

# Psychology 2019 v1.3

## Unit 2 annotated bibliography

### Unit 2: Individual behaviour

#### Unit description

In Unit 2, students explore the ways Psychology explains the development of individual behaviour. They will review the concepts underpinning psychological science. An understanding of theories of intelligence is essential to appreciate the role of nature and nurture in the development of self. Students examine diagnosis of psychological disorder, and investigate the effectiveness of various treatment interventions available to support individuals, families and the community. They develop scientific skills and conceptual understanding of the role that emotion plays in regulating and directing behaviour, and motivation in directing action.

Contexts that could be investigated in this unit include the extremes of intelligence, the use of intelligence tests by business in selecting and profiling employees, the importance of peer review in assessing journal articles and the importance of selecting the most appropriate support interventions for individuals, families and communities where psychological disorder is prevalent.

Annotation	Evaluation	Similar/related research
<b>Topic 2: Intelligence</b>		
<b>Bibliographic citation:</b> Gardner, H 2017, <i>Multiple Intelligences</i> , <a href="https://howardgardner.com/multiple-intelligences">https://howardgardner.com/multiple-intelligences</a> .		
<ul style="list-style-type: none"> <li>Howard Gardner is an American developmental psychologist who is a professor of cognition and education at the Harvard Graduate School of Education. He is best known for his theory of multiple intelligences.</li> <li>The <i>Multiple Intelligences</i> website details Gardner's work on multiple intelligences theory and includes               <ul style="list-style-type: none"> <li>frequently asked questions</li> <li>extracts from the 2011 re-release of his book <i>Frames of Mind</i></li> <li>papers on various topics, including 'Multimedia and multiple intelligences' and 'MI after twenty years'</li> <li>information about other books written by Gardner on multiple intelligences theories.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>This website               <ul style="list-style-type: none"> <li>is written for a wide audience; however, the research papers are written for an academic audience, so depending on the type of content accessed by students, scaffolding may be needed</li> <li>was created by Howard Gardner, and includes free resources for teachers and students on multiple intelligences and other cognitive behavioural theories</li> <li>could be used to compare multiple intelligences, information-processing and emotional intelligence theories of intelligence.</li> </ul> </li> </ul>	—
<b>Bibliographic citation:</b> Bouchard, TJ, Lykken, DT, McGue, M, Segal, NL & Tellegen, A 1990, 'Sources of human psychological differences: The Minnesota study of twins reared apart', <i>Science</i> , New Series, vol. 250, no. 4978, pp. 223–228.		
<ul style="list-style-type: none"> <li>Thomas Bouchard, the lead author for this study, is a professor emeritus of psychology and director of the Minnesota Centre for Twin and Adoption Research at the University of Minnesota. Bouchard's longitudinal studies (since 1979) of twins reared apart are world-renowned. This article is a literature review of this work and other research from investigating monozygotic (MZ) (identical) twins reared apart.</li> <li>The sample consisted of over 100 sets of twins or triplets from across the USA, UK and other regions of the world. The participant recruitment method was usually by 'snowball sampling', in which twins reared apart are brought to the study by friends, relatives or members of the adoption movement. The sample consisted of adult twins who were separated very early in life, reared apart during their formative years and reunited as adults.</li> <li>A correlational research design was used. Twins completed approximately 50 hours of medical and psychological assessment. A systematic assessment of twins' rearing environment was also undertaken to identify any causal elements (e.g. abuse) that may have led to differences in psychological development.</li> <li>Similar to smaller prior studies on MZ twins reared apart (MZA), this review found that about 70% of the variance in intelligence quotient (IQ) was associated with genetic variation. On multiple measures of personality and temperament, occupational and leisure interests, and social attitudes, MZA were about as similar as MZ twins reared together (MZT).</li> <li>The researchers concluded that there is evidence for strong heritability of most psychological traits, but that this does not detract from the value and importance of parenting, education and other interventions.</li> </ul>	<ul style="list-style-type: none"> <li>Although there are some technical terms about genetic heritability in this paper, in general it is quite readable.</li> <li>The reliability of this review is high, as it is based on years of research on MZA and MZT. The relatively large sample size also increases the reliability of the correlational results. The findings, however, do not support the findings of other literature, which estimates IQ to have correlations of approximately 0.50 to 0.60.</li> <li>The limitations of this study include the following.               <ul style="list-style-type: none"> <li>It uses a correlational research design, so cause and effect cannot be established.</li> <li>The sample consists of mainly USA and UK participants, so generalising outside this population should be done with caution.</li> </ul> </li> <li>This study               <ul style="list-style-type: none"> <li>could be used when discussing the nature vs. nurture debate.</li> <li>provides evidence for the extent to which intelligences are inherited.</li> </ul> </li> </ul>	—

Annotation	Evaluation	Similar/related research
<p><b>Bibliographic citation:</b> Plomin, R, Fulker, DW, Corley, R &amp; DeFries, JC 1997, 'Nature, nurture, and cognitive development from 1 to 16 years: A parent-offspring adoption study', <i>Psychological Science</i>, vol. 8, no. 6, pp. 442–447, <a href="http://www.jstor.org/stable/40063231">www.jstor.org/stable/40063231</a>.</p> <ul style="list-style-type: none"> <li>• Robert Plomin is part of the Social Genetics and Developmental Psychiatry Research Centre in London. His research mainly focuses on the factors that can affect the process of cognitive development.</li> <li>• This 20-year longitudinal study investigated the cognitive development of children living with their biological parents and children living in an adoptive home environment. Researchers sought to determine whether children's cognitive development follows that of their biological and/or their adoptive parents. In other words, this research investigated whether nature or nurture has a greater part to play in cognitive development.</li> <li>• The research method used was quasi-experimental, as there was no formally independent variable manipulated. The participants were 245 adopted children and their biological and adoptive parents and 245 matched non-adopted children and their parents (control). The participants were interviewed and standardised psychometric tests (such as IQ tests) were administered.</li> <li>• The results showed that IQ and other cognitive measures were similar between adoptive children and adoptive parents in early childhood, but that in later childhood and adolescence, the cognitive development followed that of the biological parents and was less like that of the adoptive parents. The cognitive abilities studied included recall memory, spatial awareness and mental processing reaction times. It was also found that in adolescence, the similarities between adoptive child and biological parents decreased slightly.</li> <li>• The authors concluded that although genetics (biological factors) have a part to play in the cognitive development of a child, the environment they live in also needs to be considered when studying cognitive development.</li> </ul>	<ul style="list-style-type: none"> <li>• The reliability of this study is high, as there were 490 child participants. This reliability is increased due to it being a longitudinal study (20 years), as all participants were followed through the years of development (1–16 years of age).</li> <li>• The study also has high reliability due to the use of standardised testing instruments. And the instruments are standardised against thousands of participants from a variety of cultures, giving them strong validity.</li> <li>• The limitations of the study include environmental factors and other social influences that were not controlled, e.g. social constructs (schooling) and life events (divorce, deaths) that could affect cognitive development.</li> <li>• This study provides further evidence of the extent to which intelligences are inherited.</li> </ul>	<p>—</p>
<p><b>Bibliographic citation:</b> Bastian, VA, Burns, NR, &amp; Nettelbeck, T 2005, 'Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities', <i>Personality and Individual Differences</i>, vol. 39 no. 6, pp. 1135–1145, <a href="https://doi.org/10.1016/j.paid.2005.04.006">doi:10/1016/j.paid.2005.04.006</a>.</p> <ul style="list-style-type: none"> <li>• The authors of this article specialise in emotional intelligence, cognitive ability and life satisfaction research, and are based at the University of Adelaide. As a result of previous research in these areas, it was believed that emotions may moderate intelligent behaviour by influencing an individual's reaction to, and interpretation of, information.</li> <li>• It has been suggested that high emotional intelligence (EI) might be a predictor of increased life satisfaction. As such, this study aimed to test whether EI can be used to predict real-life outcomes after controlling for the influence of cognitive abilities and personality.</li> <li>• Researchers used convenience sampling to recruit 246 first-year Psychology students from 16 to 39 years old. The study used a correlational research method. All participants completed a battery of 10 tests assessing EI, cognitive abilities, personality and life skills (e.g. academic achievement, life satisfaction, anxiety, problem-solving and coping ability) in groups of up to six people. Higher total scores on the tests indicated a higher EI.</li> <li>• Correlations between EI and life skills indicated that those with higher EI had higher life satisfaction, problem-solving and coping abilities, and lower anxiety. However, further analysis indicated that the predictive validity of EI for life skills was small (up to 6%). Additionally, correlations between EI and academic achievement were not statistically significant.</li> <li>• The researchers judged that, since EI is a relatively new measure, more research should be conducted before further conclusions can be drawn.</li> </ul>	<ul style="list-style-type: none"> <li>• This study <ul style="list-style-type: none"> <li>– is accessible to a student audience</li> <li>– is open to bias, due to the use of self-reporting measures of life skills, reducing the reliability of the findings</li> <li>– is limited in that <ul style="list-style-type: none"> <li>▪ EI is a new concept and, therefore, instruments measuring EI have not had sufficient scrutiny for researchers to be confident of their validity</li> <li>▪ the use of a sample of first-year Psychology students decreases the population validity of the research, as the sample is not very diverse and does not necessarily represent the variety of people in a given population.</li> </ul> </li> </ul> </li> <li>• This study could be used to <ul style="list-style-type: none"> <li>– teach correlational research methods to students as part of 'key skills in Psychology'</li> <li>– compare the multiple intelligences (Gardner 2017), information-processing and emotional intelligence theories of intelligence.</li> </ul> </li> </ul>	<p>—</p>
<p><b>Topic 3: Diagnosis</b></p>		
<p><b>Bibliographic citation:</b> Rosenhan, DL 1973, 'On being sane in insane places', <i>Science</i>, vol. 179, no. 4070, pp. 250–258, doi:10.1126/science.179.4070.250, <a href="http://science.sciencemag.org/content/179/4070/250">http://science.sciencemag.org/content/179/4070/250</a>.</p>		
<ul style="list-style-type: none"> <li>• David Rosenhan is a US psychologist who became famous on publication of this study for challenging the validity of psychiatric diagnoses.</li> <li>• The study consisted of two natural experiments. The first used a sample of eight pseudo patients (three women, five men). The pseudo patients presented at hospitals in different states on the east and west coasts of the USA.</li> <li>• On arrival at hospital, all pseudo patients presented with the same symptoms. They complained of hearing voices; specifically, they could hear the words 'empty', 'hollow' and 'thud'. They said the voices were unfamiliar to them, but the same sex as they were. Beyond alleging the symptoms and falsifying their name, vocation and employment, no further alterations of person, history or circumstances were made.</li> <li>• Seven of the eight pseudo patients were admitted to hospital with a diagnosis of schizophrenia. Following admission, all pseudo patients behaved normally. They spent time writing observations of their experience, without questions from hospital staff. The pseudo patients were all discharged with a diagnosis of schizophrenia 'in remission'. The length of admission ranged from seven to 52 days, with an average length of 19 days.</li> <li>• Rosenhan concluded that diagnosis of psychological disorders lacks validity, because psychiatrists could not distinguish between sanity and insanity, shown by the fact that all but one of the pseudo patients were admitted to hospital and then discharged as being in remission from a simulated condition.</li> </ul>	<ul style="list-style-type: none"> <li>• This article is easy to read and would be appropriate for a student audience.</li> <li>• Rosenhan's research was groundbreaking, as he was one of the first to question the validity of psychiatric diagnosis. It revealed the hierarchy that existed in hospital settings and how de-individualisation of hospitalised patients can contribute to over-diagnosis. It also showed that once a patient has been diagnosed, it was almost impossible to remove the diagnostic labels.</li> <li>• The implications of this study caused extensive debate in the psychiatric community about <ul style="list-style-type: none"> <li>– the effects of diagnostic labels</li> <li>– the environments and attitudes surrounding mental institutions and clinical practice</li> </ul> </li> </ul>	<p>—</p>

