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Summary of Studies Unit 3
WPS03

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Summary of Studies: Unit 3 WPS03

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Introduction

1.1 About this booklet

This selected studies summary booklet has been produced to support teachers delivering the International Advanced Level 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 - these are 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.

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:

- **International Advanced Level Psychology 2015 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
- **Twitter:** <https://twitter.com/@PearsonSciences>

SECTION A: Developmental Psychology

Classic study

van Izendoorn and Kroonenberg (1988) Cross-cultural patterns of Attachment: A Meta-analysis of the Strange Situation

Aim(s)

The aim was to carry out cross-cultural analysis looking at differences between cultures and within cultures of the attachment types in different countries.

They also wanted to gather data from the same countries to focus on issues with individual's study samples, which may have biased the results.

Procedure

From their provisional analysis they had noted that attachment types varied across the world based on studies that had already been completed. From this they suggested,

- In studies using the strange situation procedures the samples were generally small which means that generalising attachment types across that culture/country was reduced.
- Also some of the countries studies had got large samples therefore within them they could have different cultural variation in attachment that there not included in the first provision studies – in order to ensure reliability of the findings these would need to be tested within these countries again.

A meta-analysis was used which involved a search for suitable studies using a large database from which they could analyse the strange situation procedures in terms of attachment types.

The following criteria was used to select the most appropriate studies for the meta-analysis,

- Only studies of infants-mother attachment using the strange situation procedure and giving ABC classifications were included.
- Special samples such as Down's Syndrome children were not included or studies where either samples size was less than N=35.
- Studies with overlapping samples were not included – some samples were w=used in more than one study.
- Studies had to involve children under the age of two.

Based on these the final sample included 32 samples from 8 countries involving 1,990 strange situations.

Ainsworth's attachment types were focused on, and for this research they used the three main types. They planned to use Ainsworth (1978) as a baseline sample distribution.

Results

In most studies attachment was most frequently found to be Type B, which is a secure attachment.

Table 1 shows a summary of attachment type distribution by study and grouped by country.

Study	Number in the sample (n)	Attachment type distribution		
		Type A	Type B	Type C
Germany				
Beller and Pohl (1986)	40	7	31	2
Grossman et al (1981)	46	24	16	6
Grossman (1986)	50	17	30	3
Great Britain				
Smith and Noble (1987)	72	16	54	2
Netherlands				
Goossens (1986)	136	33	98	5
Van Ijzendoorn (1986b)	39	14	21	4
Koot (1986)	37	13	20	4
van den Boom et al. (1987)	39	6	30	3
Sweden				
Lamb et al (1982)	51	11	38	2
Israel				
Sagi and Lewkowicz (1987)	36	1	6	6
Sagi et al. (1985)	82	7	47	28
Japan				
Takahashi (1986)	60	0	41	19
Durrett et al. (1984)	36	5	24	7
China				
Li-Repac (1982)	36	9	18	9
USA				
Ainsworth et al (1978)	105	22	70	13
Combined (remaining 17 studies)	1125	238	727	160
Attachment types %		21%	65%	14%

Table 1

In general, there are fewer Type C attachments than expected and more Type A attachments than expected in the western countries.

In Israel and Japan there are more Type C and fewer Type A attachments.

Variations between and within cultures

Between countries, between individual samples and between continents there were significant differences. For example, Germany, Japan and the USA.

Variations within countries are nearly 1.5 times more than between the countries.

In German and the USA the differences within the country are particularly large, whereas in the Netherlands and Japan they are much smaller.

Within a country differences were quite high and as it is usually the same researcher completing the research within a country it is unlikely that the differences in distribution of attachment types was due to the different study procedures used.

When all the US studies were put together, the overall distribution of attachment did not match Ainsworth's suggestions, therefore there was no accepted baseline comparison after the meta-analysis was carried out.

Conclusions

The overall conclusion was that attachment Type B was modal in all countries.

Overall there are more Type A attachments in Western European countries and more Type C attachments in Israel and Japan, with the US being in the middle regarding Type A and Type C attachment distribution.

Possibly the media are a reason for the overall distribution of attachment type being similar globally (such as Type B being most dominant) as the media often promotes child rearing from the perspective western world and this may have spread and affected child-rearing practices.

Contemporary study

Cassibba et al. (2013) Attachment the Italian way

Aim(s)

To examine whether the distributions of child and adult attachment classifications converge with the global distributions, or whether Italy takes a special position.

To investigate whether most Italian infants and adults are classified as secure.

To test the prediction that there will be a lower percentage of unresolved attachments in Italian samples because Catholicism may help to promote successful mental resolution of trauma.

To find out if there is a significant deviation of attachment distributions from the normative pattern for both infants and adults with psychological problems.

To investigate potential gender differences in attachment as Italy is a country with the lowest rank on an index of women's status, so gender differentiation is pronounced.

Procedure

A systematic search of references to SSP and AAI studies (from 1990 to 2009) was conducted.

Pertinent studies were selected through PsycINFO, using the keywords "attachment," "Italian," and "Strange Situation Procedure" (SSP).

Unpublished papers, such as doctoral dissertations and conference papers were also included to eliminate any bias in the procedure. This is because there is a tendency in research that negative or inconclusive findings often remain hidden or unpublished.

The following criteria were applied in selection:

- Only SSP and AAI studies with Italian samples (for both normative and clinical/at risk samples) were considered.
- Among studies on infant-mother attachment, only those using the gold-standard Strange Situation Procedure, and reporting three-way classifications A, B, and C (or four-way classifications A, B, C, D, or A/C) were considered.
- For adult attachment, only studies using the original AAI coding system or AICA (Attachment Interview for Child and Adolescence), that reported the three-way Ds, F, and E classifications or four-way classifications including Ds, F, E, and U, were considered.
- When studies included two subsamples, both groups were used, assigning them to their respective groups (i.e., normative sample or clinical/at risk sample).
- Overlapping samples were excluded to make sure every participant was included only once in the analysis.
- Among studies that did not come from peer-reviewed publications, only those where at least one of the authors was a reliable AAI or SSP coder or where inter-rater reliability was high, were considered.

Sample: This selection procedure resulted in 17 studies (23 samples; 627 participants) using the SSP and 50 studies (72 samples; 2,258 participants) using the AAI, all with Italian samples.

For the analyses on the Italian SSP studies, the baseline data was taken from 21 USA samples which were used as the norm against which data was measured.

For the analyses of the AAI studies the data from studies of nonclinical North American mothers was used as a norm distribution.

Intra-cultural differences across the Italian samples with respect to gender (male vs. female), age (adolescents vs. adults), and type of population (nonclinical vs. clinical/at risk), were statistically tested and a distribution by type of sample was produced.

Results

Child attachment

Table 1 provides a summary of nonclinical and clinical/at risk attachment type distribution.

