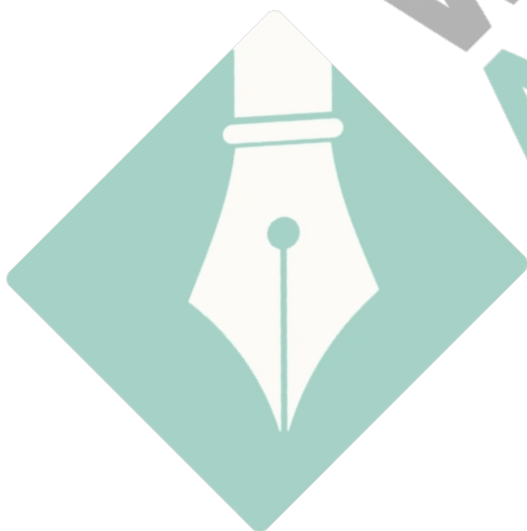


**Remote Module Examination 2023**  
**INVESTIGATING PSYCHOLOGY 2**

**[Student's Name]**

**[Name of Institute]**

**[Date of Submission]**



**Write my  
Assignment**

**‘All psychological perspectives can benefit from the contribution of neuroscience’. Discuss concerning materials from TWO blocks**

Long at the vanguard of scholarly investigation into the subtleties of human emotions, beliefs, and behaviours is the study of psychology. Numerous psychological views have developed over time, offering new insights into a variety of human undertakings (Dubinsky et al., 2019). These perspectives include behavioural psychology, which focuses on observable behaviours and the influences of the environment, and social psychology, which considers how social factors affect both individual and group behaviour. Cognitive psychology focuses on mental processes like perception, memory, and problem-solving. These ideas have had a substantial impact on our understanding of human cognition, social relationships, and the fundamental causes of behaviour (Bandura, 2018). The purpose of this essay is to critically evaluate the literature and explore how the evolution of psychological viewpoints has been significantly influenced by neuroscience.

The psychological perspective on cognition that might most use the assistance of neuroscience is this one. Understanding mental processes including perception, attention, memory, language, and problem-solving is essential to the cognitive perspective. It focuses on how individuals acquire knowledge, create opinions, and construct their worldviews (Bandura, 2018). Researchers can get a better understanding of the brain systems underlying cognitive processes by integrating neuroscience, which improves our understanding of cognition. The cognitive approach has been strengthened and supported by substantial information from neuroscience research (Gibson, 2015). For instance, investigations utilising neuroimaging methods have looked into the brain underpinnings of memory functions. The hippocampus and prefrontal cortex were activated during memory retrieval tasks, according to a study by Rugg and Vilberg (2013). This finding supports the cognitive theory of memory as an ongoing reconstructive process. The cognitive viewpoint is strengthened by this neuroscientific research since it offers neurobiological insights into the fundamental mechanisms of memory. In addition, attention-related neuroscience research is advantageous for the cognitive perspective. According to the cognitive perspective, attention is essential for choosing pertinent information and weeding out extraneous stimuli. Studies in neuroscience have looked into the brain bases of attention using methods like fMRI and EEG. For instance, Pocivavsek and Rowland (2018) used EEG to conduct a significant study in which they identified event-related potentials linked to the processing of attention. This study contributes to

the improvement of the cognitive perspective's comprehension of attentional mechanisms by providing objective measures of attentional processes.