Annotation	Evaluation	Similar/related research
<ul style="list-style-type: none"> <li>• After reporting the results of this study to the academic community, staff at a research and teaching hospital in the USA challenged Rosenhan to send further pseudo patients, believing they would be able to correctly diagnose the imposters.</li> <li>• Over the course of three months, judgments were made on 193 patients admitted for psychiatric treatment at the hospital. Of these, 19 were suspected by at least one psychiatrist and one other staff member of being a pseudo patient. In fact, Rosenhan didn't send anyone as a pseudo patient to the hospital.</li> <li>• The findings from this second study further demonstrated the lack of validity in psychiatric diagnosis, as psychiatrists were unable to identify whether all patients were genuine.</li> <li>• This study also discusses the implications of the lack of validity in diagnosis (stigmatisation, powerlessness, depersonalisation, labelling) on patient outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>– ethical practices in psychological research.</li> <li>• The research has several limitations. <ul style="list-style-type: none"> <li>– It used subjective methods of data collection.</li> <li>– Hospitals did not give their approval for the research to take place.</li> <li>– There has been limited release of details (e.g. objective video recordings, psychiatric/nursing reports on patients) about the experiment, so accounts of the treatment of patients are one-sided.</li> <li>– Many researchers have criticised its lack of empirical study.</li> </ul> </li> <li>• This study could be used to discuss the reliability and validity of diagnosis.</li> </ul>	
<p><b>Bibliographic citation:</b> Cooper, JE, Kendell, RE, Gurland, BJ, Sharpe, L, Copeland, JR &amp; Simon, R 1972, 'Psychiatric diagnosis in New York and London: A comparative study of mental hospital admissions', <i>Maudsley Monograph</i>, no. 20, Oxford University Press, London.</p>		
<ul style="list-style-type: none"> <li>• The Cross-National Project for the Study of Diagnosis of the Mental Disorders in the USA and the UK is a large-scale naturalistic research project. It used a combination of real-life patient admissions and experimental manipulation to determine differences in diagnosis between the two nations across several disorders.</li> <li>• This paper focuses on differences observed between hospital admissions for schizophrenia in the USA and the UK. The researchers sought to determine whether there was a real difference in schizophrenia between the countries or simply differences in the use of diagnostic terms by psychiatrists.</li> <li>• The paper details three strategies that were used in this part of the project. <ul style="list-style-type: none"> <li>– Records from recent hospital admissions were examined by project members.</li> <li>– Videos of patients were sent to psychiatrists.</li> <li>– Historical case records were reviewed by psychiatrists for diagnosis.</li> </ul> </li> <li>• The main finding of the work was that psychiatrists in the USA applied the diagnosis of schizophrenia to a much wider variety of clinical conditions than their colleagues in the UK and project members. There were also differences observed between how males and females with the same symptoms were diagnosed.</li> <li>• The paper concluded that <ul style="list-style-type: none"> <li>– diagnosis of mental disorders generally lacks reliability</li> <li>– it is unclear whether the difference between the countries is due to the patients or the psychiatrists, but is more than likely the latter.</li> </ul> </li> <li>• To improve the reliability of diagnosis, the paper recommends the use of highly structured interviews and further training of psychiatrists in making clinical judgments.</li> </ul>	<ul style="list-style-type: none"> <li>• This paper is written for the professional psychiatric community and uses language that is discipline-specific.</li> <li>• The work undertaken in this project was extensive. The use of a naturalistic experimental methodology increases the ecological and population validity of the conclusions. The research also used a large sample of patients and psychiatrists, further increasing the reliability of the findings.</li> <li>• In most instances, the experiment was well controlled, with measures of inter-rater reliability taken and standard classification manuals used (the World Health Organisation's <i>International Classification of Diseases</i>, 1967, and Britain's <i>Glossary of Mental Disorders</i>, 1968).</li> <li>• The limitations of the project are that <ul style="list-style-type: none"> <li>– some aspects of it were not well controlled, e.g. in the video section, psychiatrists were not monitored in how they made a diagnosis, which may have led to unreliable results</li> <li>– there was no agreed diagnosis for any of the patients, so it is difficult to determine the validity of any of the diagnoses made.</li> </ul> </li> <li>• This study could be used to discuss the reliability and validity of diagnosis.</li> </ul>	
<p><b>Bibliographic citation:</b> Mitchell, AJ, Vaze, A &amp; Rao, S 2009, 'Clinical diagnosis of depression in primary care: A meta-analysis', <i>The Lancet</i>, vol. 374, no. 9690, pp. 609–619, doi:10.1016/s0140-6736(09)60879-5, <a href="http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60879-5/fulltext">www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60879-5/fulltext</a>.</p>		
<ul style="list-style-type: none"> <li>• Alex Mitchell and his colleagues are part of the Leicestershire Partnership Trust in the UK.</li> <li>• This study aimed to investigate the accuracy (reliability) of the diagnosis of depression. It used a meta-analysis research design. Researchers reviewed literature that used a structured or semi-structured interview to diagnose depression. Of 118 studies reviewed as part of the meta-analysis, 41 studies were found to be appropriate. Total participant numbers were over 50 000.</li> <li>• The results found that <ul style="list-style-type: none"> <li>– 47.3% of patients had been correctly diagnosed with depression</li> <li>– in primary care, there tended to be a high rate of false positive diagnosis (approximately 15% of patients)</li> <li>– approximately 10% of patients were misdiagnosed with depression</li> <li>– follow-up appointments resulted in increased diagnosis accuracy.</li> </ul> </li> <li>• The researchers concluded that re-assessment is an important part of diagnosis, because without it, the rate of misdiagnosis was high.</li> </ul>	<ul style="list-style-type: none"> <li>• This meta-analysis used over 40 studies and 50 000 participants, which increases the reliability of the study in establishing the accuracy of interviews as a means of diagnosis.</li> <li>• The limitations of using a meta-analysis are that the accuracy and power of the statistics in each of the studies investigated cannot be confirmed, causing issues with validity. However, the high sample size improves the validity of the findings.</li> <li>• This study is an objective view of diagnosis using qualitative research techniques. It shows that diagnostic manuals are not always necessary and that qualitative research methods can also be used.</li> <li>• This study could be used to discuss the reliability and validity of diagnosis.</li> </ul>	—