Sample (N=sample size)	Attachment Type		
	Type A	Type B	Type C
Italian nonclinical children (N=419)	33%	53%	14%
Clinical/at risk children (N=208)	40%	32%	28%

Table 1

Compared with the USA normative sample, the overall SSP distribution of nonclinical Italian children showed significant deviations. Italian children were more avoidant than the normative sample of USA children.

Table 2 provides a summary of clinical/at risk attachment type distribution subdivided according to the type of risk (maternal or child).

Sample	Attachment Type		
	Type A	Type B	Type C
Maternal risk	43%	27%	30%
Child risk	36%	40%	24%

Table 2

Maternal risk differed significantly from the norm distribution. Italian children with clinical/at risk mothers appeared to be more avoidant or ambivalent.

Adult attachment

Table 3 provides a summary of mother and father attachment type distribution.

Sample	Attachment Type		
	Type D	Type F	Type E
Mothers	22%	59%	19%
Fathers	35%	46%	19%

Table 3

The three-way distribution was not significantly different from the normative distribution. In contrast, the four-way classification deviated significantly, with an under representation of the U category (10%).

Adolescent attachment

Table 4 provides a summary of nonclinical and clinical/at risk adolescent attachment type distribution.

Sample	Attachment Type		
	Type D	Type F	Type E
Nonclinical	27%	61%	12%
Clinical/at risk	35%	38%	27%

Table 4

With the U category included for four-way classification, the percentage of nonclinical Italian adolescents classified as U (4%) was significantly lower than in the North-American norm group (18%).

Further sub group analysis took place; the results are summarised in **Table 5**.

Sub group	Attachment Type		
	Type D	Type F	Type E
At risk samples	34%	49%	17%
Clinical samples	33%	31%	36%
Parents (children with physical impairment)	32%	40%	28%
Parents (children with psychological impairment)*	17%	12%	25%
	*Four-way classification used: remaining 46% classified as U		
Violence Within the Family (maltreating parents)*	31%	12%	15%
	*Four-way classification used: remaining 42% classified as U		

Table 5

Conclusions

The majority of nonclinical Italian infants were classified as securely attached (53%). Similarly, the majority of nonclinical Italian adults were classified in the secure attachment category (60%). Classifications for infants as well as adults were remarkably similar to those in the normative American group.

Both nonclinical and clinical Italian infants' distribution showed avoidant attachments are more common in Italy than the American sample. The differences in Italian and American parenting practices may explain this finding. Italian mothers tend to think that child development is a natural process, whereas American mothers assume it is their responsibility to promote children's development.

The low percentage of unresolved classifications may be a consequence of the high diffusion of Catholic values among the Italian population. Several studies support the idea that religion plays an important role in cognitive and emotional coping processes. However, Catholicism has not been directly tested in this meta-analysis, and various other socio-cultural differences might have played a role.

There was no over representation of dismissing attachments among males/fathers and gender differences in adult attachments were also not evident. There is a difference in the norm distributions between American and Italian nonclinical mothers. This might be because Italy has skewed and unequal gender roles.

Overall, Cassiba et al. found universal trends and culture-specific features in attachment development, with more avoidance and less unresolved loss.

Candidates should study **ONE contemporary study** as appropriate.

Contemporary study (option 1)

Ashdown and Bernard (2012) Can explicit instruction in social and emotional learning skills benefit the social and emotional development, well-being and academic achievement of young children?

Aim(s)

To investigate the effect of a social and emotional learning skills curriculum on the social-emotional development, well-being, and academic achievement of young children.

Specifically, they wanted to find out if:

- Young children who received the program would display significantly greater gains in their levels of social and emotional competence than those who did not receive the program.
- Young children who received the program would display significantly greater gains in their levels of social and emotional well-being than those who did not receive the program.
- Young children who received the programme would show a greater decrease in problem behaviours than those who did not receive the program.
- Young children who received the program would display significantly greater gains in their levels of academic achievement than those who did not receive the program.

Procedure

Sample: four teachers and 100 students (from two Prep and two Grade 1 classes) from a Catholic school in the western suburbs of Melbourne, Australia were selected. One student left, leaving 99 remaining participants who completed the study.

The school had been identified as being of 'low socio-economic status' by the Catholic Education Office (Melbourne). Approximately two-thirds of the students attending the school spoke English as a second language.

A total of 99 (45 female and 54 male) students completed the study. 42 of these (42.4%) were in preparatory classes (five year olds) and 57 of these (57.6%) were in grade 1 (six year olds). English was the main language spoken at home for 46% of students studied.

One preparatory and grade 1 class was randomly selected to receive the YCDI curriculum. These students received lessons from the "*You Can Do It! Early Childhood Education*" program (Bernard 2004a, b). This was taught by their classroom teachers over a 10-week period during Terms 2, 3, and 4, 2009. The teachers were trained in the use of the YCDI program.

The students from the remaining preparatory and grade 1 class did not receive the program during the study, thereby serving as a comparison/control group.

All four teachers completed two questionnaires about each student. The questionnaires were completed immediately before and again after implementation of the program, and at similar times for the comparison/control classes.

Questionnaire one; the *ACER Well-being Survey* consisted of 50 items and has been previously tested for reliability and validity. The teachers indicated their agreement or disagreement with each item using a four-point Likert scale (1=strongly disagree, 4=strongly agree). Part 1 of this questionnaire contained 22 items to measure levels of

social-emotional well-being and part 2 contained 28 items to measure social-emotional competence.

Questionnaire two; the *Social Skills Rating System* consisted of 57 items to measure Social Skills, Problem Behaviours and Academic Competence. This questionnaire had previously been shown to have high internal consistency and test-retest reliability, as well as content and criterion validity. Teachers indicated their agreement with items on a scale of 0 (never) to 2 (very often).

Also, teachers were asked to record each child's *Independent Text Reading Level* at each time point. Reading levels range from 0 (lowest) to 28 (highest), and indicate difficulty level of a piece of text that a child can read independently.

A classroom practice observation form was used to investigate how well the teachers implemented the program. The observer rating form included measures of teacher behaviours such as; followed the YCDI lesson plans, provided helpful feedback to children, or checked understanding with individual children. Each teacher's behaviours were rated on a three-point scale from 1 (=not at all) to 3 (=very much). This observation was completed twice on each teacher.

Results

The ratings of each YCDI teacher on the classroom observation form indicated that both YCDI teachers were well prepared, provided helpful comments to children, checked that individual children understood the lessons, and presented the lessons with enthusiasm. However, neither teacher closely followed the scripted lesson plans in the YCDI curriculum manual.

Table 1 shows the mean levels of social-emotional well-being, social-emotional competence, social skills, and reading levels by grade and group.