Neuroscience research has expanded our understanding of cognition in addition to challenging it and supporting the cognitive viewpoint. For instance, the cognitive approach has typically prioritised higher-level cognitive functions while generally ignoring the function of emotions (Blount-Hill, 2021; Guo et al., 2019). However, developments in neuroscience have brought attention to how closely cognition and emotion are related. Studies employing functional magnetic resonance imaging (fMRI) have shown that emotional brain areas, such as the amygdala, are involved in cognitive functions like decision-making (Flasbeck et al., 2018). Fields like affective neuroscience, which investigates the relationship between cognition and emotion, have emerged as a result of the fusion of neuroscience with the cognitive perspective. In addition, the cognitive perspective frequently uses behavioural observations and self-report measurements to investigate mental processes. However, neuroscience methods make it possible to study brain activity more precisely and objectively (Cuevas and Dawson, 2022). Broca's area, which is involved in language development, and Wernicke's area, which is involved in language comprehension, are two examples of discrete brain regions involved in different elements of language, according to studies on brain imaging (Cheng and Yu, 2022). By supplying specific brain correlates, this neuroscientific information improves the cognitive perspective's understanding of language processes. Despite these developments, fusing neuroscience and the cognitive perspective presents limitations as well. Neuroimaging techniques can not always adequately represent the complexity of cognitive processes since they only capture a static snapshot of brain activity rather than the dynamic nature of cognition. Additionally, some neuroscientific discoveries may be reductionistic, ignoring the broader cognitive framework in favour of neuronal mechanisms.

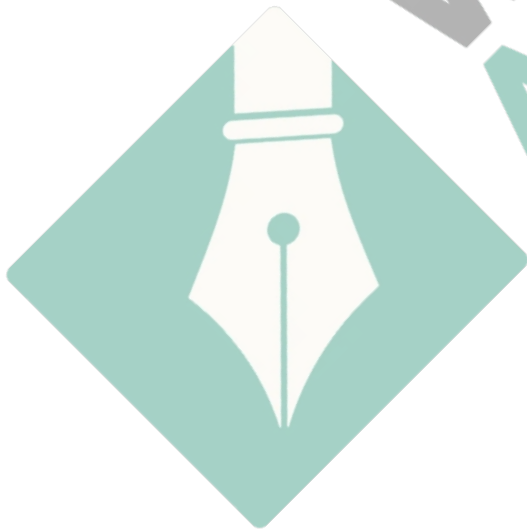
The behavioural perspective is another psychological perspective that can profit from neuroscience's input. According to Burgess et al. (2018), the behavioural perspective focuses on observable behaviours and how they are learned, changed, and influenced by the environment. Researchers can better comprehend the neurological mechanisms underlying behaviour by integrating neuroscience, leading to a better knowledge of the procedures involved in learning, conditioning, and behavioural change (Farina et al., 2020). The behavioural perspective has been strengthened and supported by neuroscientific research that has produced useful evidence. The brain networks involved in reward and reinforcement processes, for instance, have been studied

using animal models and neuroimaging methods. Reward-related learning has been linked to the mesolimbic dopamine system, which comprises the nucleus accumbens and the ventral tegmental region (Whelan et al., 2017). The behavioural perspective is strengthened by these neuroscientific findings because it provides a neurobiological foundation for the reinforcing rules that govern behaviour. The understanding of behavioural problems has also increased as a result of the fusion of neuroscience and the behavioural perspective (Chan et al., 2020; Sachs et al., 2020). Behavioural disorders including addiction, anxiety, and depression are related to changes in brain structure and function, according to neuroscientific research (Iidaka, 2014; Pitcher and Ungerleider, 2021). For instance, research utilising neuroimaging methods has revealed alterations in reward-processing-related brain areas, such as the prefrontal cortex and the amygdala, among addicts (Decety et al., 2014; Rymarczyk et al., 2018). The behavioural perspective is improved by this neuroscientific knowledge because it clarifies the brain correlates and mechanisms that underlie behavioural problems. Even though neuroscience sheds light on the brain underpinnings of behaviour, it does not directly address the intricate interactions between environment and behaviour (Forte et al., 2021). The behavioural approach places a strong emphasis on the role the environment plays in determining behaviour, and it is possible that the contextual influences on behaviour cannot be fully understood by neuroscience alone.

