measured to ensure they did not affect the results. Mood was measured using the 20 item PANAS, and self-esteem was measured using the State Self-Esteem Scale.

Results

Study 1

Table 1 summarising the mean scores for self-humanity and other humanity for study 1.

Type of video game	Mean score for self-humanity	Mean score for other humanity
Violent	3.74	4.43
Non-violent	4.35	4.93

Table 1

After controlling for the effects of frustration, enjoyableness and gender it was found that there was a significant difference between the two groups on rating of both self-humanity and the humanity of the other player, with those who played the non-violent game perceiving both themselves and the other player as possessing more humanity.

Study 2

Table 2 summarising the mean scores for self-humanity and other humanity for study 2.

Type of video game	Mean score for self-humanity	Mean score for other humanity
Violent	3.82	4.89
Non-violent	4.48	4.86

Table 2

There was a significant difference in the participants' perception of their own humanity, with those who played the violent video game seeing themselves as less human. There was no difference in the perception of the co-players' humanity between those who played the violent game and those who played the non-violent game.

Conclusions

Study 1

It was concluded that the applying of violent video games does decrease the perceived humanity of both the player and other people that they are playing against.

Study 2

It was concluded that playing a violent video game reduces perception of our own humanity, even when playing with another person against a computer avatar. It was also concluded that playing violent video games does not make us feel bad or see ourselves in a more negative life, it only affects how human we feel.

Playing a violent video game with another person rather than against them does not affect how human we see out co-player.

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