Why one of psychology's greatest heroes is actually a psychiatrist

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Reference: Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An Inventory for Measuring Depression. *Archives of General Psychiatry*, *4*(6), 561–571. http://doi.org/10.1001/archpsyc.1961.01710120031004 - 36129 citations

One characteristic that all the studies we've featured in this year's 7 days of Psychology share is the incredible influence they have had on the field of psychology. They weren't necessarily studies that appealed to the broader population. In fact, some of them are quite dry and difficult to read if you are not psychology trained. But they, and their authors, shaped the discipline of psychology.

Take the article of interest today, "*An Inventory for Measuring Depression*" by Beck, Ward, Mendelson, Mock and Erbaugh from 1961. If you were to read this article with no background in psychology, my guess is you'd find it interesting but relatively unremarkable. You might even be a little underwhelmed.

But this paper has been cited over 36000 times. And its lead author, Aaron Beck, a psychiatrist, holds a very special place in the history of psychology. How did this happen? How did a psychiatrist become one of psychology's greatest heroes.

Let's start by having a look at the paper itself

Beck and colleagues set out to develop a self-report scale for measuring depression.

Depression is a psychiatric illness characterised by a range of behavioural, cognitive, emotional and physical symptoms (Table 1).

Table 1: Common Symptoms of Depression

Behaviour Not going out anymore Not getting things done Withdrawing from family and friends Relying on drugs and alcohol Not doing usual enjoyable activities Difficulty concentrating	**Emotional** Overwhelmed Guilty Irritable Frustrated Lacking in confidence Unhappy Indecisive Disappointed Miserable Sad
Cognitive 'I'm a failure' 'Its my fault' 'Nothing good ever happens to me' 'I'm worthless' 'Life's not worth living' 'People would be better off without me'	**Physical** Tired Sick and run down Headaches and muscle pains Churning gut Sleep problems Loss or change of appetite Significant weight loss or gain

https://www.beyondblue.org.au/the-facts/depression/signs-and-symptoms

In fact, there are different types of depression: major depression, bipolar disorder, cyclothymia, dysthymic disorder, antenatal and postnatal depression, and seasonal affective disorder (*Note: you don't really need to know about these other types for this article*).

Depression is an incredibly serious problem in modern society. Globally more than 300 million people suffer from depression and it is the leading cause of disability worldwide (http://www.who.int/news-room/fact-sheets/detail/depression). It continues to be the focus of a significant amount of research and clinical attention.

The assessment or measurement of depression typically takes one of two forms:

> *Diagnosis* - where the question is "*does this person have depression?*" and doctors and psychologists use established criteria (e.g. those in the Diagnostic and Statistical Manual of Mental Disorders) to make the decision. It is basically a yes/no scenario and therefore doesn't have any real gradient (e.g. severity).

Symptoms and severity - where the questions are "*What symptoms of depression does this person have, and how severe are they?*". In this scenario, doctors and psychologists primarily use self-report questionnaires where the patient reports on their own experiences and symptoms. If a patient indicates they have a lot of symptoms, and they are intense, it would suggest a severe depression. If they indicate only a few symptoms of low intensity, it would suggest a mild depression.

By today's standards, Beck and colleagues' goals of developing a self-report depression scale would seem fairly unremarkable, perhaps even uncalled for. You can go online nowadays and get hold of reasonably decent self-report depression rating scales for free. Doctors, psychiatrists and psychologists have available to them a range of good quality measures to do this job.

But you have to remember that what sets apart the studies we've explored in 7 Days of Psychology this year, is that, for the time they were written, they were groundbreaking. The fact we have many good self-report depression measures nowadays is because of the work of Beck and colleagues in papers like the one we are describing.

You see, back in 1961, we didn't have good diagnostic criteria OR self-report measures of depression. This concerned Beck and colleagues, because if clinicians and researchers were to develop better treatments for depression, there needed to be much better agreement between them on what constituted depression and how to measure it. If everyone described and defined 'depression' in a different way, it would be very hard to contrast and compare different approaches to treating depression. Beck wanted a common language for describing the observable symptoms of depression.

So Beck drew heavily on his experiences of seeing patients for psychotherapy who he believed had depression, to put together a list of the characteristics he believed most accurately characterised individuals with depression. The list of 21 characteristics was as follows:

Mood/sadness
Pessimism
Sense of failure
Lack of satisfaction
Guilty feeling
Sense of punishment
Self-hate
Self accusations
Self punitive wishes
Crying spells
Irritability
Social withdrawal
Indecisiveness
Body image
Work inhibition
Sleep disturbance
Fatigability
Loss of appetite
Weight loss
Somatic preoccupation
Loss of libido

He then developed a rating scale for each of these characteristics that looked like this (using ‘mood/sadness’ as an example):

0 - I do not feel sad
1 - I feel sad
2 - I am sad all the time and I can’t snap out of it
3 - I am so sad and unhappy that I can’t stand it

As you can see, this rating scale allowed patients to report if they had the symptom, and also how severe it was. It meant that a patient who completed the full questionnaire could be described in terms of the symptoms they had, as well as a the severity of those symptoms, based on a score from 0 to 63.