By revealing the brain mechanisms involved in the processing and interpretation of dynamic visual information, neuroscience research has considerably improved the understanding of visual perception for dynamic scenes. Specific brain regions involved in motion perception have been identified in studies using neuroimaging techniques (Urgesi et al., 2017). For instance, Davey et al. (2016) used fMRI studies to pinpoint the middle temporal area (MT) as a crucial area in charge of processing motion. This discovery supports the psychological view of motion perception and offers neurobiological proof of the contribution of MT to the perception and analysis of motion. The brain processes that underlie attention in dynamic scenes have been uncovered by neuroscience research. The parietal brain and frontal eye fields, for instance, are activated during attentional activities, according to research using EEG and fMRI (Brosch et al., 2013). These findings support the allocation of attentional resources to pertinent elements of dynamic situations and add neurobiological support to the psychological perspective on attention. The cerebral processes driving change detection in dynamic settings have been better understood owing to neuroscience. The visual areas of the brain that are involved in encoding and comparing visual

information, for instance, have been linked in studies utilising functional magnetic resonance imaging (fMRI) to change detection (Breakspear, 2017). This neuroscientific evidence supports the psychological theory of change detection and offers a deeper comprehension of the relevant neural mechanisms.

Conclusively, the knowledge of social influence and visual perception of dynamic scenes is much improved by the fusion of neuroscience and psychology perspectives. The neurological mechanisms behind social influence processes including conformity, compliance, and groupthink are better understood due to neuroscience research. It also provides a fuller knowledge of how the brain handles motion perception, attentional mechanisms, and change detection when processing visual data in dynamic settings.



Write my  
Assignment

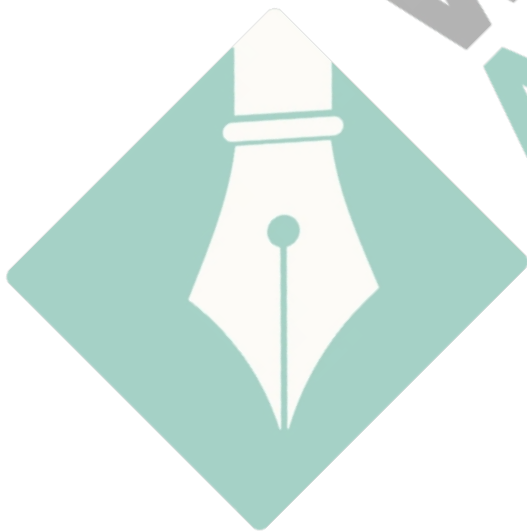
## References

- Bandura, A. (2018) 'Toward a psychology of human agency: Pathways and reflections', *Perspectives on Psychological Science*, 13(2), pp.130-136.
- Blount-Hill, K.L. (2021) 'Exploring a social identity theory of shared narrative: Insights from resident stories of police contact in Newark, New Jersey, and Cleveland, Ohio', *Criminal Justice and Behavior*, 48(6), pp.810-827.
- Breakspear, M. (2017) 'Dynamic models of large-scale brain activity', *Nature Neuroscience*, 20(3), pp.340-352.
- Brosch, T., Scherer, K., Grandjean, D. and Sander, D. (2013) 'The impact of emotion on perception, attention, memory, and decision-making', *Swiss Medical Weekly*, 143(1920), pp.w13786-w13786.
- Burgess, L.G., Riddell, P.M., Fancourt, A. and Murayama, K. (2018) 'The influence of social contagion within education: A motivational perspective', *Mind, Brain, and Education*, 12(4), pp.164-174.
- Chan, H.Y., Smidts, A., Schoots, V.C., Sanfey, A.G. and Boksem, M.A. (2020) 'Decoding dynamic affective responses to naturalistic videos with shared neural patterns', *NeuroImage*, 216, p.116618.
- Cheng, Y. and Yu, Y. (2022) 'K-Means Clustering Algorithm-Based Functional Magnetic Resonance for Evaluation of Regular Hemodialysis on Brain Function of Patients with End-Stage Renal Disease', *Computational and Mathematical Methods in Medicine*, 2022.
- Cuevas, J.A. and Dawson, B.L. (2022) 'The Correlates of Prejudice: Groupthink and Individual Psychological Attributes', In *Handbook of Racism, Xenophobia, and Populism: All Forms of Discrimination in the United States and Around the Globe* (pp. 293-316). Cham: Springer International Publishing.
- Davey, J., Thompson, H.E., Hallam, G., Karapanagiotidis, T., Murphy, C., De Caso, I., Krieger-Redwood, K., Bernhardt, B.C., Smallwood, J. and Jefferies, E. (2016) 'Exploring the role of the posterior middle temporal gyrus in semantic cognition: Integration of anterior temporal lobe with executive processes', *Neuroimage*, 137, pp.165-177.
- Decety, J., Skelly, L., Yoder, K.J. and Kiehl, K.A. (2014) 'Neural processing of dynamic emotional facial expressions in psychopaths', *Social Neuroscience*, 9(1), pp.36-49.