Annotation	Evaluation	Similar/related research
<b>Topic 4: Psychological disorders and treatments</b>		
<b>Bibliographic citation:</b> Engel, GL 1980, 'The clinical application of the biopsychosocial model', <i>American Journal of Psychiatry</i> , vol. 137, no. 5, pp. 535–544, doi:10.1176/ajp.137.5.535.		
<ul style="list-style-type: none"> <li>• George Engel was an American psychiatrist who spent most of his career at the University of Rochester Medical Center (URMC) in New York. He is best known for his construction of the biopsychosocial model of illness and healing.</li> <li>• At the time of this paper's publication, the dominant model used by healthcare practitioners for patient diagnosis and care was the biomedical model. This model looks solely at physiological factors in medical diagnosis, and ignores possible psychological and social causes. The most notable flaw of this model is its reductionist approach to patient care, i.e. not considering psychological and social factors.</li> <li>• The biopsychosocial model proposed by Engel also considers how a patient's illness may stem from physiological dysfunction, but also considers <ul style="list-style-type: none"> <li>– potential psychological factors, such as lack of self-control, emotional trauma and negative thinking</li> <li>– how different social factors, such as socioeconomic status, culture, technology and religion, may lead to illness and influence health outcomes.</li> </ul> </li> <li>• The biopsychosocial model is described as a 'systems approach', because the model sees the person as a component of higher systems. Typically, the person sits in the middle of a system in which all layers (e.g. family, community, nervous system, tissues, cells) are interlinked and interdependent.</li> <li>• This paper describes the biopsychosocial model through its use and applicability in enhancing the treatment of one patient. The patient, Mr Glover (a pseudonym), was a married, 55-year-old real estate salesman who was brought to the URMC emergency department with symptoms similar to symptoms he had experienced six months earlier, when he was diagnosed as having had a myocardial infarction (heart attack). Mr Glover's second visit was reconstructed based on post-treatment interviews. Each experience is presented through the lens of the biopsychosocial model. The paper identifies a number of flaws in Mr Glover's treatment, which are attributed to the failings of the use of the biomedical model during his admission.</li> <li>• The paper <ul style="list-style-type: none"> <li>– asserts the advantages of the biopsychosocial model in providing a conceptual framework of thinking that enables the physician to become more informed and skilful in psychosocial areas</li> <li>– counteracts the reductionist approach of the biomedical model in terms of the determinants of illness.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• This paper <ul style="list-style-type: none"> <li>– is written in academic language, but the figures provide good visual cues to assist understanding of the systems approach asserted in the model</li> <li>– promotes the clinical application of the biopsychosocial model by using a patient experience to demonstrate its effective use by physicians</li> <li>– demonstrates bias toward the biopsychosocial model over the biomedical model, mainly presenting strengths of the former and weaknesses of the latter</li> <li>– was published in 1980, so it lacks historical validity.</li> </ul> </li> <li>• The patient story is used as a commentary through which the model is examined, so does not provide evidence for the advantages of one model over another.</li> <li>• This paper could be used to describe the biopsychosocial approach to understanding psychological disorders.</li> </ul>	—
<b>Bibliographic citation:</b> Jorm, AF, Patten, SB, Brugha, TS & Mojtabai, R 2017, 'Has increased provision of treatment reduced the prevalence of common mental disorders? Review of the evidence from four countries', <i>World Psychiatry</i> , vol. 16, no. 1, pp. 90–99, doi:10.1002/wps.20388.		
<ul style="list-style-type: none"> <li>• Anthony Jorm is a researcher at the Melbourne School of Population and Global Health at the University of Melbourne and the lead researcher on this paper. For this study, Jorm and his colleagues reviewed evidence from Australia, Canada, England and the USA to identify whether an increase in the provision of treatment has been associated with a reduction in prevalence of common mental disorders.</li> <li>• The focus was specifically on mood and anxiety disorders in adults, as these disorders are the major source of 'disease burden' (the impact of a health problem as measured by financial cost, mortality, morbidity or other indicators). The papers reviewed were identified by a search in PubMed (an online library of biomedical literature) for studies published from 1990 to 2015. Papers were deemed relevant if they covered time trends in prevalence or treatment of the disorders.</li> <li>• The results showed that the prevalence of mood and anxiety disorders and symptoms had not decreased over time, despite substantial increases in provision of treatment, particularly antidepressants. The paper suggests the possibility that this lack of improvement is due to <ul style="list-style-type: none"> <li>– much of the treatment provided not meeting the minimal standards of clinical practice guidelines</li> <li>– much of the treatment provided not being targeted optimally to those in greatest need</li> <li>– there being a lack of attention to the prevention of common mental disorders.</li> </ul> </li> <li>• Researchers concluded that reducing the prevalence of common mental disorders remains an unsolved challenge for health systems globally, and may require greater attention to the 'quality gap' and 'prevention gap'.</li> </ul>	<ul style="list-style-type: none"> <li>• This research is a literature review.</li> <li>• It provides evidence for the increasing incidence of mental illness in industrialised English-speaking countries.</li> <li>• The methodological process is provided, with explanation of the types of studies that were and were not included in the analysis.</li> <li>• A limitation of the research is that the researchers do not report the sample size of their research, e.g. the number of studies included for each country.</li> <li>• Further limitations include the use of survey methodologies, diagnostic criteria and response rates that vary over time within countries. Much of the data comes from lay diagnostic interviews or self-report symptom questionnaires, rather than standardised clinical interviews.</li> <li>• The comparison research between countries is interesting and students may be particularly interested in the Australian data.</li> <li>• This study could be used to examine the prevalence, symptoms and perceived causes of anxiety disorders.</li> </ul>	—

Annotation	Evaluation	Similar/related research
<p><b>Bibliographic citation:</b> Angermeyer, MC, van der Auwera, S, Carta, MG &amp; Schomerus, G 2017, 'Public attitudes towards psychiatry and psychiatric treatment at the beginning of the 21st century: A systematic review and meta-analysis of population surveys', <i>World Psychiatry</i>, vol. 16, no. 1, pp. 50–61, doi:10.1002/wps.20383.</p> <ul style="list-style-type: none"> <li>• Matthias Angermeyer is the lead researcher on this paper and works for the Center for Public Mental Health, Gosing am Wagram, Austria. This paper is a review and meta-analysis of population studies from around the world examining public attitudes towards various aspects of psychiatric care.</li> <li>• The aim of this research was to investigate public attitudes towards psychiatry and identify the crucial determinants for seeking help for mental illness.</li> <li>• 162 peer-reviewed papers based on population surveys between 2000 and 2015 were reviewed. Specifically, the researchers sought to determine attitudes towards <ul style="list-style-type: none"> <li>– seeking help from a psychiatrist or psychologist</li> <li>– psychiatric medication and psychotherapy</li> <li>– inpatient care.</li> </ul> </li> <li>• The results indicated that general practitioners were preferred for the treatment of depression, while mental health professionals were the most trusted helpers for schizophrenia. Psychotherapy was consistently preferred over medication.</li> <li>• Attitudes to seeking help from psychiatrists or psychologists, medication and psychotherapy, have markedly improved over 25 years. The researchers also found that self-stigma and negative attitudes towards people with mental illness decrease the likelihood of personally considering psychiatric help.</li> <li>• The researchers concluded that the public readily recommends psychiatric help for the treatment of mental disorders and that psychotherapy is the most popular psychiatric treatment.</li> </ul>	<ul style="list-style-type: none"> <li>• This research <ul style="list-style-type: none"> <li>– is comprehensive and included peer-reviewed journal articles published between January 2000 and December 2015</li> <li>– details the methodology clearly, with two researchers reviewing each article, increasing the reliability of the findings.</li> </ul> </li> <li>• Limitations of the research are that <ul style="list-style-type: none"> <li>– all data was self-reported</li> <li>– combining data from numerous studies and measures can be problematic</li> <li>– the conclusions drawn can only be applied to depression and schizophrenia, as researchers were unable to obtain a sufficient number of research reports on other psychological disorders</li> <li>– it only provides public attitudes, which may not be representative of all populations at all times.</li> </ul> </li> <li>• This paper provides an example of a meta-analysis research method. It could be used to <ul style="list-style-type: none"> <li>– describe different methods of data collection used by researchers</li> <li>– evaluate self-report measures</li> <li>– describe the impact of stigma on help-seeking behaviours.</li> </ul> </li> </ul>	<p>—</p>
<p><b>Topic 5: Emotion and motivation</b></p>		
<p><b>Bibliographic citation:</b> Schachter, S &amp; Singer, JE 1962, 'Cognitive, social and physiological determinants of emotional state', <i>Psychological Review</i>, vol. 69, no. 5, pp. 379–399, doi:10.1037/h0046234.</p>		
<ul style="list-style-type: none"> <li>• Stanley Schachter was a social psychologist at Columbia University, USA, best known for the development of the two-factor theory of emotion with his colleague Jerome Singer at Pennsylvania State University.</li> <li>• In this experiment, they sought to investigate the two-factor theory of emotion. The theory proposes that emotion arises from a combination of cognition and physiological arousal. They wished to test three hypotheses. <ul style="list-style-type: none"> <li>– If a person experiences a state of arousal for which there is no explanation, they will describe emotions in terms of the cognitions available to them.</li> <li>– If a person experiences a state of arousal with an appropriate explanation, they will be unlikely to describe their emotion in terms of alternative available cognitions.</li> <li>– If a person is put in a situation, they will react emotionally only if they are in a state of physiological arousal.</li> </ul> </li> <li>• The experiment used convenience sampling to recruit 184 male college students. Using an independent groups design, participants were allocated to one of four groups. All participants were told that they were going to be given an injection of Suproxin (a fake vitamin supplement) to test its effects on vision. However, three of the groups actually received an injection of adrenaline, which has side effects including <ul style="list-style-type: none"> <li>– increased blood pressure, heart rate, blood sugar levels and blood flow to the muscles and brain</li> <li>– tremors</li> <li>– flushing</li> <li>– faster breathing.</li> </ul> </li> <li>• These groups were either <ul style="list-style-type: none"> <li>– informed of the correct effects of adrenaline</li> <li>– given no information on side effects</li> <li>– given false information on side effects.</li> </ul> </li> <li>• The fourth group (control) received an injection of saline (no physiological effects) and were given no information on side effects.</li> <li>• To test their hypotheses, researchers manipulated participants' emotional states by putting them into an environment that would either induce euphoria (condition one) or anger (condition two). To do this, the four initial groups were divided into two subgroups. Participants in the euphoria condition (one) played games in the waiting room with a stooge before completing a self-report questionnaire about their mood and physical condition. In the anger condition (two), participants were informed of a delay in the experiment and then asked to answer a questionnaire for 20 minutes while they waited. A stooge was used to induce frustration and anger in research participants by growing querulous and finally raging at the delay and the seemingly long and overly invasive questionnaire. Following this, participants also completed the self-report questionnaire about their mood and physical condition.</li> </ul>	<ul style="list-style-type: none"> <li>• This study challenged previous theoretical beliefs and research by finding that a combination of physiological change (adrenaline) and cognitive labelling (appraisal of the situation) can contribute to changes in emotion.</li> <li>• The paper describes the methodology in detail and is an example of how to conduct an observational study.</li> <li>• The strength of the methodology was the use of a control group and an experimental group to determine a cause-and-effect relationship.</li> <li>• However, this experiment has several limitations. <ul style="list-style-type: none"> <li>– Conclusions about the participants' emotional state, and interpretation of that state, were measured subjectively using observation and self-report. These methods are open to bias, although two observers were used, with high inter-rater reliability (88%). The only objective measure used to indicate arousal was pulse rate before and after injection.</li> <li>– The experiment had low ecological validity as it was performed in a highly artificial environment.</li> <li>– It has been argued that this experiment was unethical, as participants were injected with an unknown substance, and induced to feel anger and potentially act aggressively.</li> </ul> </li> <li>• This experiment supported the two-factor theory of emotion put forward by Schachter and Singer, and led to further research into the role of attributions (cognitive labelling) in emotions.</li> <li>• This paper could be used to compare the two-factor and appraisal theories of emotion.</li> </ul>	<ul style="list-style-type: none"> <li>• Lazarus, RS 1991, 'Progress on a cognitive-motivational-relational theory of emotion', <i>American Psychologist</i>, vol. 46, no. 8, pp. 819–834, doi:10.1037/0003-066X.46.8.819.</li> <li>• Speisman, JC, Lazarus, RS, Mordkoff, AM &amp; Davison, LA 1964, 'Experimental reduction of stress based on ego-defense theory', <i>Journal of Abnormal Psychology</i>, vol. 68, no. 4, pp. 367–380, doi:10/1037/h0048936.</li> </ul>