Measure	Group	Grade: Preparatory (n=42)		Grade: Grade 1 (n=57)	
		Before YCDI	After YCDI	Before YCDI	After YCDI
Positive social-emotional well-being	YCDI	90.57	96.38	90.07	95.02
	Non-YCDI	83.33	85.19	89.39	85.42
Total problem behaviours	YCDI	2.02	2.37	2.17	1.44
	Non-YCDI	2.66	2.45	2.97	3.15
Total social-emotional competence	YCDI	102.57	110.87	105.31	116.85
	Non-YCDI	99.97	101.80	98.37	97.37
Total social skills	YCDI	42.94	45.66	40.59	46.28
	Non-YCDI	38.46	38.33	42.50	34.98
Reading level	YCDI	5.10	17.96	7.86	24.48
	Non-YCDI	2.05	18.24	5.48	22.98

There were differences between the mean scores of male and female students in both the YCDI and non-YCDI classes on each of the dependent variables at both time points.

Males displayed higher levels of problem behaviours, and lower levels of social-emotional well-being, social-emotional competence, and social skills. However, the analysis of the results indicated that there were no differences in the effectiveness of YCDI between males and females as both group score improved over the program duration.

Conclusions

The results are consistent with previous research evidence that a social and emotional learning program using teacher-led lessons has a place in early years education.

Results suggest that the *You Can Do It! Early Childhood Education Program* is an effective way of improving the social and emotional competence of young children.

After the YCDI program the students in the YCDI classes were more able to manage their emotions, get along with others, and engage in their academic learning, than the students in the non-YCDI classes.

There were no differences between males or females, or between the students who spoke different first languages. This indicates that the program was equally effective for males and females, and for English and non-English speaking children. The program was equally effective for children from a range of cultural backgrounds.

There was no evidence that YCDI resulted in an overall reduction in total problem behaviours when both prep and grade 1 data were combined. However, the results did differ between the YCDI classes. Grade 1 YCDI students did have a reduction in their levels of problem behaviours than the grade 1 non-YCDI students. Therefore, the program was effective at reducing the problem behaviours displayed by the grade 1 students.

For academic achievement, the results of this study showed no significant differences in reading levels between the YCDI and non-YCDI students after the program. However, for the progress of the 50% of children with the lowest reading levels before the program, the YCDI classes displayed greater gains in their levels of reading achievement than the non-YCDI classes.

As the Grade 1 YCDI class showed more robust improvements than the Prep YCDI class, it may be the case that the impact of the YCDI intervention is greater when teachers rely on the explicit teaching guidance contained in the YCDI curriculum concerning how the content of the lesson should be delivered.

Candidates should study **ONE** contemporary study as appropriate.

Contemporary study (option 2)

Ding et al. (2014) The relation of early infant attachment to attachment and cognitive development outcomes in early childhood.

Aim(s)

To investigate the relation of mother–infant attachment to attachment, cognitive and behavioural development in young children.

Procedure

This study used a longitudinal study design.

The current study adopted Ainsworth's "strange situation procedure (SSP)" to evaluate mother–infant attachment in 12- to 18-month-old infants.

Ethical approval was obtained from the Research Ethics Committee of the Children's Hospital of Fudan University. Informed consent was obtained from all the mothers.

Sample: At the first visit, the subjects included 160 infant–mother dyads. They were recruited through child health care networks in Shanghai. Most of the sample were middle-income families.

All 160 infants were firstborn, full-term, healthy infants. There were 82 boys and 78 girls.

Participants completed an attachment assessment by SSP during the first visit by the researchers. After the assessment, the infants were followed up when they were approximately 3 years old.

For the follow-up, participants were asked to visit the research study unit and Ding et al. provided cost reimbursements, such as transportation fees for the visit. In total, 118 young children completed the follow-up (63 boys and 55 girls), so forty-two infants were not included in the follow-up. Reasons for this included moving to a new location or inability to get to the unit because of family arrangements or events.

Follow up testing included 8 scenarios using the SSP: mother–infant dyads entering, infants staying with their mothers; the intervention of strangers; separation of infants from their mothers; staying with strangers; reunion with their mothers; and separation from their mothers followed by reunion with their mothers.

Video and audio recording were used. Video data was coded to classify the attachment type of the infants. The videos were coded by two authors and the inter-rater/inter-coder reliability on the A, B, C and D categories was 95%.

A child Attachment Q-set (AQS) was also used to evaluate the attachment type of the 118 young children. The AQS has 90 cards that reflect the security of a child's attachment and related behavioural characteristics.

This evaluation was performed by the mothers. Ding et al. provided instructions to the mothers. The scores from the AQS were used to divide the children into 2 types: those with the secure type of attachment and those with the insecure type of attachment.

Ten mothers were randomly selected to re-evaluate their children using the AQS as a consistency/control measure.

The BSID-II was used to evaluate the mental development index (MDI) and psychomotor development index (PDI) development of the children. This was administered by 2 professional evaluators who were unaware of the attachment type of the children to avoid bias.

10 children were also randomly selected to be evaluated simultaneously by 2 professional evaluators using the BSID-II to test for inter-reliability.

The CBCL (for 2- to 3-year-olds) was used to evaluate behavioural problems. This scale has 99 items about behavioural problems. The mothers completed the CBCL.

10 mothers were randomly selected to re-evaluate their children using the CBCL as a consistency/control test.

Results

Of the 118 followed-up young children;

- 78 demonstrated secure type of attachment
- 40 demonstrated insecure type of attachment
 - 10 with avoidant type
 - 27 with resistant type and
 - 3 with disorganised type.

There were no reports of parental divorce or death or other family crises among the 118 followed-up young children. Two of them had a young brother and one of them had a young sister since the first visit.

Consistency of the attachment security from infancy to early childhood

Of the 118 followed-up young children;

At the first visit:

76 children were classified as having secure type of attachment (64.4%).
42 children were classified as having insecure type of attachment (35.6%).

At the follow-up visit:

70 still demonstrated secure type of attachment giving a consistency rate of 89.7%.
34 still demonstrated insecure type of attachment giving a consistency rate of 85.0%.

Mother–infant attachment in relation to cognitive development

The evaluation of cognitive development in early childhood showed:

MDI was 102.9 ± 12.6 for secure types (B) compared to 97.5 ± 14.8 for insecure types (A and C and D)

PDI was 98.8 ± 12.1 for secure types (B) compared to 95.6 ± 13.4 for insecure types (A and C and D)

Results of a t-test showed that the difference in MDIs was statistically significant, although the t-test result for the difference in PDIs showed no significant difference.

Mother–infant attachment in relation to behavioural problems

The insecurely attached infants scored more highly in social withdrawal, aggressive behaviour and total problems in early childhood than the securely attached infants.

Conclusions

Consistency

The majority of securely attached infants maintained a secure attachment relationship with their mothers in early childhood, while the majority of insecurely attached infants maintained insecure attachment with their mothers.

Relation of infant attachment to cognitive development in early childhood

In line with the findings of most previous studies the results demonstrated that attachment security in infancy had a significant impact on general cognitive development in early childhood. Securely attached infants were more likely to have a better cognitive development than insecurely attached infants.

The cognitive developmental level of children with insecure-avoidant type was close to that of children with the secure type, while the levels of young children with insecure-resistant type of attachment were significantly lower than those of children with the secure type.