- Dubinsky, J.M., Guzey, S.S., Schwartz, M.S., Roehrig, G., MacNabb, C., Schmied, A., Hinesley, V., Hoelscher, M., Michlin, M., Schmitt, L. and Ellingson, C. (2019) 'Contributions of neuroscience knowledge to teachers and their practice', *The Neuroscientist*, 25(5), pp.394-407.
- Farina, E., Borgnis, F. and Pozzo, T. (2020) 'Mirror neurons and their relationship with neurodegenerative disorders', *Journal of Neuroscience Research*, 98(6), pp.1070-1094.
- Flasbeck, V., Gonzalez-Lienres, C. and Brüne, M. (2018) The brain that feels into others: Toward a neuroscience of empathy. In *The neuroscience of empathy, compassion, and self-compassion* (pp. 23-51). Academic Press.
- Forte, G., Favieri, F., Oliha, E.O., Marotta, A. and Casagrande, M. (2021) 'Anxiety and attentional processes: The role of resting heart rate variability', *Brain Sciences*, 11(4), p.480.
- Gibson, S., 2015. Why do good people do bad things? The psychology of social influence.
- Guo, F., Restubog, S.L.D., Cui, L., Zou, B. and Choi, Y. (2019) 'What determines the entrepreneurial success of academics? Navigating multiple social identities in the hybrid career of academic entrepreneurs', *Journal of Vocational Behavior*, 112, pp.241-254.
- Iidaka, T. (2014) 'Role of the fusiform gyrus and superior temporal sulcus in face perception and recognition: An empirical review', *Japanese Psychological Research*, 56(1), pp.33-45.
- Lin, L.C., Qu, Y. and Telzer, E.H., 2018. Intergroup social influence on emotion processing in the brain. *Proceedings of the National Academy of Sciences*, 115(42), pp.10630-10635.
- Pitcher, D. and Ungerleider, L.G. (2021) 'Evidence for a third visual pathway specialized for social perception', *Trends in Cognitive Sciences*, 25(2), pp.100-110.
- Pocivavsek, A. and Rowland, L.M. (2018) 'Basic neuroscience illuminates causal relationship between sleep and memory: translating to schizophrenia', *Schizophrenia Bulletin*, 44(1), pp.7-14.
- Rymarczyk, K., Żurawski, Ł., Jankowiak-Siuda, K. and Szatkowska, I. (2018) 'Neural correlates of facial mimicry: simultaneous measurements of EMG and BOLD responses during perception of dynamic compared to static facial expressions', *Frontiers in Psychology*, 9, p.52.
- Sachs, M.E., Habibi, A., Damasio, A. and Kaplan, J.T. (2020) 'Dynamic intersubject neural synchronization reflects affective responses to sad music', *NeuroImage*, 218, p.116512.

Urgesi, C., Candidi, M. and Avenanti, A. (2014) 'Neuroanatomical substrates of action perception and understanding: an anatomic likelihood estimation meta-analysis of lesion-symptom mapping studies in brain injured patients', *Frontiers in Human Neuroscience*, 8, p.344.

