

Sample Answer

Discuss research into the validity of exercise and mental health (15 marks)

Internal validity refers to whether the effects observed in a study are due to the manipulation of the independent variable and not some other factor. This means that there is a causal relationship between the independent and dependent variable. Internal validity can be improved by controlling extraneous variables, using standardised procedures, counterbalancing, and eliminating demand characteristics and investigator effects. In contrast external validity refers to the extent to which the results of a study can be generalised to other settings (ecological validity), other people (population validity) and over time (historical/ temporal validity).

The research by Lewis et al (2014) can be said to have high internal validity as there was strict control over the variables and the IV was manipulated to clearly show a difference between the conditions. In the study participants were asked to complete a mood questionnaire after completing both the short and long cycles of dance classes. It was clear from the results that mood scores improved after the intervention showing the benefits of dance in the elderly and those with Parkinson's Disease. This suggests that the findings demonstrate internal validity. Other studies such as Hackney and Earhart (2009) also show the clear benefit of dance on movement control in people with Parkinson's Disease. They too compared different dance styles to a control group by manipulating the type of dance participants completed during the procedure. They found that tango, waltz and foxtrot styles of dance significantly improved people's mood especially when compared to the control group who received no intervention. This shows that the difference in the experimental groups can be due to the manipulation of the independent variable which increases the internal validity of the findings.

When considering the external validity of research into exercise and mental health it is important to look at the sample selected. In the Lewis et al (2014) study there were only 37 participants and only 22 of them were in the experimental group (having Parkinson's Disease). This makes generalisation more difficult. Moreover, they were compared to an even smaller control group of 15, not to mention that participant attrition occurred and a further 7 participants dropped out. This means that the study lacks population validity and restricts the generalisations that can be made to the wider population as it is not a fair representation. Other studies such as Lane and Lovejoy (2002) who studied a group of 80 participants that had attended an exercise class on a regular basis for the previous three months, have more external validity. They stipulated that participants had to have attended a class at least once a week over this period to ensure inclusion for all. This gives their study increased population validity as their findings can be generalised to others who regularly attend exercise classes.

There is also the issue of ecological validity in research into exercise and mental health. Most studies like Lewis et al (2014) were carried out using real dance interventions with genuine instructors. This means that the settings are likely to represent real life and people are likely to act natural whilst taking part in the procedures of the study. However, there is still the risk of bias and demand characteristics as participants were asked to volunteer to take part and may have wanted to impress the researchers. In addition Lima and Vieira (2007) looked at a dance action-research project developed with elderly people in Brazil. At the end of one year taking ballroom dance classes, a group of 60 senior citizens were asked to answer a questionnaire in

order to provide subjective information on the meanings of ballroom dancing and its benefits for them. This study has high ecological validity as the dance classes were carried out in natural environments and the classes were something they wanted to participate in. This study adds to the growing number of dance projects and research for older people, responding in part to evidence that dance is a form of therapy.

