Information Handout

Professional Version | US English

Cognitive Distortions – Unhelpful Thinking Styles (Extended)

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Description

Cognitive distortions, cognitive biases, or 'unhelpful thinking styles' are the characteristic ways our thoughts become biased (Beck, 1963). We are always interpreting the world around us, trying to make sense of what is happening. Sometimes our brains take 'shortcuts' and we think things that are not completely accurate. Different cognitive short cuts result in different kinds of bias or distortions in our thinking. Sometimes we might jump to the worst possible conclusion ("this rough patch of skin is cancer!"), at other times we might blame ourselves for things that are not our fault ("If I hadn't made him angry he wouldn't have hit me"), and at other times we might rely on intuition and jump to conclusions ("I know that they all hate me even though they're being nice"). These biases are often maintained by characteristic unhelpful assumptions (Beck et al., 1979).

Different cognitive biases are associated with different clinical presentations. For example, catastrophizing is associated with anxiety disorders (Nöel et al., 2012), dichotomous thinking has been linked to emotional instability (Veen & Arntz, 2000), and thought-action fusion is associated with obsessive compulsive disorder (Shafran et al., 1996).

Catching automatic thoughts and (re)appraising them is a core component of traditional cognitive therapy (Beck et al., 1979; Beck, 1995; Kennerley, Kirk, Westbrook, 2007). Identifying the presence and nature of cognitive biases is often a helpful way of introducing this concept – clients are usually quick to appreciate and identify with the concept of 'unhelpful thinking styles', and can easily be trained to notice the presence of biases in their own automatic thoughts. Once biases have been identified, clients can be taught to appraise the accuracy of these automatic thoughts and draw new conclusions.

Levels of cognition

Beck's cognitive model proposes that there are three levels of cognition (Beck, 1995):

- **At the top level are automatic thoughts.** These are thoughts which arise automatically and involuntarily in response to events. They are often felt to be plausible and are accepted uncritically, even when they are untrue.
- **At the middle level are underlying assumptions,** also known as intermediate beliefs, conditional assumptions, attitudes, or rules. These assumptions arise from people attempting to make sense of their life and experiences, and they may vary in how accurate or functional they are.
- **At the bottom level are core beliefs.** Developed during childhood and throughout a person's life, these are enduring ideas about oneself, others, and the world. They are often regarded as 'truths', and like underlying assumptions, they may vary in how accurate or functional they are.

The cognitive model proposes that the way a person feels about an event follows from the meaning they make of it (their thoughts and beliefs). Their perception of events is influenced by their schemas (their beliefs about the self, their personal world, and the future). Beliefs which are inaccurate or dysfunctional can cause people to process information in a biased way, resulting in cognitive distortions such as overgeneralizing, catastrophizing, or disqualifying some kinds of evidence. Distressing feelings associated with psychological disorders can therefore be the product of unhelpful or biased ways of thinking.

Clinicians practicing CBT will have worked at the level of automatic thoughts. Standard texts recommend that the *"usual course of treatment in cognitive behavior therapy … involves an initial emphasis on identifying and modifying automatic thoughts that derive from the core beliefs"* (Beck, 1995). Clinicians often choose to work at this level for good reason: changes in automatic thoughts can occur quickly, and they are often all that is needed to achieve emotional change.

Description

Clinically relevant cognitive distortions

Beck (1963) initially identified 5 cognitive distortions (arbitrary interpretation, selective abstraction, overgeneralization, magnification and minimization, inexact labeling) and a further 2 distortions in *Cognitive therapy of depression* (personalization, dichotomous thinking; Beck et al., 1979). David Burns was an early student of Beck and popularized cognitive distortions in his self-help book, *Feeling good: The new mood therapy* (1981). Other distortions have since been identified through research and clinical observation, including thought-action fusion, hindsight bias, disqualifying others, and social comparison. More general thinking biases have also been reported (e.g., self-serving and self-consistency biases), although these are usually associated with social psychology and behavioral economics, rather than psychopathology and psychotherapy (for examples, see Kahneman, 2011).