Whelan, M.E., Morgan, P.S., Sherar, L.B., Orme, M.W. and Esliger, D.W. (2017) 'Can functional magnetic resonance imaging studies help with the optimization of health messaging for lifestyle behavior change? A systematic review', *Preventive Medicine*, 99, pp.185-196.



Write my  
Assignment



**‘Conducting studies that produce data that can be subjected to statistical testing are the only studies worth doing’. Critically evaluate this statement referring to studies drawn from TWO blocks of DE200 to support your argument.**

Numerous approaches are used in psychological research to comprehend and investigate human behaviour and mental processes. Categorically, statistical analysis is a key tool in the discipline, offering insightful information about the connections, discrepancies, and patterns found in quantitative data. Recognising that psychological study goes much beyond statistical analysis is crucial (Sporns, 2014). Psychology covers a wide range of topics and occurrences, and academics employ a range of methods to investigate them (Tafreshi et al., 2016). The argument that "conducting studies that produce data suitable for statistical testing are the only studies worth doing" is subjected to a critical evaluation in this essay by considering the wider range of research procedures used in psychology.

Statistical testing, which involves using mathematical algorithms to evaluate data and find the presence of statistically significant differences or links, is an essential part of psychology research (Borsboom et al., 2021). For instance, correlation analysis enables researchers to look at the connection between two variables. Curtis et al. (2016) used correlation analysis to ascertain the degree and direction of the association between the frequency of exercise and levels of anxiety or depression looking at the connection between exercise and mental health. Similarly, the research by Chinnaswamy et al. (2019) demonstrated that the regression analysis can also be used to determine how elements like study time, sleep quality, and stress levels affect forecasting students' grades in studies on the factors affecting academic success. Researchers can evaluate the efficacy of interventions or therapies using statistical testing. For instance, in clinical psychology, researchers may carry out randomised controlled trials to assess the effect of treatment intervention on outcomes related to mental health. To compare the results between the treatment and control groups and ascertain the success of the intervention, statistical analysis can be used, such as t-tests or analysis of variance (ANOVA) (Mayers, 2013). These tests offer empirical proof of the effectiveness of particular interventions and serve as a tool for clinical practice and healthcare decision-making.

Although there are many benefits to statistical testing in psychological research, there are certain limitations as well. One limitation is that results that are statistically significant might not always have applications. Large amounts of variation within groups or small sample sizes might

occasionally produce substantial results that may not be applicable to or meaningful in real-world circumstances (Miyata et al., 2013). For instance, Zimbardo's famous Stanford Prison Experiment (1971) produced statistically significant results regarding the influence of social roles on behaviour, but ethical issues and methodological flaws have called into question the study's conclusions' applicability in real-world situations (Zimbardo, 2017). Additionally, statistical testing is predicated on ideas that might not always hold true in actual research contexts, such as independence and the normal distribution of data. The validity and generalisability of statistical conclusions may be jeopardised if these presumptions are broken. Genome-wide association studies (GWAS), for instance, have encountered difficulties in the field of genetics since they rely on the independence of genetic markers, which may be violated by genetic linkage or population structure (Visscher et al., 2017).

Researchers frequently use additional research techniques, like qualitative approaches, to get beyond the constraints of statistical testing and get a deeper knowledge of psychological processes. Interviews, observations, and content analysis are just a few examples of qualitative methods that offer valuable insights into people's individualised experiences and perspectives (Kazdin, 2021). For instance, the qualitative study by Sanderson et al. (2021) investigated the lived experiences of people with post-traumatic stress disorder (PTSD), emphasising the unique difficulties they encounter and the coping strategies they use. Such qualitative research offers a greater insight into the lived experiences and intricacies of psychological events, which helps to supplement quantitative findings. Additionally, well-known studies like Milgram's obedience study (1963) and the previously mentioned Stanford Prison Experiment show the necessity of a balanced approach in psychological research (Gibson, 2019). Even though these studies' statistical analyses produced useful quantitative data, later ethical debates and qualitative assessments have been crucial in illuminating the psychological and ethical consequences of these experiments.