Annotation	Evaluation	Similar/related research
<ul style="list-style-type: none"> <li>To measure the effects of the adrenaline and emotional conditions on participants, researchers also used observational techniques.</li> <li>The results of the experiment were <ul style="list-style-type: none"> <li>Participants who were informed of the true effects of the injection (adrenaline) showed minimal changes in emotion in either the euphoria or anger conditions. Researchers explained that this was likely because they had an accurate explanation for their emotions (the effects of the adrenaline).</li> <li>Participants who were given no information, or given false information, showed much higher changes in emotion in both the euphoria and anger conditions. Researchers explained that this was likely because they had no explanation for their feelings of physiological arousal.</li> <li>Interestingly, the control group, who were injected with saline, had the second-highest reports of anger.</li> </ul> </li> <li>Overall, researchers concluded that a process of cognitive labelling is the interpretation of physiological cues combined with contextual cues to construct a person's subjective experience of emotion.</li> </ul>		
<p><b>Bibliographic citation:</b> Lazarus, RS 1982, 'Thoughts on the relations between emotion and cognition', <i>American Psychologist</i>, vol. 37, no. 9, pp. 1019–1024, doi:10.1037/0003-066X.37.9.1019, <a href="http://gruberpeplab.com/3131/Lazarus_1982.pdf">http://gruberpeplab.com/3131/Lazarus_1982.pdf</a>.</p>		
<ul style="list-style-type: none"> <li>Richard Lazarus was a prominent psychologist renowned for his cognitive-mediational theory of emotion. At the heart of Lazarus's theory was what he called 'appraisal': that before any emotion occurs, people make an automatic, often unconscious cognitive assessment. He believed that emotion is necessary for survival.</li> <li>In this paper, Lazarus argues that thought is necessary for the expression of emotion. He begins by putting forward his theory for the role of cognition (appraisal) in emotion. He asserts that emotion normally includes three components <ul style="list-style-type: none"> <li>cognitions (what we think)</li> <li>actions impulses (what we do)</li> <li>somatic disturbances (how we physically react).</li> </ul> </li> <li>To clarify the debate about the role of cognition in emotion, Lazarus suggests that cognition does not always present as deliberate reflections, rationality or awareness. He asserts that sometimes cognition can be an unconscious reflex that precedes a stimulus. This assertion supports the idea that cognition (appraisal) can come before an expression of emotion. Throughout the paper, Lazarus proposes evidence for his appraisal theory of emotion from <ul style="list-style-type: none"> <li>existing theories of perception</li> <li>developmental and evolutionary psychology research.</li> </ul> </li> <li>The paper determines that some emotions depend more on cognitive activity than others, e.g. there may be less cognition needed for feeling fright than for feeling anxiety. This is particularly true for emotions that require greater symbolism, e.g. anxiety, guilt and indignation. Lazarus uses evidence from developmental psychology to show the co-emergence of these more complex emotions (e.g. anxiety) and a greater symbolic understanding (e.g. experience and knowledge of the world).</li> <li>The paper concludes by asserting that it is time to formulate rules about how cognitive processes generate, influence and shape the emotional response in every species that reacts with emotions.</li> </ul>	<ul style="list-style-type: none"> <li>This paper is written for an academic audience, but many elements are accessible to students.</li> <li>It attempts to assert a theory of emotion and uses evidence from different fields of psychology as support.</li> <li>Very little empirical research is given in support of the theory, limiting its reliability and validity. However, the theory has received research support since publication.</li> <li>The theory is <ul style="list-style-type: none"> <li>not reductionist, as it does not try to reduce emotion to the lowest common denominator and allows for individual experience</li> <li>not deterministic, as it asserts that emotion is built on several complex, individualised rules for expressing behaviour.</li> </ul> </li> <li>This study could be used to compare the two-factor and appraisal theories of emotion. It could also be used as an example of how to put forward a scientific argument.</li> </ul>	
<p><b>Bibliographic citation:</b> Ochsner, KN &amp; Gross, JJ 2008, 'Cognitive emotion regulation: Insights from social cognitive and affective neuroscience', <i>Current Directions in Psychological Science</i>, vol. 17, no. 2, pp. 153–158, doi:10.1111/j.1467-8721.2008.00566.x, <a href="http://journals.sagepub.com/doi/10.1111/j.1467-8721.2008.00566.x">http://journals.sagepub.com/doi/10.1111/j.1467-8721.2008.00566.x</a>.</p>		
<ul style="list-style-type: none"> <li>Kevin Ochsner is a professor and director of graduate studies in the department of psychology at Columbia University, USA. Ochsner's research interests include the psychological and neural processes involved in emotion, self-control and person perception. James Gross is a psychologist best known for his research into emotion and emotion regulation. He is a professor at Stanford University and the director of the Stanford Psychophysiology Laboratory.</li> <li>This study is a review of behavioural and neuroimaging research findings regarding cognitive emotion regulation. The study illustrates how a SCAN approach can extend behavioural research.</li> <li>The SCAN approach involves <ul style="list-style-type: none"> <li>clarifying the temporal dynamics of relevant processes</li> <li>providing tips to break down complex processes into simpler ones</li> <li>relating processes in a given family of strategies to one another</li> <li>distinguishing one group of processes from others not in that group.</li> </ul> </li> <li>In order to investigate this, the study used neuroimaging scans to determine the regions of the brain that were activated when participants were doing a process called 'reappraisal'. Reappraisal involves changing the direction of an emotional response by consciously reinterpreting the meaning of the emotional stimulus.</li> <li>The findings were that <ul style="list-style-type: none"> <li>the prefrontal cortex (PFC) and cingulate regions of the brain are implicated in cognitive control</li> <li>the amygdala and insula are involved in emotional responding.</li> </ul> </li> <li>Some subcortical regions of the brain that were also activated included areas implicated in</li> </ul>	<ul style="list-style-type: none"> <li>This study uses neurologically technical language and is not suitable for students. It could be used to teach theories of emotion and address the biological nature of cognitive appraisal. It references a large number of research studies that have investigated various aspects of cognitive emotion regulation.</li> <li>The study used neuroimaging techniques in highly controlled environments, which increases the validity and reliability of the findings and decreases the chance of other types of error, such as researcher bias and participant expectations.</li> <li>A limitation of the research is that not all of the studies tested specific hypotheses about the functional roles played by discrete brain areas, and so it is unclear whether these brain regions were activated for reasons other than 'reappraisal'.</li> <li>A further limitation is that the theory behind this research is still relatively new, so it cannot be extrapolated to assist in further understanding and treatment of emotional disorders, such as anxiety and depression.</li> <li>This study could be used to explain the biological nature of cognitive appraisal.</li> </ul>	—