Beck and colleagues administered this questionnaire to 409 new psychiatric outpatients of two local hospitals (a university hospital and metro hospital) who had a variety of psychiatric diagnoses. In addition, each patient was seen by one of four psychiatrists who, after interviewing them, assigned them a diagnosis and ‘depth of depression’ score (none, mild, moderate, severe). These four psychiatrists had met previously to agree on the criteria for the diagnoses and ‘depth of depression’ score.

What did they find?

Well, they found the questionnaire was quite useful.

First, there was strong agreement between a patient’s score on the questionnaire and the ‘depth of depression’ category assigned by the psychiatrist. This might sound unremarkable, but at the time, the opinion of the psychiatrist was paramount. Showing that it was possible to get good agreement between the psychiatrists’ rating of the severity of the patient, and the patient’s own self-rating was incredibly important in validating the idea of patients being able to report accurately on their status.

Second, in a sub-group of patients who were followed up at a later date to see if their condition had changed, any changes in severity as indicated by the questionnaire were matched by the psychiatrists’ ratings on the ‘depth of depression’ scale. That is, there was evidence that the questionnaire was sensitive to change in depression severity.

Third, using some tricky statistics, it was demonstrated that the 21 items of the questionnaire were all measuring a single underlying construct which was hypothesised to be depression [*Basically, if scores on single items reliably predict the total score on the questionnaire, then it is assumed they are measuring something similar*].

These findings, whilst fairly benign by today’s standards, were important at the time of the study.

The findings challenged a reasonably widely held assumption that self-rating questionnaires couldn’t capture accurately the actual functioning of the person, as compared to the more objective rating of a mental health professional. This study showed that self-evaluations could be obtained that were consistent with the total behaviour of the patient as observed by a mental health professional.

But there were other findings in the study that were equally interesting.

For example, the study highlighted that the psychiatrists could not agree, with a high level of accuracy, on the diagnosis of depression in these patients, despite meeting and collectively deciding on a set of criteria. So the questionnaire, which was standardised and could be administered the same way to every single patient, seemed to outshine the inconsistent diagnostic process used by the participating psychiatrists.

Also, they found it was very common for patients who weren't given a diagnosis of depression to still report significant depression symptoms. In fact, only 26% of the patients they questioned didn't have symptoms of depression. We know nowadays that this is definitely the case. Symptoms of depression co-exist with a range of different mental and physical disorders.

Collectively, these findings opened up the serious possibility of using such instruments in clinical practice and research to more accurately and reliably measure depression symptoms, not only in studies of people with diagnosed depression, but other disorders as well. The questionnaire was easy and cheap to administer, generated a numerical outcome that could be compared with other numerical metrics and was able to track improvement or worsening over time. It would be unaffected by the biases of individual mental health professionals. This questionnaire could be really useful.

The impacts of this study

It is probably not much of a surprise to you, by this stage in the article, to learn that the questionnaire described in the study, now known as the 'Beck Depression Inventory (BDI)', went on to become a fixture in psychological and psychiatric research and practice.

In fact, the article describing the revised version of the BDI (which was released in 1996) has over 27000 citations. The BDI is one of the most widely used depression scales in clinical practice and research. It is remarkable as a psychologist now looking back on how comprehensive the first BDI was in terms of describing what we know as depression nowadays. One of its real strengths is that it describes how depression is experienced by the person, in terms of their feelings, beliefs, behaviours and physical symptoms.

But it is not just that the BDI itself is widely used, it is that it is now commonplace for clinicians and researchers to use self-report questionnaires to assess individuals' mental health. Whilst the diagnostic system still remains (and is arguably much better than it was in 1961 when the paper was published), self-report questionnaires are now routinely used to quantify the types and severity of mental illness symptoms experienced by people seeking assistance. They are particularly useful in

measuring change in symptoms over time and, as such, are used in research looking at different treatments.