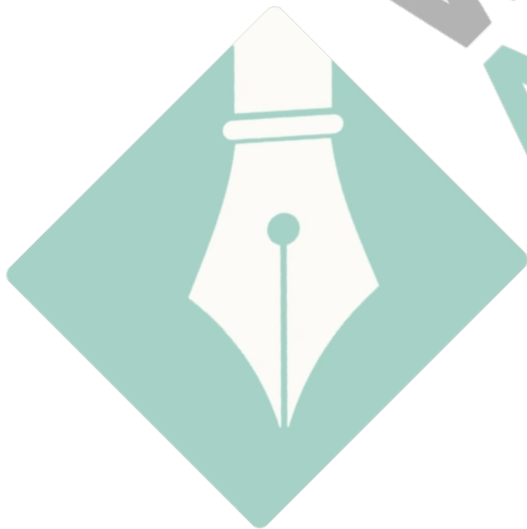
Qualitative research offers an in-depth study of subjective experiences, contextual circumstances, and the complexity of human behaviour, whereas statistical testing offers accurate measurements and permits rigorous hypothesis testing. The qualitative information gathered through interviews demonstrated the complex interplay of variables that affected individuals' behaviour, including personal values, social pressures, and ethical considerations (Gibson, 2020). These results illustrate the multidimensional nature of social influence and give light on the intricacy of deference to authority (Israel, 2014). Using only quantitative approaches may disregard the subjective

sensations and internal dynamics at play in social influence scenarios when compared to earlier studies that mostly focused on statistical testing. This is especially true when comparing Milgram's qualitative research to those studies. The Asch conformity experiments, for instance, focused previous experimental studies on conformity by calculating the proportion of participants that conformed to inaccurate group judgements (Kyriltsias and Michael-Grigoriou, 2018). The participants' emotional experiences or the underlying causes of their behaviour were not fully explored in these studies, despite the fact that they offered insightful information about compliance rates.

On the other hand, qualitative research explores the depth and context of occurrences and offers detailed descriptions that capture subtle meanings. It enables a deeper comprehension of people's viewpoints, drives, and the social and cultural forces shaping their behaviour. Milgram's experiment goes beyond straightforward quantification and statistical studies to capture the intricacy of social influence by using qualitative methodologies. Participants were given the opportunity to reflect on their experiences during the open-ended interviews, which revealed the emotional and mental processes that affected their obedience. This qualitative method improved our comprehension of the psychological influences on social behaviour in people (Kanika, 2015). Qualitative research has its own limitations such as the potential for bias on the part of the researcher when interpreting qualitative data. Due to the subjective nature of the qualitative analysis, the interpretation of participant replies may unintentionally be influenced by the researcher's previous assumptions or personal prejudices. Rigid processes for data collection, processing, and peer review are required to overcome this restriction and improve the validity and dependability of qualitative findings (Queirós et al., 2017). Additionally, smaller sample sizes are frequently used in qualitative research, which may restrict the generalizability of the results (Munthe-Kaas et al., 2019). For instance, Milgram's study only included a limited sample of individuals, so their experiences could not accurately reflect those of the general community (Haslam et al., 2015). In order to comprehend social influence more thoroughly, it is crucial to mix qualitative and quantitative study findings.

Conclusively, the notion that "conducting studies that produce data suitable for statistical testing are the only studies worth doing" oversimplifies the nuanced nature of the psychological inquiry. The idea that only studies with data suitable for statistical testing are worthwhile undertaking ignores the qualitative aspects of human behaviour, favours confirmatory research methods, and

may overlook non-significant discoveries. To increase our understanding of psychological processes, a balanced approach that takes into account qualitative research techniques, considers novel concepts, and acknowledges the limitations of statistical testing is required. It is imperative to acknowledge the relevance of qualitative research in capturing subjective experiences, contextual elements, and nuanced understanding, even as statistical testing is indispensable for analysing quantitative data. A full and holistic understanding of human behaviour is facilitated by combining quantitative and qualitative methods, which leads to more insightful discoveries in the field of psychology.