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<ul style="list-style-type: none"> <li>- working memory and selective attention (dorsal portions of the PFC)</li> <li>- language or response inhibition (ventral portions of the PFC)</li> <li>- monitoring control processes (dorsal portions of the anterior cingulate cortex (ACC)).</li> <li>• The researchers concluded that different brain areas are activated depending on the type of emotion expressed. They suggested that further work is needed to address specific hypotheses related to understanding emotion–cognition processes.</li> </ul>		
<p><b>Bibliographic citation:</b> Diener, E 1984, 'Subjective well-being', <i>Psychological Bulletin</i>, vol. 95, no. 3, pp. 542–575.</p>		
<ul style="list-style-type: none"> <li>• Ed Diener is a psychologist, professor and author who works at the University of Utah, the University of Virginia and the University of Illinois, USA. He is noted for his research into theories of happiness, including temperament and personality influences on wellbeing.</li> <li>• This paper is a review of literature pertaining to subjective wellbeing (SWB), focusing on measurement, causal factors and theory.</li> <li>• An evaluation of current and emerging single-item and multi-item psychometric scales is given. This includes a discussion of measurement issues for SWB, including the influence of mood state at measurement, whether happiness is considered a state or a trait, and the validity of using self-report measures.</li> <li>• The evaluation concludes by noting that most measures of SWB correlate moderately with each other and have adequate reliability. Diener recommends that further testing of new multi-item scales and non-self-report measures is required to validate findings, such as interviewer ratings, peer ratings, facial coding and other nonverbal measures.</li> <li>• Proposed causal influences on SWB, such as health, social contact, activity, personality and other demographic variables (e.g. age, gender, employment, marriage and family) are discussed.</li> <li>• A number of different theoretical approaches to SWB are presented, including telic theories, associationistic models, activity theories, judgment approaches and top-down vs. bottom-up conceptions.</li> <li>• The review concludes with suggestions about the future directions of SWB research, including the development of more sophisticated theories of happiness and further empirical analysis of current theory.</li> </ul>	<ul style="list-style-type: none"> <li>• This article is written for an academic audience.</li> <li>• Ed Diener is a prolific author in the field of happiness and SWB. This paper reviews some of his previous work, as well as the work of his colleagues.</li> <li>• A strength of the paper is that it makes meaningful recommendations for future research into the area of happiness and subjective wellbeing.</li> <li>• A limitation of the paper is that it was written in 1984, so it lacks historical validity.</li> <li>• This paper could be used to assess the degree to which subjective wellbeing, psychological wellbeing and the broaden-and-build theory influence happiness.</li> <li>• Some sections of the article could be used to add to students' understanding of SWB. The determining factors of SWB could be incorporated into a learning activity.</li> </ul>	—
<p><b>Bibliographic citation:</b> Ryff, CD &amp; Keyes, CLM 1995, 'The structure of psychological well-being revisited', <i>Journal of Personality and Social Psychology</i>, vol. 69, no. 4, pp. 719–727, <a href="http://www.midus.wisc.edu/findings/pdfs/830.pdf">www.midus.wisc.edu/findings/pdfs/830.pdf</a>.</p>		
<ul style="list-style-type: none"> <li>• Carol Ryff is a professor of psychology at the University of Wisconsin–Madison, USA, where she is the director of the Institute on Aging. She is known for her work on psychological wellbeing and psychological resilience. Corey Keyes is a sociologist and psychologist who is known for his work with positive psychology. Keyes currently teaches at Emory University in Georgia, USA.</li> <li>• This paper describes a theoretical model of psychological wellbeing that encompasses six distinct dimensions of wellness. These dimensions include <ul style="list-style-type: none"> <li>- <i>autonomy</i> (a sense of self-determination)</li> <li>- <i>environmental mastery</i> (the capacity to effectively manage one's life and the surrounding world)</li> <li>- <i>personal growth</i> (a sense of continued growth and development as a person)</li> <li>- <i>positive relations with others</i> (the possession of quality relationships with others)</li> <li>- <i>purpose in life</i> (the belief that one's life is purposeful and meaningful)</li> <li>- <i>self-acceptance</i> (positive evaluation of oneself and one's past life).</li> </ul> </li> <li>• To test the theory, researchers used data from a nationally representative sample of 1,108 adults, aged 25 and over, who participated in telephone interviews.</li> <li>• The results of the interviews provided support for the model. It was also found that <i>self-acceptance</i> and <i>environmental mastery</i> were highly correlated, suggesting that they may in fact measure the same thing. However, on further analysis, researchers found distinct age differences <ul style="list-style-type: none"> <li>- <i>environmental mastery</i> tended to increase incrementally with age</li> <li>- <i>self-acceptance</i> tended to stay fairly constant</li> <li>- the <i>personal growth</i> and <i>purpose in life</i> dimensions tended to decrease incrementally with age.</li> </ul> </li> <li>• The researchers concluded that the results <ul style="list-style-type: none"> <li>- provided support to the proposed model of psychological wellbeing</li> <li>- indicated that there is more to being well than feeling happy (positive affect) and being satisfied with life.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The study uses sophisticated statistical language which will make it difficult for students to read.</li> <li>• The study proposed a new theoretical model of psychological wellbeing that challenged previous theories of positive affect and life satisfaction.</li> <li>• A limitation of the research is that the analysis was based on self-report techniques, so was open to participant expectations.</li> <li>• The strength of the research is the use of a large representative sample, increasing the population validity of the results.</li> <li>• This paper could be used to assess the degree to which subjective wellbeing, psychological wellbeing and the broaden-and-build theory influence happiness.</li> <li>• The literature review at the beginning of the article details previous theories of psychological wellbeing, which could be used to add to students' understanding of this area of study in psychology.</li> </ul>	—

