

Candidate 2 evidence

TITLE PAGE

The impact of false high estimates on the participants estimated guess of sweets in the jar



Word count - 2680

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Introduction

The current experiment is about conformity; conformity is when an individual acts in a way that allows them to be accepted by a social group and it can also change their behaviour. People's actions and behaviours are determined by society and other surrounding people, to fit in; this is due to social pressure. Conformity can also be due to peer pressure and media pressure. Peer pressure happens around people you know and are familiar with and media pressure is because of the influence the media and celebrities have on people's lives. The three different types of conformity are compliance, identification, and internalization. Compliance is when a person conforms temporarily in a situation by pretending to change their opinion and agree with the rest of the group. Identification is when a person agrees with a group and adopts their behaviour even when they are alone, but it is only temporary because leaving the group would result in their opinions going back to what they were before. Internalization is the most permanent state of conformity, it is when a person adopts the opinions and behaviours of a group even when they are no longer a group member. Conforming to the majority's opinions and behaviour both publicly and privately, permanently. Conformity is a phenomenon that the research team will be testing.

The two main influences on conformity are normative and informational. These terms originated from Deutsch and Gerrard (1955). Normative social influence is when a person knowingly conforms to social norms to be accepted and liked, even when they know it is wrong. Informational social influence is when a person conforms because they are unsure of the situation, they adopt other people's behaviours or follow their actions because of their doubt and lack of confidence to make the right decision.

A famous conformity study is the Asch experiment which was carried out in 1955. The Asch experiment was an experiment to test if social influence would result in people denying an answer that was obvious. He did this by testing people's judgments on the length of lines. In the Asch experiment 50 male American participants were used; they were each placed into separate groups of 8 with 7 other people who were aware of the experiment. They were shown a series of 18 lines and were asked to pick out of three options which line was the same as the one they were told to compare. The 7 confederates were all told to say the same incorrect answer to see if the participant would conform. Asch found that 25% of the participants did not conform and 75% of the participants conformed at least once. These results showed how much a group can influence conformity.

The current experiment is like the Asch experiment because the current experiment used false estimates to see if participants would conform and guess higher, just as the Asch experiment used the confederates to give false answers.

Another famous conformity study is the Mori and Arai experiment, which took place in 2010. This was a replication of Asch's 1951 experiment, but it had no confederates so that results could be gathered without any acting. The method of comparing lengths of lines was still used but instead of having confederates to answer incorrectly all the participants wore glasses so they perceived the lines in different ways. In each group every participant was given the same pair of glasses except for one to see if they would conform to the majority of the group. Mori and Arai saw this as a more natural way to carry out the experiment because all participants believed that their answers were correct. Mori and Arai used 104 Japanese confederates, the confederates were both

male and female. Mori and Arai found that the female participant results were like the results in Asch's study however the male participants did not conform to the majority view.

Another conformity study is Jenness (1932), Jenness was the first psychologist to study conformity. The study was done to see if individuals guess of jellybeans in a jar was influenced by group discussion. In this study Jenness showed participants a glass jar of sweets and individually asked them to guess the number of sweets in the jar. He then split them into groups to discuss the number of sweets in the jar before then asking them to individually guess again. This study found that people conformed after the group guess and female participants conformed more than male participants. Jenness (1932) is a similar experiment to the current experiment. The current experiment also uses a jar of sweets, and the participants are asked to guess the number of sweets individually. However, in the current experiment, instead of using a group discussion to test conformity like Jenness, false estimate sheets are used.

The aim of the current experiment is to investigate the effect of false estimates on conformity in Scottish secondary students, previous research such as the Asch experiment has shown that participants are likely to conform to other participants answers.

Therefore, the hypothesis of this experiment was, if participants are given an answer form with false high estimates, then they will conform and guess higher than if they had been given a blank answer form.

Null hypothesis - The students will not conform to the false estimates, they will not have an effect. If there is any change in the results it will be due to chance and random factors.

Method

Design

This experiment was a laboratory experiment, a laboratory experiment was used because it allows for extraneous variables to be controlled. A laboratory experiment also makes it easier for participants and experimenters to social distance due to covid.

The experiment used an independent measure design because it was different participants that took part in condition A than condition B. Condition A was an answer form with no false estimates, a blank form, and condition B was an answer form with false high estimates (see Appendices A and B for false estimates and blank recording sheet).