Relation of infant attachment to behavioural problems in early childhood

Attachment security in infancy has an important impact on the occurrence of behavioural problems in early childhood, especially social withdrawal and aggressive behaviour.

The avoidant infants showed no significant difference in any single behaviour problem or in total problems in early childhood when compared with the securely attached infants. One possible reason is that the number of avoidant types in the present study was relatively small. Another possible reason is that mothers of avoidant infants are likely to ignore or be insensitive to their children's behavioural problems.

Children with secure type attachment in infancy tended to have mainly single-behaviour problems, whereas children with insecure type (especially disorganised type) attachment in infancy, tended to have various behavioural problems occurring simultaneously.

SECTION B: Criminological Psychology

Candidates are required to study **either** criminological psychology **or** health psychology.

Criminological psychology (Topic F) is **one** of the two optional topics assessed in the written examination for Paper 3. Candidates **must** study **developmental psychology** and **only one** further option.

Classic study

Loftus and Palmer (1974) Reconstruction of auto mobile destruction: An example of the interaction between language and memory.

Aim(s)

To see if the phrasing of a question would affect estimates of speed, applying these findings to the idea of leading questions in court.

A leading question is one that suggests to the witness what answer is desired or leads him or her to the desired answer.

Experiment 1

Procedure

45 students were put into groups.

7 films were shown, each involving a traffic accident, with each film lasting 5-30 seconds. The films were segments from longer driver's education film borrowed from the Evergreen Safety Council and the Seattle Police Department.

After every film the participants had a questionnaire to fill in.

First they were required to give an account of the accident, and then to answer to specific questions.

The critical question was the one asking about the speed of the vehicle.

9 participants were asked "about how fast were the cars going when they hit each other?" and equal numbers of the rest were asked the same question, but with the word "hit" being replaced by "smashed", "collided", "bumped", or "contacted".

The same procedure was followed for each film, however the order of the films was randomised for each group.

4 of the 7 films used contained staged crashes originally designed to illustrate what can happen to human beings when cars collide at various speeds. In these cases, the speed of the cars was known. One was travelling at 20 mph, one was at 30 mph and two were at 40mph.

Results

Table 1 shows the mean speed estimate by verb used in the questioning of the participants.

Verb used	Mean speed estimated (mph)
smashed	40.5
collided	39.3
bumped	38.1
hit	34.0
contacted	31.8

Table 1

The use of the verb "smashed" gave the highest mean estimate of speed and "contacted" the lowest mean estimate.

"Collided", "bumped" and "hit" had speed estimates that decreased as per the perceived severity of the verb.

The mean estimates of speed for the four films where the actual speed was known were: 37.7, 36.2, 39.7, and 36.1 mph, respectively. In agreement with previous work, people are not very good at judging how fast a vehicle is traveling.

Conclusions

It was concluded that a leading question, can affect a witness answer.

Perhaps the participant is uncertain in judging speeds, for example between 30 and 40 mph, so he or she uses the word in the question to help.

It is possible that the question changes the memory of the accident so the participant sees the accident as more severe if the word "smashed" is used. If this is the case, we might expect participants to "remember" other details that did not actually occur.

Experiment 2

Aim(s)

The second experiment was designed to provide additional insights into the origin of the differential speed estimates

Procedure

150 participants were sampled and in groups of various sizes they watched a film with a multiple car accident, this was followed by completing a questionnaire.

The film lasted less than 1 minute of which the accident was 4 seconds.

The questionnaire at the end of the film asked participants to describe the accident in their own words and then to answer more questions. Some were asked about the speed using the word "smashed" as part of the questions, some were asked the same question with the word "hit" replacing "smashed", and some were not asked about speed. This group acted as a baseline control group measure.

One week later the participants came back but were not shown the film again. They were asked more questions, including "Did you see any broken glass?". There was no broken glass in the film, but it was thought that the word "smashed" used in the question the week before would lead to more broken glass being "remembered" by those participants.

Results

The mean estimate of speed for the question including the word "smashed" was 10.46mph and for "hit" it was 8mph. These differences were found to be statistically significant.

An chi-square test was conducted on these responses and was found to be significant beyond the .025 level. The probability of saying "yes" to the question about broken glass is 0.32 when the verb *smashed* is used, and 0.14 with *hit*. So, *smashed* leads to more "yes" responses and to higher speed estimates.

Table 2 shows the number of participants that answered yes or no to the question of 'Did you see any broken glass'.

Response	"smashed"	"hit"	Control
Yes	16	7	6
No	34	43	44

Table 2

Conclusions

The question about "how fast were the cars going when they smashed into each other?" led to higher estimates of speed than the same question asked with the verb *smashed* replaced by *hit*. This also had consequences for how questions are answered a week after the original event occurred.

Loftus and Palmer proposed that two kinds of information go into memory. The first is information from the perception of the original event; the second is external information supplied after the fact. These two sources of information become integrated so that we are unable to tell from which source specific detail is recalled. All that is available is one "memory".

Contemporary study

Bradbury M D and Williams M R (2013) Diversity and Citizen Participation: The Effects of Race on Juror Decision Making.

Aim(s)

To investigate whether the racial makeup of a jury affects its decision making.

Specifically;

- That black defendants will be more likely to be convicted by juries composed of a higher number of white jurors.
- That black defendants will be more likely to be convicted by juries composed of a higher number of hispanic jurors.

Procedure

The data for the current study was originally collected by another team of researchers for a study of actual hung jury verdicts in noncapital felony cases in Maricopa County, Arizona; Los Angeles, California; Bronx, New York; and Washington, D.C.

The authors collected data for trials held in 2000 and 2001 to compare juries that convicted defendants with juries that deadlocked.

The data included type of charge, sentence, jury decision, demographic characteristics of defendants and victims, jury selection, trial evidence and procedures, and jury deliberations.

Bradbury and Williams selected trials with only Black defendants, as they comprised approximately 60% of all defendants across the jurisdictions.

The dependent variable was a conviction or not. This considered convictions on only some (or one) of the charges brought to trial and/or being convicted of lesser charges. Therefore, a conviction on any charge is coded as a conviction. Acquittals and hung juries were coded as "no."

The independent variable was the racial makeup of the jury, measured by the percent Black, percent White, and percent Hispanic groups serving on the jury.

The strength of the prosecutor's case was measured by the quantity of evidence and witnesses the prosecutor presented during trial, this was because conviction is more likely when the prosecutor's case is relatively strong.

Case type was considered, which included whether the defendant was charged with a violent crime or a property crime. Violent crimes and property crimes were used as dummy variables for the study with drug crimes being the reference category to be measured.

Results

Juries comprising a higher percentage of White jurors are more likely to convict Black defendants.

Juries comprising a higher percentage of Hispanic jurors are more likely to convict Black defendants.

Juries were less likely to convict Black defendants of violent crimes when compared with drug crimes.

Juries were less likely to convict Black defendants of property crimes when compared with drug crimes, though this is only marginally significant.