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<p><b>Bibliographic citation:</b> Fredrickson, BL 2004, 'The broaden-and-build theory of positive emotions', <i>Philosophical Transactions of the Royal Society B Biological Sciences</i>, vol. 359, no. 1449, pp.1367–1378, doi:10.1098/rstb.2004.1512, <a href="http://rstb.royalsocietypublishing.org/content/359/1449/1367">http://rstb.royalsocietypublishing.org/content/359/1449/1367</a>.</p> <ul style="list-style-type: none"> <li>• Barbara Fredrickson is a professor in the department of psychology at the University of North Carolina, USA. She is a social psychologist whose research focus is emotion and positive psychology.</li> <li>• This article introduces the broaden-and-build theory of positive emotion. This theory argues that positive emotions produce optimal functioning in the present and in the long term.</li> <li>• The article describes the broaden-and-build theory as a subset of positive emotions including joy, interest, contentment and love. It provides an overview of previous research on positive emotion, mentioning that psychological research has historically focused on the negative emotions associated with psychological disorders.</li> <li>• The article uses Lazarus's (1991) theory of emotion as an example of a theory that incorporates a cognitive component and goes some way to describing the formation of positive emotions.</li> <li>• The broaden-and-build theory is outlined: positive emotion broadens momentary thought–action repertoires and builds enduring personal resources. Evidence for this assertion is in the form of a summary of current research findings.</li> <li>• The article concludes that the broaden-and-build theory, together with current research, suggests that positive emotions <ul style="list-style-type: none"> <li>– broaden people's attention and thinking</li> <li>– undo lingering negative emotional arousal</li> <li>– fuel psychological resilience</li> <li>– build consequential personal resources</li> <li>– trigger upward spirals towards greater wellbeing in the future</li> <li>– seed human flourishing.</li> </ul> </li> <li>• Each of these aspects is detailed with empirical research as support.</li> </ul>	<ul style="list-style-type: none"> <li>• This article <ul style="list-style-type: none"> <li>– is easy to understand</li> <li>– clearly states the broaden-and-build theory proposed by Fredrickson</li> <li>– uses empirical research evidence as support.</li> </ul> </li> <li>• The strength of the article is that the literature reviewed is clearly explained and shows support for the theory.</li> <li>• A limitation is that many of the research studies were conducted by Fredrickson herself, which could be seen as problematic due to confirmation bias.</li> <li>• This paper could be used to assess the degree to which subjective wellbeing, psychological wellbeing, and the broaden-and-build theory influence happiness. It could also be used by students in a group or peer teaching activity to unpack different elements of the theory itself.</li> </ul>	<ul style="list-style-type: none"> <li>• Lazarus, RS 1991, <i>Emotion and Adaptation</i>, Oxford University Press, Oxford.</li> <li>• Isen, AM 2000, 'Positive affect and decision making', <i>Handbook of emotions</i>, 2nd edn, pp. 417–435, Guildford, New York.</li> </ul>
<p><b>Bibliographic citation:</b> Nakamura, J &amp; Csikszentmihalyi, M 2002, 'The concept of flow', <i>Oxford Handbook of Positive Psychology</i>, pp. 89–105, Oxford University Press, USA.</p> <ul style="list-style-type: none"> <li>• Jeanne Nakamura is an associate professor in behavioural and organisational sciences at Claremont University, USA. Mihaly Csikszentmihalyi is a professor of psychology and management at Claremont Graduate University, USA. Nakamura and Csikszentmihalyi are founders and co-directors of the Quality of Life Research Center. This centre is a non-profit research institute for positive psychology.</li> <li>• This is a chapter of a book published by Oxford University. It details the concept of flow, which asserts that a good life is one that is characterised by complete absorption in what one does (the 'flow experience'). Flow research seeks to understand the phenomenon of intrinsic motivation — activity that is rewarding in and of itself.</li> <li>• The flow model of optimal experience and optimal development is described, including <ul style="list-style-type: none"> <li>– perceived challenges or opportunities for action that stretch (neither overmatching nor underutilising) existing skills</li> <li>– a sense that one is engaging in challenges at a level appropriate to one's capacities</li> <li>– clear proximal goals and immediate feedback about the progress that is being made.</li> </ul> </li> <li>• The subjective state of flow is characterised by <ul style="list-style-type: none"> <li>– intense and focused concentration on what one is doing in the present moment</li> <li>– merging of action and awareness</li> <li>– loss of reflective self-consciousness</li> <li>– a sense that one can control one's actions</li> <li>– distortion of temporal experience, e.g. a sense that time has passed faster than normal</li> <li>– experience of the activity being intrinsically rewarding, so the end goal is often just an excuse for the process.</li> </ul> </li> <li>• The chapter discusses how flow and related constructs have been measured, and recent work in this area. It identifies promising directions for future research.</li> </ul>	<ul style="list-style-type: none"> <li>• The theory proposed by the researchers uses historical and recent research to support assertions.</li> <li>• The research methods used to measure flow have traditionally included self-report tools, such as interviews and questionnaires. These measures are open to participant bias and limit the reliability and validity of findings.</li> <li>• Recently, the development of the 'experience sampling method' allows participants to report on in-the-moment experiences, increasing the reliability and validity of participant responses, and of conclusions drawn from them.</li> <li>• At the time of publication of the chapter many areas of flow still lacked empirical support. Future research directions encouraged by the writers include <ul style="list-style-type: none"> <li>– looking at the impact of autotelic personality on flow</li> <li>– improving the measurement of flow</li> <li>– determining differences in forms of flow.</li> </ul> </li> <li>• This chapter <ul style="list-style-type: none"> <li>– has implications for learning experiences in school settings, as well as increasing happiness through the pursuit of pleasurable flow experiences</li> <li>– could be used as an example of a qualitative research methodology</li> <li>– could be used to assess the degree to which subjective wellbeing, psychological wellbeing and the broaden-and-build theory influence happiness.</li> </ul> </li> </ul>	<p>—</p>



Annotation	Evaluation	Similar/related research
<p><b>Bibliographic citation:</b> Locke, EA, Shaw, KN, Saari, LM &amp; Latham, GP 1981, 'Goal setting and task performance: 1969–1980', <i>Psychological Bulletin</i>, vol. 90, no. 1, pp. 125–152, doi:10.1037/0033-2909.90.1.125.</p> <ul style="list-style-type: none"> <li>• The authors of this article are from business and psychology departments at the University of Maryland and University of Washington, USA. Their primary research interest is goal setting and whether setting a goal increases performance in tasks.</li> <li>• This study reviews laboratory and observational investigations between the years of 1969 and 1980. These investigations centred on goal setting and task performance.</li> <li>• The findings of the review showed that the clear majority (approximately 90%) of the studies indicated that goal setting improved performance in tasks. Furthermore, the more specific and challenging the goals, the more improvement in task performance.</li> <li>• It was concluded that goal setting is important in the achievement of results for an individual, and that goals should be as specific as possible in order to increase performance.</li> </ul>	<ul style="list-style-type: none"> <li>• This article was a review of previous peer-reviewed studies and is therefore likely to have high reliability.</li> <li>• One of its limitations is that this review focused on dated research (1969–1980) and it is possible that theories of goal setting and types of goal setting have changed over time, decreasing the validity of the conclusions.</li> <li>• The studies used were mainly based on goals assigned by the researchers of each study and neglect to account for self-set goals. This is a major limitation of goal setting research, as individual motivation is essential in gaining a sense of identity.</li> <li>• A strength of this study is that a large time span of research was analysed, which provides a comprehensive review of goal setting and the benefits associated with this behaviour.</li> <li>• This article could be used to evaluate the achievement goal (task orientation and ego orientation), cognitive evaluation (intrinsic and extrinsic motivation), and self-efficacy (outcome expectations and efficacy expectations) theories of motivation.</li> </ul>	<p>—</p>
<p><b>Bibliographic citation:</b> Herral, MM &amp; Tomaka, J 2002, 'Patterns of emotion-specific appraisal, coping and cardiovascular reactivity during an ongoing emotional episode', <i>Journal of Personality and Social Psychology</i>, vol. 83, no. 2, pp. 435–450.</p> <ul style="list-style-type: none"> <li>• Mary Herral and Jon Tomaka are researchers at the University of Texas, USA. They are part of the health sciences department and have a research interest in mental health and the factors associated with emotional response.</li> <li>• This research aimed to investigate <ul style="list-style-type: none"> <li>– if physiological and cognitive perceptions of emotion are an accurate predictor of, or indicator for, reactivity in emotional responses</li> <li>– if certain emotional responses aided or hindered performance.</li> </ul> </li> <li>• 109 participants were recruited and asked to participate in a survey. While conducting the survey, participants were subjected to verbal and non-verbal behaviours from a stooge who elicited pride, anger or shame, or remained neutral.</li> <li>• Measurements that were taken from the participants included <ul style="list-style-type: none"> <li>– heart rate (physiology)</li> <li>– a self-rated self-esteem questionnaire</li> <li>– baseline and post-experiment cognitive appraisal strategies, including emotional coping strategies</li> <li>– emotional reaction surveys.</li> </ul> </li> <li>• The research method used was an independent measures design, because four independent groups with four different emotional triggers (stooges) were used.</li> <li>• The results found that the cognitive appraisal of the emotions for the 'pride' and 'neutral' conditions were vastly different from the 'anger' and 'shame' conditions. Participants in the anger and shame conditions <ul style="list-style-type: none"> <li>– required higher emotion-focused coping strategies when compared with the other two conditions</li> <li>– produced higher physiological readings when compared with the pride and neutral conditions.</li> </ul> </li> <li>• Participants in the pride condition demonstrated increased performance in tasks, while participants in the anger condition demonstrated decreased performance.</li> <li>• The authors concluded that certain emotions can be synthetically created in a laboratory environment and that positive emotions are related to health benefits when compared with negative emotions. This finding has real-life applications in the prevention and treatment of mental health and psychological disorders.</li> </ul>	<ul style="list-style-type: none"> <li>• Due to the self-reported measures in this study, the results are open to bias in the form of participant expectations, limiting their reliability and validity.</li> <li>• The methodology is strengthened through the use of a physiological (objective) measure of arousal, increasing the reliability of the data collected, and because many different aspects of emotional response were investigated on a relatively large number of participants. As such, the conclusions reached are likely to be valid and readily generalisable.</li> <li>• A possible limitation is the use of the stooge. This is because it may have been unclear how the stooge affected the participants and the qualitative measurement.</li> <li>• This study could be used to compare the two-factor and appraisal theories of emotion.</li> </ul>	<p>—</p>