The independent variable in the experiment was whether the participants saw the false high estimate sheet or the blank sheet, and the dependent variable was the participant estimate of sweets in the jar. The research team controlled the experiment by using a controlled environment to avoid the impact of extraneous variables, different environments could have more noise, a different temperature or lighting which could all affect the participants' answer. The research team also used standardised instructions (see appendix H) to ensure that everything was the same for every participant. To randomise

the conditions for every participant the two types of answer sheet were in a mixed-up randomised pile.

Participants

The participants used in this experiment were 55 pupils from a Scottish high school. All participants were over 16 years old. 16 participants took part in the experiment, 8 in condition A and 8 in condition B. The sampling method used in this experiment was opportunity sampling, this is a quick and convenient method of sampling which ensures that participants are willing to participate and give consent. The research team found pupils that were available in the school.

All participants involved in the experiment were 16 years old. There were 14 males and 2 females, 7 males and 1 female in condition A and 7 males and 1 female in condition B. All participants were naïve because they were not in the psychology class and therefore did not know what the experiment was about.

Materials

For the experiment the research team used two types of answer forms, a false high estimate form, with 5 false estimates on it, and a blank form with no false estimates. The research team also used a glass jar with 49 sweets in it for the experiment (see appendix C). When the participants entered the experiment, they were given a consent form which they had to sign to consent to the experiment and confirm that they are over 16. The consent form (see appendix D) informed them briefly about the experiment and told them they could withdraw at any point. After the experiment the participants were given a debrief form (see appendix E) which explained conformity and what the experiment was about. To ensure the participants were all treated the same by the research team, standardised instructions were used.

Procedure

The research team set up the classroom ready for participants to be brought in. Opportunity sampling was used for this experiment, the research team collected students that were available at the time of the experiment in small groups and had them stand outside of the classroom. The participants were brought into the classroom one at a time where they would be met by two members of the research team and thanked for coming. Only two members of the research team were present for each participant to avoid intimidating participants with too many people. When the participant entered the room, they were welcomed in and sat down, they were then given a consent form, to confirm they were over the age of 16 and their willingness to participate. The research team then showed the participant a jar of sweets for 7 seconds. The jar of sweets was filled with 49 fruitella sweets. The participants were then given an answer sheet, the research team flipped a coin to see which condition they would get to ensure randomisation. They were then asked to write down their estimate guess of the number of sweets in the jar. After they answered they were given a debrief form and thanked for participating. This was repeated with 16 participants. The experiment took approximately 3 minutes per participant to complete.

Ethics

To stick to the BPS ethics code of conduct the research team created a consent form to make sure the participants were over the age of 16 and willing to participate while also letting them know that they can withdraw themselves and their data at any point during or after the experiment. The research team also verbally reminded the participants that they can withdraw at any point.

For confidentiality, all data of the participants' identities were kept anonymous, such as their names and the name of the school the experiment was carried out on.

After the experiment the participants were given a debrief form to inform them about the study and to tell them that conformity is normal and if you conformed or not isn't nothing to be ashamed about, it also said that if they had any questions about the study then they can contact the psychology department. However, because the experiment was guessing the sweets in a jar it was a lighthearted task and it's not likely to offend anyone.

Results

Descriptive statistics were applied to the data, to show the results a mean and a range has been calculated for each condition (See appendix F and G for calculations and raw data). A mean was used because it shows an average among the data. A mean is calculated by adding together all the estimates and dividing that number by the number of estimates, a range is calculated by taking away the lowest guess from the highest guess. The mean of the guessed number of sweets for condition A, the blank form, was 42 and the range was 28. The mean of the guessed number of sweets for condition B, the false estimates form, was 48 and the range was 48. The average number of sweets in the jar guessed by the participants with the false high estimate answer form were higher than the average number of sweets guessed by the participants with the blank answer form. This supports the hypothesis which was, if participants are given a false estimate sheet, then they will conform to the other guesses and guess higher than if they had been given a blank form. Therefore, the null hypothesis has been rejected.

Table 1: The mean of the guessed number of sweets and the range between the answers which show the effect of false estimates on conformity.

Answer Form	Guessed number of sweets in the jar (Mean)	Range between answers
No false estimates (Blank Form)	42	28
False estimates answer Form	48	48

Table 1 shows that the average number of sweets guessed by the participants with the false estimates answer form was 48 and the average number of sweets guessed by the participants with the blank form was 42. The range between the guesses from false

estimates sheet was higher than the range between the guesses from the blank answer form.