Conclusions

The consistent pattern of Black defendants being more likely to be convicted of drug crimes than for violent crimes, regardless of jury composition by race raises the issue of whether the criminal justice system is generally tougher on Blacks charged with drug-related offenses than for violent crimes.

The findings also suggest that attorneys for Black defendants can increase the odds of an acquittal by seeking out Black jurors. Jurors may be biased in their decision making due to in-group/out-group bias. This suggests that jurors should represent a community and not share characteristics with a defendant.

Public participation in jury service should make careful consideration of which members of the public are, and are not, participating, as this may influence the deliberative process and/or result.

Candidates should study **ONE** contemporary study as appropriate.

Contemporary study (option 1)

Ruva, McEvoy and Bryant (2007) Effects of pre-trial publicity and jury deliberation on jury bias and source memory errors.

Aim(s)

To investigate the effects of exposure to pre-trial publicity (PTP) and jury deliberation on juror memory and decision making.

Procedure

Sample: participants consisted of 558 university students (128 males and 430 females) aged 18 to 52 years (mean age 20.6 years) who received extra course credit for participating in the experiment.

354 were Caucasian, 86 were African American, 36 were Asian or Pacific Islander, 73 were Hispanic, 2 were Native Americans, and 2 fell into the other category.

Six indicated that they had been jurors in an actual criminal trial prior to participating in the experiment.

The groups consisted of;
138 participants in collaborating groups (randomly assigned to collaborative or nominal).
140 in the nominal exposed groups.
142 in the nominal non-exposed groups.

There were 25 groups (juries) per condition. This experiment consisted of two phases, which were 4–7 days apart.

Phase 1

Participants were in groups of 16 or fewer, with all participants in each session assigned to the same PTP condition. The exposed jurors received negative PTP about the defendant in the trial, and the non-exposed jurors read unrelated crime articles.

Participants in the PTP-exposed conditions received packets containing news stories that were modified from actual PTP from the trial. These contained general information about the case as well as information that was not presented at trial and that could have a biasing effect on juror verdicts.

Participants in the non-exposed PTP conditions received packets containing news articles of an unrelated crime in which a woman was accused of embezzling child support funds.

These articles packets were matched for both conditions, such as both contained 9 separate news articles of approximately the same length and consisted of 10 pages of text.

Phase 2

Approximately 4 days after exposure to the articles, participants viewed the videotaped trial. They were told they were not to use any prior information when making decisions about the defendant's guilt and to only use the evidence presented during the trial.

The trial was a real videotaped criminal trial that had been used in prior research and was edited to run for approximately 30 minutes. It depicted a trial of a man who accused

of murdering his wife and the defendant gave a plea of not guilty, claiming that his wife accidentally shot herself when he tried to prevent her from committing suicide by shooting herself in the head. Written PTP was provided to the experimental groups.

Immediately following the viewing of the trial, each juror was given a verdict form asking for:

- their verdicts of 'not guilty', 'hung', or 'guilty'
- how confident they were in these verdicts (score ratings)
- the length of the prison sentence (between 30–45 years) they would suggest

Then the nominal group was then moved to a different room to the collaborating group.

The nominal groups of five to six individuals were randomly selected after data collection was completed and they worked alone in all experimental tasks. They had to individually recall as many trial facts as they could and indicate which had the greatest influence on their decision and why.

The collaborating groups of four to six people deliberated for half an hour as a jury until they reached a unanimous verdict regarding guilt of the defendant. A hung trial would be recorded if the decision was not unanimous.

Using 12-person juries would make most mock jury research prohibitive, most researchers employ four- to six-person juries. Ruva et al. had 50 groups of collaborating jurors, where 68% had 6 jurors, 18% had 5 jurors and 14% had 4 jurors.

Once the verdict was complete participants in both conditions individually completed a source monitoring test about whether a statement (source) appeared in the experiment as part of the trial or one of the articles they read. They also indicated their confidence in each answer.

Results

The results in **Table 1** show the mean scores for guilty verdicts, confidence in the verdict and length of prison sentence in the experimental (exposed) group and control (non-exposed) groups for collaborating and nominal (individual) decision making.

Group	Pre-deliberation		Post-deliberation		Post source monitoring	
	Exposed	Non-exposed	Exposed	Non-exposed	Exposed	Non-exposed
Verdicts of 'guilty'						
Collaborating	2.46	1.83	2.22	1.72	2.25	1.67
Nominal	2.30	1.74	2.27	1.71	2.27	1.71
Confidence in verdict						
Collaborating	5.29	4.08	5.63	3.96	5.45	4.04
Nominal	5.05	3.89	5.07	3.99	5.09	3.99
Length of prison sentence (from a given choice of 30-45 years)						
Collaborating	40.71	37.74	40.64	36.91	41.02	35.80
Nominal	40.37	37.69	40.74	38.10	40.74	38.14

Table 1

Jurors were less likely to find the defendant guilty on the post-source monitoring measures than on the pre-deliberation measures. This was only apparent for the jurors in the collaborating conditions.

Jurors in the exposed conditions were significantly more likely than jurors in the non-exposed conditions to attribute information presented only in the PTP to either the trial or

both the trial and the PTP. Jurors in collaborating conditions were more confident than nominal jurors about their accurate and inaccurate SM judgements for the trial items.

There was a significant effect of collaboration on perceived credibility of the defendant, with nominal jurors perceiving the defendant as more credible than collaborating jurors.

This suggests a link between PTP exposure and critical PTP source memory errors and perceived credibility of the defendant. They also suggest a link between PTP exposure and guilt ratings.

Conclusions

Negative PTP about a defendant can have an extremely biasing effect on juror decision making. The effects of deliberation on decision making can depend on how juror bias is measured (e.g. verdicts, credibility ratings of the defendant, SM misattributions).

The comparison of pre-deliberation and post-source monitoring verdicts suggested that group deliberation reduced the bias associated with negative PTP, this has been termed a 'leniency shift'. Deliberations presumably highlight the law's reasonable doubt standard and the fact that the conviction of the innocent should be avoided. However, Deliberation was found to increase juror bias where they viewed the defendant as less credible than jurors who did not, regardless of PTP exposure.

Collaborating jurors provided more accurate SM responses than did nominal jurors, which supports the suggested benefits of juries because they are especially good at catching their members' memory errors.

Exposed jurors were more likely than non-exposed jurors to make misattributions between PTP and trial evidence. Most SM errors for exposed jurors were due to inaccurately attributing this information to both the trial and the PTP. The jurors did not forget that they read about this information in the PTP, but they also believed that they heard it during the trial.

Also, those exposed to negative PTP perceived the defendant as being less credible than non-exposed jurors. Negative PTP may have caused jurors to form a negative impression of the defendant.

Overall, where there is a lot of negative pre-trial publicity about a defendant, it may be impossible for them to have a fair trial. Even when jurors are instructed not to use PTP information they may be unable to do so because of source memory errors or negative impressions already formed about the defendant.