Annotation	Evaluation	Similar/related research
<p><b>Bibliographic citation:</b> Öhman, A, 2000, 'Fear and anxiety: Evolutionary, cognitive and clinical perspectives', <i>Handbook of Emotions</i>, 2nd edn, pp. 573–593, Guildford Press, New York.</p> <ul style="list-style-type: none"> <li>• Arne Öhman has been a key researcher into fear, anxiety and other maladaptive emotions in the past 20 years. Through this research, he has identified many aspects of emotion that have implications for the design of psychological treatments and preventative measures.</li> <li>• This chapter in the book <i>Handbook of Emotions</i> focuses on the key elements that explain the experience of fear and anxiety. Due to the chapter's length, only a brief summary of key points has been given.</li> <li>• In discussing fear and anxiety, Öhman explains <ul style="list-style-type: none"> <li>– the key components, including diagnostic manual specifications</li> <li>– the differences between the two emotions</li> <li>– the different variations of manifestation of both emotions.</li> </ul> </li> <li>• Öhman says fear is generally considered a reaction to something immediate that threatens the security and safety of an individual. Behavioural responses to fear are similar in almost all animals, and often present as a 'fight or flight' response. In contrast to fear, anxiety is a general state of distress that is longer lasting and usually triggered by something that is non-specific, i.e. the exact threat is often unknown. Anxiety produces a similar physiological arousal to fear.</li> <li>• The emotions of fear and anxiety have been measured in research and shown to transform the behaviour of individuals. They may lead a person to avoid situations, or produce defence mechanisms that can obscure the recognition of reality, e.g. anxiety emotions expressed as phobias.</li> <li>• The chapter also describes the role of the unconscious in the development of phobias, and outlines that expectations of a particular situation (situational context) can lead to emotions expressed as fear and anxiety.</li> <li>• Öhman asserts the importance of identifying and understanding the role of expectations, assumptions and attention in the emotional experience of fear and anxiety.</li> </ul>	<ul style="list-style-type: none"> <li>• The language used in this chapter requires an understanding of psychological terminology and theories.</li> <li>• Öhman has published other reviews of the emotions of fear and anxiety, so this is a reliable source when investigating these emotions.</li> <li>• Strengths of the chapter are that it <ul style="list-style-type: none"> <li>– uses many peer-reviewed sources</li> <li>– investigates the emotions of fear and anxiety from a variety of perspectives, including those that have roots in psychoanalytic theory, social psychology and cognitive psychology.</li> </ul> </li> <li>• This chapter gives an in-depth investigation into two specific emotions. It could be used <ul style="list-style-type: none"> <li>– as a link between the psychological disorders covered earlier in this unit and the emotion and motivation topic</li> <li>– to compare the two-factor and appraisal theories of emotion.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Öhman A &amp; Mineka S 2001, 'Fears, phobias and preparedness: Toward an evolved module of fear and fear learning', <i>Psychological Review</i>, vol.108, no. 3, pp. 483–522.</li> </ul>
<p><b>Bibliographic citation:</b> Wager, TD, Davidson, ML, Hughes, BL, Lindquist, MA &amp; Ochsner, KN 2008, 'Prefrontal-subcortical pathways mediating successful emotion regulation', <i>Neuron</i>, vol. 59, no. 6, pp. 1037–1050, <a href="http://www.sciencedirect.com/science/article/pii/S0896627308007538">www.sciencedirect.com/science/article/pii/S0896627308007538</a>.</p> <ul style="list-style-type: none"> <li>• Tor Wager is a professor of psychology and neuroscience at the University of Colorado, USA. Wager and colleagues from the departments of psychology and statistics at Columbia University sought to investigate the specific pathways in the brain responsible for emotion regulation.</li> <li>• The researchers aimed to <ul style="list-style-type: none"> <li>– determine the specific area of the prefrontal cortex involved in the cognitive regulation of emotions</li> <li>– investigate the role of other cortical and subcortical interactions.</li> </ul> </li> <li>• To conduct the study, the researchers recruited 30 right-handed participants. They used an independent groups design, with three groups <ul style="list-style-type: none"> <li>– LookNeu (where participants viewed neutral images)</li> <li>– LookNeg (where participants viewed negative images)</li> <li>– ReappNeg (where participants viewed negative images and were asked to reappraise the emotional value of those images, so that the emotional impact was less negative).</li> </ul> </li> <li>• While participants viewed the images, fMRI scans were taken at different intervals. Participants were then asked to answer the question 'How negative do you feel?' by indicating from 1 to 5 on a rating scale (1 = not at all negative; 5 = extremely negative).</li> <li>• The results showed evidence of a set of prefrontal cortical regions (medial, lateral and orbitofrontal) that, working together, orchestrate reappraisal of the meaning of emotional events.</li> <li>• The researchers concluded that there are two separate pathways linking prefrontal cortical activity <ul style="list-style-type: none"> <li>– one through the nucleus accumbens of the ventral striatum, which may generate positive appraisals</li> <li>– one through the amygdala, which may generate or enhance negative appraisals.</li> </ul> </li> <li>• They suggested that in future research, it may be important to consider each of these functional pathways when examining the role of the frontal subcortical systems in emotion.</li> </ul>	<ul style="list-style-type: none"> <li>• This paper uses highly technical neuroscientific and statistical language that would not be accessible to students. There are a number of fMRI images used throughout that could be used when covering neuroimaging.</li> <li>• The methodology used in this study allowed researchers to draw a cause-and-effect conclusion.</li> <li>• A strength of the methodology is that they used fMRI technology, which is not subject to bias, with participant self-report, enhancing the reliability of the study. Additionally, complex statistical modelling was used to analyse the results, further enhancing the reliability and validity of their findings.</li> <li>• A limitation of the study was the small sample size. Using an independent groups design with only 30 participants means that the study lacks population validity.</li> <li>• This paper could be used to explain the biological nature of cognitive appraisal.</li> </ul>	<p>—</p>

Annotation	Evaluation	Similar/related research
<p><b>Bibliographic citation:</b> Mueller, CM &amp; Dweck, CS 1998, 'Praise for intelligence can undermine children's motivation and performance', <i>Journal of Personality and Social Psychology</i>, vol. 75, no. 1, pp. 33–52, <a href="https://mindscholar.com.au/wp-content/uploads/2016/12/praise-predicts-performance.pdf">https://mindscholar.com.au/wp-content/uploads/2016/12/praise-predicts-performance.pdf</a>.</p> <ul style="list-style-type: none"> <li>• Carole Dweck is known for her work on mindset as a psychological trait. She is currently the Lewis and Virginia Easton professor of psychology at Stanford University, USA. She has previously taught at Columbia University, Harvard University, and the University of Illinois. Claudia Mueller is an assistant professor of paediatric surgery at Stanford University. This research paper was submitted as her PhD dissertation.</li> <li>• The researchers sought to investigate what being praised for intelligence teaches children. At the time of the research, praise for ability was commonly considered to have beneficial effects on motivation.</li> <li>• To investigate this phenomenon, researchers undertook six separate experiments. Using a convenience sampling method, they recruited Year 5 students between the ages of 10 and 12 in the USA.</li> <li>• All children were asked to work on three sets of problems. Researchers used an independent measures design; once students had finished the first set of problems, they were randomly assigned to either the 'ability', 'effort' or 'control' group.</li> <li>• Children's ability on later problems and selection of future learning goals was measured. Participant attributions for perceived success or failure were also measured.</li> <li>• The results showed that participants praised for intelligence were found to care more about performance goals relative to learning goals than children praised for effort. After failure, children in the 'praised for intelligence' condition displayed less persistence, less task enjoyment, more low-ability attributions, and worse task performance than children in the 'praised for effort' condition. Children in the praised for intelligence condition were more likely to describe their performance on the task as a fixed trait. In comparison, children in the praised for effort condition were more likely to believe their performance on the task was subject to improvement.</li> <li>• The researchers stated that these findings have implications for how achievement is best encouraged in children.</li> </ul>	<ul style="list-style-type: none"> <li>• The experimental nature of this research, along with the use of a control group, allowed the researchers to draw cause-and-effect conclusions.</li> <li>• A strength of the methodology is that the research used a double-blind procedure, which limited the potential for experimenter and participant bias.</li> <li>• A limitation of this research is the use of self-report techniques, as they are open to bias and participant expectations, limiting the reliability of the findings.</li> <li>• A further limitation is that by praising intelligence, the participants may have interpreted the task as an intelligence test. This may have affected the participants' ability and rating of later tasks, limiting the validity of the findings.</li> <li>• This paper is an example of an experimental methodology and could be replicated in some ways by students in a practical.</li> <li>• This paper could be used to describe the role of goal setting in motivation.</li> </ul>	<p>—</p>
<p><b>Bibliographic citation:</b> Kesebir, P &amp; Diener, E 2008, 'In pursuit of happiness: Empirical answers to philosophical questions', <i>Perspectives on Psychological Science</i>, vol. 3, no. 2, pp. 117–125.</p> <ul style="list-style-type: none"> <li>• Pelin Kesebir and Ed Diener are researchers at the University of Illinois, USA.</li> <li>• This article provides <ul style="list-style-type: none"> <li>– an overview of claims made about the nature of happiness by various philosophers through the ages</li> <li>– evidence from psychological research to substantiate or refute each of the philosophical claims.</li> </ul> </li> <li>• The researchers also ask key questions about happiness, including <ul style="list-style-type: none"> <li>– 'Can people be happy?'</li> <li>– 'Do people want to be happy?'</li> <li>– 'Should people be happy?'</li> <li>– 'How to be happy?'</li> </ul> </li> <li>• The results indicate that <ul style="list-style-type: none"> <li>– people generally rate themselves as being happy and that 'actual' happiness is attainable (in comparison to 'ideal' happiness)</li> <li>– people rate happiness as something that they find important and that they seek</li> <li>– happiness can lead to better health, work performance and social relationships, and to more ethical behaviour</li> <li>– an adequate amount of money is a necessary condition, albeit not a sufficient one, for happiness</li> <li>– social relationships, religion and personality (e.g. traits such as extraversion, self-esteem, optimism, trust, agreeableness, hardiness) are correlated positively with happiness.</li> </ul> </li> <li>• The researchers suggest that there is still a lot of empirical research to be undertaken to confirm many of the psychological theories of happiness, as well as those put forward by early philosophers.</li> </ul>	<ul style="list-style-type: none"> <li>• This study <ul style="list-style-type: none"> <li>– details several key theories that influence happiness research</li> <li>– provides an account of early philosophical ideas of happiness</li> <li>– provides an overview of current theories of happiness that align with early philosophical ideas, including <ul style="list-style-type: none"> <li>▪ Ryff &amp; Singer's (1996) concept of psychological wellbeing</li> <li>▪ Ryan and Deci's (2000) self-determination theory</li> <li>▪ Fredrickson's (2004) broaden-and-build theory.</li> </ul> </li> </ul> </li> <li>• A limitation of the research is that the theories discussed are relatively new and therefore lack consistent research support. Where research has been conducted, there are very few replication studies, so it is difficult to determine the reliability and validity of the initial findings.</li> <li>• A further limitation is that the measurement of happiness is often conducted as a self-report, which is open to bias and participant expectations.</li> <li>• This paper could be used to <ul style="list-style-type: none"> <li>– describe factors that influence happiness</li> <li>– help students understand the theory of happiness in a holistic sense.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Ryff, CD &amp; Singer, B 1996, 'Psychological well-being: Meaning, measurement, and implications for psychotherapy research', <i>Psychotherapy and Psychosomatics</i>, vol. 65, no. 1, pp. 14–23, doi:10.1159/000289026.</li> <li>• Ryan, RM &amp; Deci, EL 2000, 'Self-determination theory and the facilitation of intrinsic motivation, social development and well-being', <i>American Psychologist</i>, vol.55, no.1, pp. 68–78, <a href="https://selfdeterminationtheory.org/SDT/documents/2000_RyanDeci_SDT.pdf">https://selfdeterminationtheory.org/SDT/documents/2000_RyanDeci_SDT.pdf</a>.</li> </ul>