Write my  
Assignment

## References

- Borsboom, D., Deserno, M.K., Rhemtulla, M., Epskamp, S., Fried, E.I., McNally, R.J., Robinaugh, D.J., Perugini, M., Dalege, J., Costantini, G. and Isvoranu, A.M. (2021) 'Network analysis of multivariate data in psychological science', *Nature Reviews Methods Primers*, 1(1), p.58.
- Chinnaswamy, A., Papa, A., Dezi, L. and Mattiacci, A. (2019) 'Big data visualisation, geographic information systems and decision making in healthcare management', *Management Decision*, 57(8), pp.1937-1959.
- Curtis, E.A., Comiskey, C. and Dempsey, O. (2016) 'Importance and use of correlational research', *Nurse Researcher*, 23(6).
- Gibson, S. (2019) 'Obedience without orders: Expanding social psychology's conception of 'obedience'', *British Journal of Social Psychology*, 58(1), pp.241-259.
- Gibson, S. (2020) 'Milgram's Experiments on Obedience to Authority', In *Oxford Research Encyclopedia of Psychology*.
- Haslam, S.A., Reicher, S.D., Millard, K. and McDonald, R. (2015) 'Happy to have been of service': The Yale archive as a window into the engaged followership of participants in Milgram's 'obedience' experiments', *British Journal of Social Psychology*, 54(1), pp.55-83.
- Israel, M. (2014) *Research ethics and integrity for social scientists: Beyond regulatory compliance*. Sage.
- Kanika, A. (2015) *Research methods: The essential knowledge base*. Cengage learning.
- Kazdin, A.E. (2021) *Research design in clinical psychology*. Cambridge University Press.
- Kyrlitsias, C. and Michael-Grigoriou, D. (2018) 'Asch conformity experiment using immersive virtual reality', *Computer Animation and Virtual Worlds*, 29(5), p.e1804.
- Mayers, A. (2013) *Introduction to statistics and SPSS in psychology*.
- Miyata, S., Noda, A., Iwamoto, K., Kawano, N., Okuda, M. and Ozaki, N. (2013) 'Poor sleep quality impairs cognitive performance in older adults', *Journal of Sleep Research*, 22(5), pp.535-541.
- Munthe-Kaas, H.M., Glenton, C., Booth, A., Noyes, J. and Lewin, S. (2019) 'Systematic mapping of existing tools to appraise methodological strengths and limitations of qualitative

- research: first stage in the development of the CAMELOT tool', *BMC Medical Research Methodology*, 19(1), pp.1-13.
- Queirós, A., Faria, D. and Almeida, F. (2017) 'Strengths and limitations of qualitative and quantitative research methods', *European Journal of Education Studies*.
- Sanderson, C., Lobb, E.A., Mowll, J., Butow, P.N., McGowan, N. and Price, M.A. (2013) 'Signs of post-traumatic stress disorder in caregivers following an expected death: A qualitative study', *Palliative Medicine*, 27(7), pp.625-631.
- Sporns, O. (2014) 'Contributions and challenges for network models in cognitive neuroscience', *Nature Neuroscience*, 17(5), pp.652-660.
- Tafreshi, D., Slaney, K.L. and Neufeld, S.D. (2016) 'Quantification in psychology: critical analysis of an unreflective practice', *Journal of Theoretical and Philosophical Psychology*, 36(4), p.233.
- Visscher, P.M., Wray, N.R., Zhang, Q., Sklar, P., McCarthy, M.I., Brown, M.A. and Yang, J. (2017) '10 years of GWAS discovery: biology, function, and translation', *The American Journal of Human Genetics*, 101(1), pp.5-22.
- Zimbardo, P.G. (2017) On the ethics of intervention in human psychological research: With special reference to the stanford prison experiment. In *Research Ethics* (pp. 353-366). Routledge.