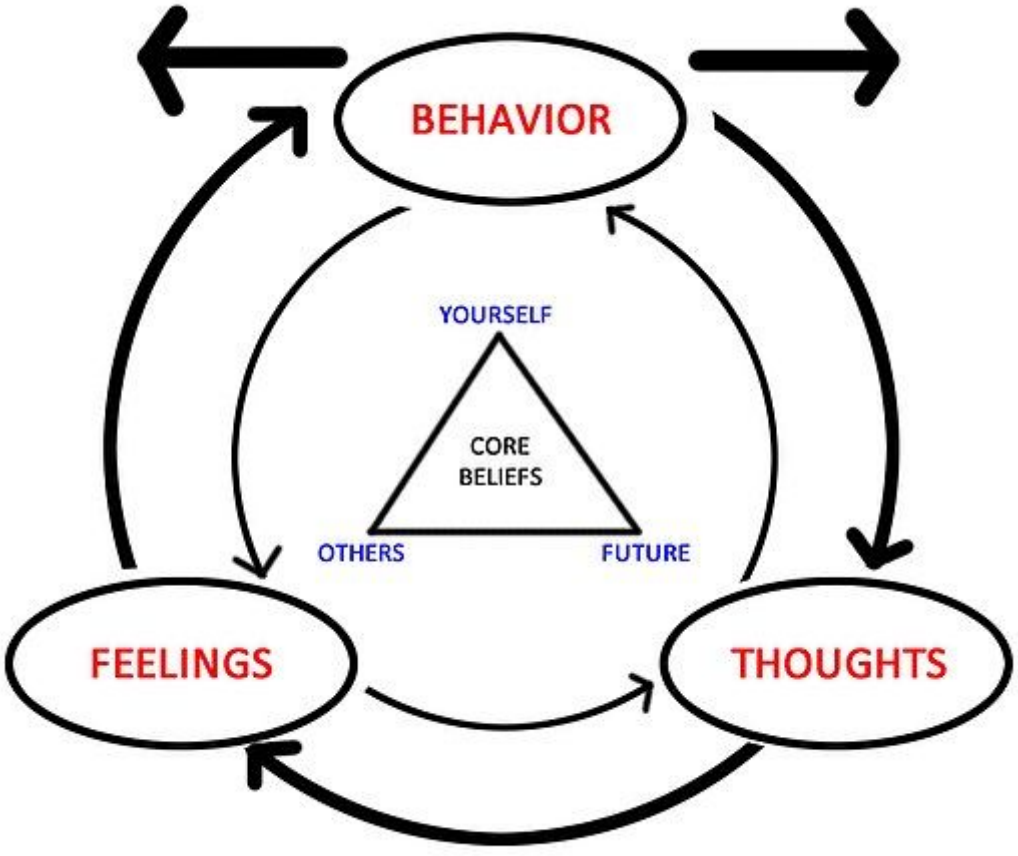
So Beck and colleagues didn't just give psychology and psychiatry a new instrument for measuring depression. They played a critical role in transforming how we quantify mental illness in research and practice.

But wait, there's more!

If you read Day 1 of 7 Days of Psychology on Bandura's self-efficacy study, you might remember that one of the significant contributions he made was showing that you could feasibly measure cognitive variables (e.g. thoughts, beliefs).

Beck and colleagues achieved something similar with this paper, as many of the BDI items targeted beliefs the individual might hold about themselves (e.g. 'I believe that I look ugly') and the world in general (e.g. 'I feel the future is hopeless and that things cannot improve').

What is really interesting about this is that the lead author, Aaron Beck, went on to develop a model of therapy (Cognitive Therapy) that specifically targets the beliefs an individual holds about themselves, others and the world/future. When an individual with anxiety or depression is able to identify and modify the beliefs that underpin those emotional states, they feel better and function better.



According to CBT, our beliefs and thoughts influence our feelings and behaviour

(https://commons.wikimedia.org/wiki/File:Depicting_basic_tenets_of_CBT.jpg)

That model of therapy (now known more broadly as Cognitive Behaviour Therapy - CBT) would become, arguably, the most influential type of psychological therapy ever devised. It is hard to overstate just what impact that model of therapy has had on the field of psychology.

Put simply, if you were to go see a clinical psychologist today (a psychologist that works with people to improve their mental health and treat mental disorders), it is almost certain that the style of therapy they would provide would either be a form of CBT, or have been significantly influenced by CBT.

CBT is the most widely researched and practised model of therapy in psychology, used to treat a range of psychological disorders: depression, anxiety, chronic pain, eating disorders, OCD, phobias, PTSD, problem gambling, sleep issues and addiction. Nowadays you can go online and get CBT treatment for free or very low cost (e.g. This Way Up).

Say the name Aaron Beck to any psychologist and they will know exactly who you are talking about.

That is how a psychiatrist became one of psychology's greatest heroes.

Want to learn more?

Aaron Beck is still with us, and still involved in the ongoing development of CBT. His daughter Judith is a gifted and passionate CBT therapist. You can learn more about what they, and the incredibly large CBT community, are up to nowadays on the Beck Institute Website - https://beckinstitute.org/

I'd love to be able to direct you to an online place where you can complete the Beck Depression Inventory, but like many tests developed for professionals, you have to be a mental health professional and pay for the test to use it. That being said, you can find a copy of the older version online.

That being said, If you suspect that you are depressed, I'd recommend not engaging in self-testing and instead speak to your GP, or visit https://www.beyondblue.org.au/ to learn more.