Candidates should study **ONE** contemporary study as appropriate.

Contemporary study (option 2)

Valentine T and Mesout J (2009) Eyewitness identification under stress in the London Dungeon.

Aim(s)

To investigate the influence of state anxiety on recall. They aimed to test the prediction of 'the catastrophe model' that states that in a situation which induces cognitive anxiety, high physiological arousal can cause a marked impairment in eyewitness recall and identification.

Specifically, they tested whether visitors to the London Dungeon could describe and identify somebody they encountered in the Horror Labyrinth.

Procedure

They used a correlation design as they did not have a non-stressful condition as a control.

Validation of State Anxiety Inventory: 20 employees of a London department store were recruited. Data from 2 participants was not analysed because their baseline heart rate was an outlier in the sample. The participants who contributed data for analysis had a mean age of 26.1 years (range 18–48 years) and 10 were female, 8 were male.

Informed consent was obtained before taking part in the study. Heart rate was measured using a Polax Accurex Plus wireless heart rate monitor. The wireless heart rate monitor was strapped around the participant's chest. A baseline heart rate was measured with the participants walking slowly. Then their average heart rate was recorded whilst in the Labyrinth with other visitors.

Having completed their visit the participants reported, using State and Trait anxiety was measured using the Spielberger (1983) State-Trait Anxiety Inventory, how they had felt whilst in the Labyrinth.

Eyewitness study: Visitors to the London Dungeon were offered a reduction in the admission price to complete questionnaires after their visit. 56 volunteers provided complete data that were analysed. They had a mean age of 31.0 years (range 18–54 years) and 29 were female, 27 were male.

The Horror Labyrinth is the first exhibit in the tour of the London Dungeon. It is a maze and visitors are admitted in groups of around thirty people. It is designed to disorientate visitors. It is dark, crowded and there is a sound track playing various scary noises and screams. There are several 'scares' in the Labyrinth. There was an actor in the Labyrinth, dressed in a dark robe and wearing theatrical make up to create a very pale facial skin colour with wounds or scars. This actor is the 'scary person' participants were to identify. The actor would step out in front of the participant, and then block their path to prevent them passing.

Participants had agreed to fill in questionnaires about their visit but had not given informed consent to participate in the experiment, however after they had completed their tour, the purpose of the experiment was explained and informed consent was obtained.

They completed a questionnaire about how they felt. Then they completed a questionnaire on their memory for the 'scary person'.

The dependent variable was the recall of the actor's appearance and the identification of the actor from a 'culprit-present' line-up.

First they were asked to provide a written free recall description, then they were prompted to provide a cued recall (e.g. sex, age, height, hair colour, clothing etc.).

In both recall tasks participants were instructed to include only those details they could remember and not to guess any details they were unsure of.

Finally, participants were shown a nine-person photograph line up which included the 'scary person' actor. Others in the photo line-up were similar in appearance, age, ethnic origin, and gender to the 'scary person' and wore the same make-up.

After making their decision, participants rated their confidence in their decision on a scale of 0–100% confidence.

Results

Validation of State Anxiety Inventory: The mean baseline heart rate of the 18 participants was 74.7 bpm, and while in the labyrinth it was 86.9 bpm. Therefore, the mean heart rate was reliably higher in the labyrinth. Their mean state anxiety score was 43.2.

Statistical analysis of heart rate and state anxiety showed a reliable association between increasing heart rate and state anxiety score, validating the SAI measure.

Eyewitness study: Data was obtained from 56 participants. The mean state anxiety score was 49.0. State anxiety was reliably higher for females than for males (52.8 vs. 45.3). The mean trait anxiety score was 36.8.

There was no significant difference in trait anxiety between males and females (36.3 vs. 37.3).

In free recall of the 'scary person' actor, the number of correct descriptors recalled was recorded. They found that participants who reported higher state anxiety recalled fewer correct details about the actor.

Table 1 shows the accurate, inaccurate or no identification made outcomes in the identification of the 'scary person' actor from a 9-person photograph line up.

ID of actor	Low state anxiety	High state anxiety
Accurate	21	5
Inaccurate	6	15
No identification	1	8

Table 1

There was a statistically reliable effect of state anxiety on recall.

To test any association between state anxiety and sex, identification accuracy was also analysed by gender. Males made more correct identifications than females, as summarised in **Table 2**.

ID of actor	Male	Female
Accurate	19	7
Inaccurate	5	16
No identification	5	4

Table 2

Conclusions

There was a reliable association between sex and state anxiety. Females reported a higher state anxiety in the Labyrinth than did males. This is consistent with previous data which show females reported higher state anxiety under stressful conditions than males.

An implication of the results and the association of state anxiety under stress with sex is that eyewitness identification may be particularly vulnerable to the effect of stress in female witnesses or victims of crime.

There was a strong negative association between state anxiety and the ability to correctly recall the appearance of a person encountered under stressful conditions. Witnesses who experienced higher anxiety reported fewer correct descriptors than witnesses who experience less anxiety.

Eyewitness identification was impaired by high state anxiety. Only 17% of eyewitness scoring above the median on the state anxiety scale correctly identified the person they saw from a nine-person photograph line-up. However, 75% of eyewitnesses who scored below the median correctly identified the 'culprit'.

Overall, the catastrophic failure of the ability to describe and identify a person encountered under high state anxiety in the Horror Labyrinth provides strong support for the catastrophe model of memory performance under anxiety.

SECTION C: Health Psychology

Candidates are required to study **either** criminological psychology **or** health psychology.

Health psychology (Topic G) is **one** of the two optional topics assessed in the written examination for Paper 3. Candidates **must** study **developmental psychology** and **only one** further option.

Classic study

Brady (1958) Ulcers in executive monkeys.

Aim(s)

To see if there was a relationship between high stress levels and increased hormone production and the development of ulcers.

Brady was interested in the stress levels of business executives.

Procedure

There were 8 rhesus monkeys which were tested in pairs.

Brady initially placed the monkeys in 'restraining chairs' and conditioned them to press a lever. Monkeys received electric foot shocks that were signalled by a preceding tone. They were given electric shocks every 20 seconds unless the lever was pressed at the same time.

The experimental conditions, the executive monkey was responsible for pressing a lever and was shocked if this was not completed on time.

A 'yoked' control monkey only received shocks if the executive monkey did not press the lever in time, although it could not control these.

The shock was an electric shock to the monkey's feet for half a second.

The creation of stress in the executive monkey was the psychological stress of decision responsibility for the electric shock.

By pressing a lever at least once within the period, the executive monkey could avoid the shock for both.

The electric shocks happened every 20 seconds, for 6 hours at a time over a three-week period.

The experiment lasted 6 to 7 months and each day 6 hours would be when the monkeys were being administered the shocks, the other 6 hours the monkeys would have off periods where they received no shocks.

Results

The conditioned monkeys from all 4 pairs died between the 9 to 48 days of the experiment due to developing ulcers from the stress of having to pull the lever.