Annotation	Evaluation	Similar/related research
<p><b>Bibliographic citation:</b> Blanchard, CM, Amiot, CE, Perreault, S, Vallerand, RJ, Provencher, P 2009, 'Cohesiveness, coach's interpersonal style and psychological needs: Their effects on self-determination and athlete's subjective well-being', <i>Psychology of Sport and Exercise</i>, vol. 10, no. 5, pp. 545–551, doi:10/1016/j.psychsport.2009.02.005.</p> <ul style="list-style-type: none"> <li>• Céline Blanchard is a researcher at the University of Ottawa, Canada, whose primary area of research interest is sports psychology and the role motivation plays in sport.</li> <li>• This study aimed to investigate coaching style and its influence on an athlete's perception of autonomy, satisfaction and team spirit.</li> <li>• 197 basketball players from leagues in Quebec City were recruited on a volunteer basis.</li> <li>• The investigation used <ul style="list-style-type: none"> <li>– questionnaires investigating their coach's interpersonal style, group environment satisfaction, and the perception of needs met by relationships</li> <li>– sport motivation scales</li> <li>– a general wellbeing scale.</li> </ul> </li> <li>• These results were then correlated to find if one of these variables could be used to predict the other variables tested.</li> <li>• The results indicated that the <ul style="list-style-type: none"> <li>– higher the satisfaction with the group environment, the higher the perception of needs satisfaction</li> <li>– more controlling the coach's behaviour, the lower the perception of autonomy among the players</li> <li>– factor of psychological needs in the 'needs satisfaction' scale predicted the self-determination and emotional response categories in the wellbeing instrument.</li> </ul> </li> <li>• The researchers concluded that there are many factors that influence sport motivation and these are related to the perception of psychological needs being met.</li> </ul>	<ul style="list-style-type: none"> <li>• A strength of the methodology used is that factors that can affect motivation were identified, and many of these factors are supported by other research.</li> <li>• The research uses a correlational and quasi-experiment design, so a cause-and-effect relationship cannot be established. Even though many factors were found to affect sports motivation, the reliability of this finding cannot be confirmed because conditions were not controlled.</li> <li>• A limitation of the research is that only basketball players from a French-Canadian region were recruited, decreasing the population validity.</li> <li>• Although the study had a relatively large sample size, the use of a self-report method increases the chance of bias in the form of participant expectations, decreasing the reliability of the results.</li> <li>• This research could be used to assess the degree to which subjective wellbeing, psychological wellbeing and the broaden-and-build theory influence happiness.</li> </ul>	<p>—</p>
<p><b>Bibliographic citation:</b> Kimball, AC 2007, "'You signed the line': Collegiate student-athletes' perceptions of autonomy', <i>Psychology of Sport and Exercise</i>, vol. 8, no. 5, pp. 818–835, doi:10.1016/j.psychsport.2007.03.005.</p> <ul style="list-style-type: none"> <li>• Aimee Kimball is a researcher at the Centre for Sports Medicine at the University of Pittsburgh, USA. Her research interests include sport motivation and autonomy in athletes, and goal setting.</li> <li>• This study aimed to investigate whether the perception of autonomy can affect the motivation of athletes in their chosen sport. A qualitative research design in the form of interviews was used to investigate 12 athletes at a university in the USA.</li> <li>• The results found that there were different types of perceived autonomy. Athletes who were able to integrate a sense of autonomy (personal or relationship-based) into their identity as a college athlete were able to have increased satisfaction in their career as a collegiate athlete. Those who perceived a lack of autonomy found motivation in their sport much more difficult and had much less satisfaction in their sport.</li> <li>• It was concluded that autonomy, or the perceived notion of autonomy, is very important to motivation in sport and that this is especially true for athletes competing at a college level.</li> </ul>	<ul style="list-style-type: none"> <li>• As interviews were the sole data collection method, the results are open to participant expectations and possible bias, so the reliability of the conclusions is decreased.</li> <li>• A further limitation is the use of a small sample size (n = 12) and that all participants were from only one university in the USA. Participants were also only from four sports (basketball, football, track and golf), which decreases the reliability of findings within the sports and also the generalisability of the results to other universities.</li> <li>• A strength of the methodology is that the results showed a link between the development of identity and perception of autonomy. This study provides an opportunity for further research into how these two elements are connected. Additionally, the results from the study suggest that if the identity of an athlete is developed, this can change their attitudes towards autonomy.</li> <li>• This research <ul style="list-style-type: none"> <li>– is contemporary and an example of how qualitative research could be used to provide hypotheses for future research</li> <li>– could be used to describe the role of goal setting in motivation.</li> </ul> </li> </ul>	<p>—</p>
<p><b>Bibliographic citation:</b> Schofield, L, Mummery, WK &amp; Schofield, G 2005, 'Effects of a controlled pedometer-intervention trial for low-active adolescent girls', <i>Medicine &amp; Science in Sport &amp; Exercise</i>, vol. 37, no. 8, pp. 1414–1420.</p> <ul style="list-style-type: none"> <li>• Louise Schofield is a researcher in the faculty of health and human performance at Central Queensland University, Australia. Her primary research interests include the impact of exercise and health on motivation and positive emotions in individuals.</li> <li>• This study aimed to investigate goal setting and health-related outcomes in adolescent girls.</li> <li>• 85 participants were recruited and then randomly allocated to one of three groups in an independent measures design <ul style="list-style-type: none"> <li>– a control group (no goals set)</li> <li>– a 'minutes spent walking' group (goal set per day)</li> <li>– a pedometer group (goal for the number of steps taken per day).</li> </ul> </li> <li>• All participants continued in the study for 12 weeks.</li> <li>• The participants were tested on their physical activity before, during and after intervention. Body mass index (BMI) was used as a means of measuring the dependent variable of health.</li> </ul>	<ul style="list-style-type: none"> <li>• Given the use of inferential statistical testing (ANOVA), the reliability of conclusions made about the data is increased. However, given that only a moderately sized sample was used (n = 85), further research should be conducted to confirm results. This is supported by the small effect size reported in the results, which indicates only a small correlation between the variables.</li> <li>• A key limitation of the research is the use of step count as a measure of physical activity, because those in the pedometer group were asked to reach a particular step count, so it was likely that they would score higher in this category than the other two groups due simply to the difference in goals. This may be a confounding variable and not be a true indicator of physical activity.</li> </ul>	<p>—</p>

Annotation	Evaluation	Similar/related research
<ul style="list-style-type: none"> <li>• The results found that               <ul style="list-style-type: none"> <li>– the pedometer group recorded significantly higher physical activity compared to the other two groups</li> <li>– the 'minutes spent walking' group and the pedometer group had higher physical activity at the six-week mark than the control group</li> <li>– there were no statistically significant differences in the BMI recordings between the three groups.</li> </ul> </li> <li>• The authors concluded that               <ul style="list-style-type: none"> <li>– time goals and step goals were useful for short-term interventions and motivation</li> <li>– long-term improvements at 12 weeks were more prominent for the pedometer group, indicating that step goals were more useful for low-activity adolescent girls.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The study could be used to               <ul style="list-style-type: none"> <li>– look at statistical significance and inferential statistics</li> <li>– evaluate the achievement goal (task orientation and ego orientation), cognitive evaluation (intrinsic and extrinsic motivation), and self-efficacy (outcome expectations and efficacy expectations) theories of motivation.</li> </ul> </li> </ul>	