Graph 1: The mean of the guessed number of sweets in the jar for each condition. Showing the effect of false estimates on conformity.

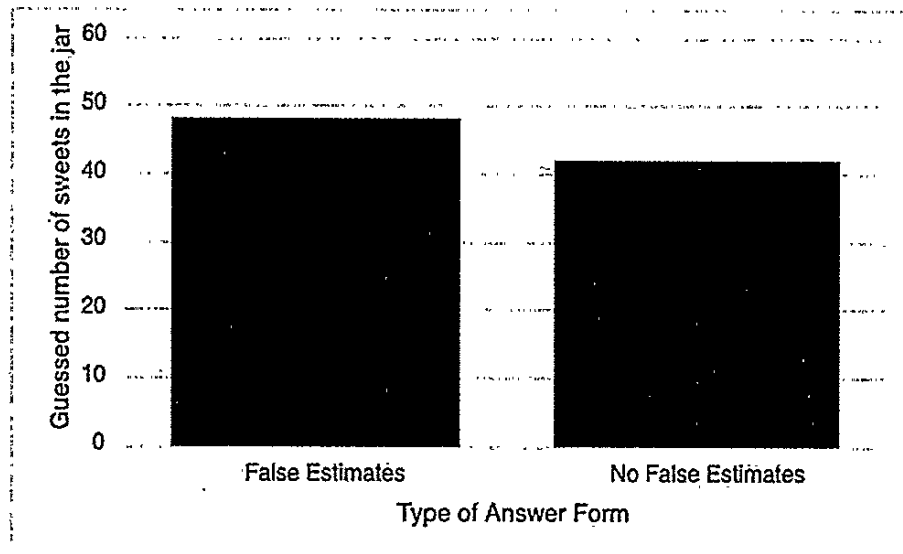


Figure 1 shows the average number of sweets guessed by the participants were higher with the false estimates answer form than it was with the blank answer form, but not by a significant amount.

Discussion

The average number of sweets in the jar guessed by the participants with the false high guesses was 48 which was higher than the average number of sweets guessed by the participants with the blank answer form, this was 42. This supports the hypothesis. However, the results did not have an extreme difference between the blank form guesses and the false estimate form guesses. This could have been because participants did not take much notice of the false estimates, or simply because conformity did not have a big effect on the students. One participant stated "I was going to put 28 until I saw the higher answer, so I changed to 56" this shows that some participants did conform during the experiment. In future studies, participants could be given a questionnaire after to gather qualitative data with questions such as 'did you conform', 'why did you conform'.

Another reason for the conformity levels not being remarkably high could be because the false guesses on the false estimate sheet were so high that they were not believable, and some participants caught on. One participant said, "did you put these high guesses on purpose to change our minds?" A weakness of this experiment could have been the use of big sweets in a small jar. To improve on this for future studies, smaller sweets or a larger jar could be used so that it is more difficult to tell the number of sweets. This

also could have been because it has been so long since the first conformity study, Jenness (1932), so people may be more aware of experiments like this therefore less conformity. At the time of Jenness (1932) and Asch (1951) a lot less people studied psychology, it was mainly studied at university by rich men, whereas now it is taught to many ranges of people including secondary students. This would also explain why the level of conformity is lower than the previous studies.

Another weakness of this experiment was that it was a lab experiment, therefore it lacked ecological validity. Being asked to guess the number of sweets in a jar is not an activity the participants would partake in usually, which means they may act differently and conform more or less in a real-life situation such as answering questions in a classroom. This could mean the results cannot be applied to any real-life situations. Nevertheless, the experiment being a laboratory experiment meant that more extraneous variables could be controlled which makes the experiment easier to repeat.

The experiment had a small sample size. It was only carried out on 55 students, this could mean the results only apply to that year group, or even just those 16 participants because it was such a small sample. To improve this next time, a bigger sample size could be used to ensure a wider variety of results. The sample also had more men than women, which means the results are applied to males. This could have been because of opportunity sampling and the groups of male students that were willing to participate.

Asch 1951 found that 75% of people conformed at least once and 25% of people didn't conform at all, the current experiments results didn't find as high of a level of conformity as Asch. This could have been because of the years they were done in; people may be aware of conformity studies which would make them less likely to conform. Jenness 1932 was claimed an unethical study because of the use of groups, the current experiment didn't use groups to make it a more ethical partial replication.