However, the control monkeys who were not in charge of pressing the lever did not die.

Conclusions

Brady concluded that the shocks themselves were not severely stressful as the yoked monkeys showed little gastric ulceration; the critical factor was the stress associated with trying to avoid the shocks.

Having control was the stressful element in this study, causing gastric ulceration in the executive monkeys.

The most dangerous time was when the sympathetic arousal stopped (during the rest periods) when the stomach became flooded with digestive hormones.

Overall, high levels of stress are dangerous and that there are possibilities that gastrointestinal problems can develop.

Contemporary study

Nakoncz and Shik (2009) And all your problems are gone: religious coping strategies among Phillipine migrant workers in Hong Kong.

Aim(s)

To investigate the hardships and religious coping strategies of Philippine migrant workers in Hong Kong.

Specifically;

- To investigate if intensified coping needs that arise from the migration process lead to a reorientation towards more charismatic religious groups
- To investigate if this in turn promotes coping strategies specifically tailored towards the experiences of migrants.
- To investigate if religious coping aids the toleration of exploitative patterns in migration by reducing their emotional cost.

Procedure

In a pilot study with 20 Filipinos (consisting predominantly of female domestic workers) throughout the first month of the project highlighted that all the participants considered religion very important for their coping. The sample for phase two was narrowed to particularly religiously active groups.

The data was collected in an evolving process over 3 months, using ethnographic methods. Nakoncz engaged in participation observation of Sunday services and after-church religious activities under the guise of a student with the objective to write a research paper.

Contact with participants was only on Sundays, as the migrants lived at their employers' homes and had only one day off.

Field notes were taken during the observations and in-depth interviews using open-ended questions, which enabled discussion, with 10 individuals and four focus groups were undertaken.

Participants in the interviews were exclusively female Filipino domestic worker's in their mid-twenties to late forties. The duration of stay abroad covered newly arrived migrants (less than a year) and migrants with over two decades of migration.

All the participants attended religious gatherings every Sunday. In most cases, almost all activities of their free day were related to their respective religious groups.

Results

Perceived hardships by the migrants themselves.

Individual participants assessed their situation very positively (in areas like income) they were unhappy with their condition. For example, some describe it as "mental torture" and one burst into tears when talking about her situation.

At the top of the list of hardships or burdens were "loneliness" and "homesickness", some reported being denied leaving the house or making phone calls, contributing to their feeling of isolation. Working conditions were the second most frequently identified "burden", typically including long and exhausting working hours. The third source of "burden" were worries about family left behind.

Religious coping

Religious reappraisal of hardships uses religious interpretations to place problems in a new light to make them feel less oppressive. Many migrants believe that “whatever the tragedy is in their lives, it is a plan of God and not a human being”. This belief in an external locus of control and gives spiritual significance to events and makes it easier for the migrants to accept them.

Some participants put their hardships in the context of higher cosmic forces. A strong other-worldly orientation being used as a strategy to deal with hardships by means of reducing their importance.

“Whatever you want, God will give it to you” is one of the statements that appeared most frequently in the research. The Divine is seen as the principal actor in the problem-solving process. This is particularly important when the migrants feel they have no or limited possibility of taking influence.

In all five groups studied, the concept of “giving the burden to God” was recurrent. By making use of the biblical image of “God as a comforter,” migrants can combat stress by surrendering the hardship to God.

Distraction is a dimension of the church as social locus because thinking about problems is stressful, so to focus on something else is a temporary stress relief.

“Sharing” problems with others provided strong interpersonal trust necessary to make sharing an effective coping strategy: “Once you are a member, once you have a religion, you can share your problems. Because you have trust in the fellows of the religion”.

Church groups are also important networks of solidarity when it comes to materially supporting migrants in trouble. They can mobilize funds to help members in financial distress. Sometimes, they serve as a marketplace for referrals to “good employers.”

Conclusions

Religion was often defined in terms of its coping benefits by the participants. Many emphasized the positive psychological effects of their religious activities (“all your troubles are gone”).

The findings suggest that most religious coping strategies used by the participants aim either at emotional adjustment to the (stressful) situation or passing of responsibility to a higher entity, rather than at action to change the stressors.

Participants who use emotion-focused, religious coping strategies, and who rely on God for patience and positive intervention, appear simultaneously to be empowered. Most participants were very aware of their rights and migration-related policies, and showed strong interest in political and economic issues that concerned them.

Overall, Filipino migrants in Hong Kong are a group with social homogeneity (they are almost entirely female domestic workers), they share very similar experiences and problems. They find coping tools and advice to actively deal with their situations in charismatic churches and groups.

Candidates should study **ONE** contemporary study as appropriate.

Contemporary study (option 1)

Avdagic et al. (2014) A randomised controlled trial of acceptance and commitment therapy (ACT) and cognitive behavioural therapy (CBT) for generalised anxiety disorder.

Aim(s)

To investigate the relative efficacy of group acceptance and commitment therapy (ACT) for generalised anxiety disorder (GAD) compared to group cognitive behavioural therapy (CBT).

Procedure

Participants were individuals who met diagnostic criteria for GAD. They were recruited through community advertising (newspapers and flyers) and via emails.

Telephone screening interviews using the Anxiety Disorders Interview Schedule for DSM-IV, a semi-structured clinical interview that provides a comprehensive assessment of anxiety disorders, was undertaken to confirm a GAD diagnosis according to the DSM-IV criteria.

Participants with psychotic symptoms, major deficits in neurocognitive functioning, substance abuse or dependence, and current suicidal intent were excluded from the study.

The 51 participants (34 females and 17 males), aged between 19 and 69 years, were randomly allocated either to the ACT group (n=25) or CBT group (n=26).

Each treatment condition was delivered in a group format of session lasting 2 hours over 6 weeks. Participants were assessed before starting the group treatment (pre-assessment), after completing the program (post-assessment) and then again at 3-months' follow-up. A total of 12 groups (6 ACT and 6 CBT) were conducted.

9 participants discontinued their therapy during the study period, 3 from the ACT group (12%) and 6 from the CBT group (23%).

Participants were required to complete a questionnaire booklet that was mailed to them.

4 participants did not return their post-assessment questionnaires (3 from the ACT group and 1 from the CBT group). Thus, complete data from 38 participants was available at post-assessment, 19 in the ACT group and 19 in the CBT group.

To measure the outcomes of the ACT and CBT, the Penn State Worry Questionnaire (PSWQ) was used. This is a 16-item, self-reported measure of trait worry. It measures the degree to which worry is excessive, uncontrollable, and pervasive.

Also, the Depression, Anxiety and Stress Scale 21 (DASS-21) was used to measure participant levels of depression, stress and anxiety. The DASS is a self-reported questionnaire.

The Quality of Life Inventory (QOLI) measured participants' satisfaction with 16 areas of life (e.g., health, work, relationships, goals and values, romantic relationships, recreation).