References

Mori, K. and Arai, M., 2010. No need to fake it: Reproduction of the Asch experiment without confederates. *International Journal of Psychology*, 45(5), pp.390-397.

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Jenness, A., 1932. Social influences the change of opinion. *The Journal of Abnormal and Social Psychology*, 27(1), p.29.

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Appendices

Appendix A

Blank form

GENDER	AGE	
GENDER	AGE	
GENDER	AGE	
GENDER	AGE	
GENDER	AGE	
GENDER	AGE	
GENDER	AGE	
GENDER	AGE	

Appendix B

False high estimate form

GENDER	AGE	
16	M	69
GENDER	AGE	
16	F	72
GENDER	AGE	
17	F	81
GENDER	AGE	
16	M	56
GENDER	AGE	
17	M	78
GENDER	AGE	
16	M	58
GENDER	AGE	
GENDER	AGE	
GENDER	AGE	

Appendix C

Jar of Sweets



Appendix D

Consent form

You are invited to take part in a higher psychology experiment. During the task you will be shown a jar of sweets. You will then be given an answer form and asked to guess the number of sweets in the jar. It will take 1-2 minutes. To participate you must be over 16.

Please tick this box if you are over 16

If you are happy to share age and gender information, please complete the box below

Female Male Other Prefer not to say

16-18 years 19-25 years 26 + years

You can withdraw at any time, and data is anonymized and confidential. There are no known risks.

If you agree with all the conditions above, please sign:

Appendix E

Debrief

Thank you for participating in this experiment, the purpose of this was to see if participants would be influenced by previous guesses and conform to the group norm by giving higher numbers if they were given false guesses before making their decision. During this experiment, a group of participants were given a blank sheet of paper to guess the number of sweets in a jar and the other group were given a sheet of paper with false high number guesses. We expected the numbers to be higher in the group that was shown false answers compared to those guessing on blank paper, this is due to conformity.

Conformity is described as social influence, there are two types of conformity, normative and informational. Normative conformity is when a person changes or adapts certain things such as clothes or hairstyles to fit into the social norm of a group. Informational conformity is when a person changes or adapts to feel correct this is due to the lack of knowledge. There are various levels of conformity such as only conforming with a group and social norm briefly or permanently. Conformity in this experiment is completely expected and natural.

The experiment was inspired by Jenness (1932) which was the first study done on conformity. In this study participants were asked to estimate the number of beans in a glass bottle, the participants were firstly asked individually to estimate the number of beans, they were then put into a group which was then asked to make an estimated decision together. The participants were then offered a second guess where everyone took the opportunity. Jenness found that every individual guess was altered to closer to the group estimate.

Thank you again for participating in our experiment, you were a significant help to our research. We want to reassure you conformity is completely normal, and it is in fact a good thing for people to conform. People want to be right as this leads to rewarding outcomes as well as this, conforming can be good as it can be useful and help people learn a lot about life. Never feel bad about conforming it is completely normal and we all do it all the time! Thank you again for participating. All data is anonymous and held securely.

If you wish to contact anyone about this experiment, please contact the Psychology Department

Appendix F

Calculations

Mean - Blank Form

$$60 + 36 + 37 + 40 + 47 + 42 + 42 + 32$$

$$= 336$$

$$336 \div 8 = 42$$

~~42~~ = 42

Range - Blank Form

$$60 - 32$$

$$= 28$$

50
48
44
35
35
34
82
58

$$= 386$$

$$386 \div 8 = 48.25 \leftarrow \text{mean}$$

$$58 - 34 = 24 \leftarrow \text{range}$$

Appendix G

Raw data

False estimate Form		Blank Form	
Guess	Gender	Guess	Gender
58	M	42	M
82	M	42	M
34	M	47	M
35	M	40	M
35	M	37	F
44	F	36	M
48	M	60	M
50	M	32	M

Appendix H

Standardised Instructions

When the participant enters the room, they will be greeted by the research team and asked to take a seat, they will then be thanked for coming. The participant will then be given a consent form and a member of the research team will say "please fill out this form," the consent form will inform the participants that they can withdraw at any point and the research team will repeat this to them by saying "you can withdraw from this experiment at any point." The research team will then show the participants the jar of sweets and inform them that they have 7 seconds to look at the jar of sweets before being given an answer sheet to write down their estimate number of sweets in the jar. The jar of sweets will then be hidden, and the participant will be given an answer form, either condition A or condition B, and asked to fill out their estimate. After they have written their estimate then they will be given a debrief form and thanked for participating.