During the group interventions, self-reported ratings of distress and interference were used to measure participants' perception of changes to levels of distress or worrying in their everyday life over the course of treatment.

The Acceptance and Action Questionnaire (AAQ) was used to measure the extent of participants' accepting attitude toward negative feelings and experiences and their ability to take action even when feeling uncertain.

The Intolerance of Uncertainty (IUS) is a 27-item, self-reported measure designed to assess several aspects of intolerance of uncertainty, such as ideas that uncertainty is not acceptable and leads to frustration, stress and inability to act.

Using the 25-item, self-reported Cognitive Avoidance Questionnaires (CAQ) participant cognitive avoidance was measured, including outcomes such as suppressing worrisome thoughts, substituting neutral and positive thoughts for worry, avoidance of threatening stimuli, distraction, and transformation of images into thoughts.

Finally, to measure perceived positive consequences of worry, the Why Worry-II (WW-II) was administered.

Results

The effects of treatment type on symptoms (worrying, anxiety, stress, and depression), process measures (positive beliefs about worrying, experiential avoidance, intolerance of uncertainty, cognitive avoidance, and fear of experiencing emotions) and quality of life of GAD individuals was analysed.

Worrying (PSWQ); there was a significant main effect of time, indicating significant reductions in pre- to post-levels of worrying across both groups.

Depression, Anxiety, and Stress (DASS-21) results showed a significant main effect of time from pre- to post-assessment, suggesting that participants across the two groups reported significantly lower levels of depression, anxiety, and stress symptoms.

Quality of Life (QOLI) showed at significant improvement across both groups from pre- to post-assessment.

Distress analysis showed that the groups differed in reported distress levels at the last treatment session, with the ACT group showing significantly lower levels of distress compared to the CBT group.

Interference in daily life, across both groups, was reported with lower levels of interference of their symptoms with everyday life activities over the course of therapy. Participants in the ACT group reported lower levels of interference compared to the CBT group.

Experiential avoidance (AAQ) results showed a significant main effect of time for the, indicating greater experiential acceptance across both groups at the end of treatment. A greater magnitude of change from pre- to post-assessment was found for the ACT group compared to the CBT group.

Using the WW-II a significant decrease in positive beliefs about worrying from pre- to post-assessment was found across both groups, a trend of steeper decrease on this measure was found for the ACT group relative to the CBT group.

Intolerance of uncertainty data showed that participants' had a greater ability to handle uncertainty after treatment completion compared to pre-assessment across both groups,

with a greater increase in tolerating uncertainty for participants in the ACT group as opposed to the CBT group.

Both treatment groups equally demonstrated a significant reduction in using cognitive avoidance strategies at treatment completion, neither group had a significant difference.

Comparisons Between ACT and CBT from Post- to 3-Month Follow-Up

Treatment benefits were maintained at 3-month follow-up for both worrying and quality of life, while further significant improvements were found in relation to depression, anxiety, and stress symptoms across both groups. Significant treatment gains reported on process measures at post-assessment were sustained at the follow-up.

Conclusions

The results suggested that each treatment condition (ACT and CBT) for GAD suggested that significant improvements on all measures from pre- to post-assessment.

Furthermore, the obtained benefits were maintained at 3-month follow-up, with further gains on the DASS-21 for both groups. These findings imply that a short, 6-week group therapy, either ACT or CBT, can lead to significant progress in outcomes among GAD individuals.

When compared to each other, both groups showed similar improvements in participants' reported levels of depression, stress, anxiety, and quality of life from pre- to post-assessment.

Treatment benefits obtained at the end of the group interventions were either maintained or further improved at 3-month follow-up, with no significant differences between the two groups.

Overall, ACT for GAD is as useful as CBT treatment for GAD. The outcomes were achieved in a short-term group format and should encourage the use of this cost-effective treatment approach. This was particularly evident for the ACT group, whereby most participants showed improvements at the end of treatment. Similar improvement rates were achieved at 3-month follow-up for the CBT group, suggesting that the CBT group might have needed more time to practise the skills to reach similar outcomes.

Candidates should study **ONE** contemporary study as appropriate.

Contemporary study (option 2)

Russell et al. (2015) Adaptation of an adolescence coping assessment for therapeutic recreation and outdoor adventure settings.

Aim(s)

To respond to the need for a measure of stress and coping in therapeutic recreation settings.

To adapt the Response to Stress Questionnaire (RSQ) for use in adventure-based therapeutic settings.

To design an assessment to measure coping skills among adolescents in wilderness and adventure therapy settings to further expand understanding of the effectiveness of the programs.

Procedure

After obtaining permission from an original author the adaptation of the RSQ began with exploratory research to identify key outdoor stressors in adventure therapy contexts.

35 adolescents in an adventure therapy program were asked to identify key stressors in the outdoor adventure experiences. They were then asked to rate stressors.

56 stressors were identified and the 10 with the highest ratings were integrated into the original RSQ domains to represent stress in adventure settings.

These stressors included things like "frustration with others in the group," "fear of getting injury".

The items in the RSQ-OAV were designed to focus on responses to stress, however, several items provide examples of more than one stressful context. These gave examples of stressors to provide contexts for adolescents to think about their individual stress response and coping strategy.

A panel consisting of wilderness and adventure therapy and test construction experts reviewed the items for content-related evidence of validity.

The RSQ-OAV was tested by being administered to a sample of 144 participants.

78 (54%) were males and 66 (46%) were females. All participants were aged between 13 and 17 years old (with a mean age of 15.54).

The sample was selected from a public high school (49%); a private therapeutic high school (42%); and an adventure therapy program (9%). Most participants were White (49.3%) or Asian/Pacific Islander (36.1%).

The assessment was tested against itself for discriminate and convergent evidence of validity, for example, the questions on primary control should all correlate with each other.

Results

The RSQ-OAV adaption consisted of 59 items using a combination of Likert scales, checklists, and open-ended questions.

Examples of adapted items;

RSQ 12. I get really jumpy when I'm having problems getting along with other kids.
RSQ-OAV 12. I get really jumpy when I'm frustrated with the group or have difficulty with an activity or problem.

RSQ 30. I think about happy things to take my mind off the problem or how I'm feeling.
RSQ-OAV 30. I think about happy things to take my mind off the bad weather, scary activities, or problems with group members.

Content, discriminate and convergent validity tests of the RSQ-OAV proved moderate to high.

Conclusions

The RSQ-OAV is a reliable and valid assessment that may allow practitioners and researchers to gain greater understanding of coping and adventure/wilderness interventions, and the impact the programs have on participants.

The physical demands and risk involved in outdoor adventures allow adolescents to experience heightened stress and provides opportunities to learn meaningful coping strategies. Measuring the effectiveness of these programs will allow researchers and practitioners to build theory in this area and develop more effective programming.

The RSQ-OAV may allow researchers to determine if some therapeutic recreation programs and experiences are more effective than other experiences at promoting coping skills.

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Study	Link
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