The cognitive distortions described in this information handout include:

- **All or nothing thinking:** polarized or binary appraisals characterized by extreme, absolute judgments (e.g., "I am either a good or a bad person").
- **Arbitrary inference:** appraisals that are either unsupported or contrary to factual evidence (e.g., "I heard a bang – someone is breaking into my home").
- **Catastrophizing:** assuming the worst possible outcomes are not only possible, but likely to occur. This is often characterized by "What if …?" thoughts (e.g., "my partner is late coming home – what if they have been killed?").
- **Disqualifying others:** the tendency to discount or devalue other peoples' communications (e.g., "She doesn't really mean that, she's just being nice").
- **Disqualifying the positive:** ignoring, dismissing, or undermining one's positive attributes and experiences (e.g., "There's nothing good in me or my life").
- **Emotional reasoning:** basing one's predictions or conclusions on feelings, intuitions, or hunches (e.g., "I feel afraid so I must be in danger").
- **Externalizing:** unfairly blaming others for negative events and denying personal responsibility (e.g., "It's all his fault – he made me do it").
- **Fortune telling:** assuming certain events and experiences are likely to happen without considering more probable alternatives (e.g., "I'm going to fail the exam").
- **Hindsight bias:** overestimating the predictability of an event and believing an outcome was somehow foreseeable (e.g., "I knew I shouldn't have married him").
- **Jumping to conclusions:** reaching hasty decisions or inaccurate conclusions that are unwarranted by the facts of a situation (e.g., "They must be laughing at me").
- **Labeling:** assigning fixed, global traits to the self or others, usually in the form of pejorative, single-word descriptors (e.g., "I'm stupid").
- **Magnification and minimization:** exaggerating certain aspects (e.g., of oneself or others) while downplaying others (e.g., "I'm so lazy – I never achieve anything").
- **Mental filter:** basing one's appraisals on a single detail, which is taken out of context and magnified, while ignoring others (e.g., "My children are perfect in every way").
- **Mind reading:** assuming other peoples' thoughts, feelings, and intentions without a factual basis or seeking clarification (e.g., "She thinks I'm a loser").
- **Overgeneralization:** sweeping, self-defeating conclusions about oneself, others, or the world based on isolated events (e.g., "He was rude – men are all so obnoxious").

Description

- **Permissive thinking:** appraisals that facilitate, justify, or rationalize problematic actions (e.g., "I feel bad so it's OK to binge").
- **Personalizing:** interpreting events and experiences in self-referential (and often negative) manner (e.g., "She was curt with me because I somehow offended her").
- **Self-blame:** incorrectly and unfairly assigning blame or responsibility for adverse events to oneself (e.g., "It's my fault that no-one enjoyed their restaurant meal").
- **Should statements:** rules and imperatives about how oneself, others, or the world are supposed to operate (e.g., "I shouldn't inconvenience other people").
- **Social comparison:** the tendency to make unfavourable comparisons against others (e.g., "He is so much smarter than me").
- **Thought-action fusion:** assuming that thoughts, actions, and events are inextricably linked (e.g., "Thinking about my plane crashing will make it more likely to happen").

Why we think in unhelpful ways: the psychology of cognitive distortions

Various theoretical frameworks have been used to understand cognitive distortions:

- Beck (1963, 1964) suggests that distorted cognitions result from the activation of negative schemas developed during childhood which "assume a dominant role in directing the thought process". They can be addressed by evaluating their validity or accuracy. The effect of the thought can also be neutralized by refuting it, considering alternative explanations, or confronting assumptions about oneself, others, or the world.
- Beck and colleagues (1979) proposed that cognitive distortions are underpinned by both idiosyncratic beliefs and assumptions specific to that distortion. For example, the tendency to catastrophize might be grounded in the assumption, *"It is helpful to always assume the worst".*
- Teasdale and Barnard's (1993) interacting cognitive subsystems (ICS) model proposes that negative automatic thoughts form part of a reinforcing loop driven by depressogenic schematic models. These schemas output specific negative meanings which are subsequently "experienced, downline, as streams of 'negative automatic thoughts'". These then reinforce negative meanings and associated depressogenic schema (Teasdale, 1996). They suggest that ICS better accounts for the dependency of dysfunctional attitudes and logical distortions on mood-states.
- Gilbert (1998) uses an evolutionary lens to account for cognitive distortions, which complements the traditional cognitive approach. He suggests that cognitive distortions reflect the activation of evolved information-processing algorithms that tend to become active when individuals are under threat, and which may be adaptive in the right circumstances. For example, jumping to conclusions acts as a 'better-safe-than-sorry' style of thinking that enables humans to make rapid decisions in dangerous situations. While it can lead to mistakes, assuming the worst and taking defensive action unnecessarily is a less risky strategy. Accordingly, Gilbert suggests that instead of seeking to "turn off (normal) internal defensive processing systems… people can learn how to manage their natural tendencies towards irrationality".

Instructions

Suggested Question

Psychologists sometimes say "You can't believe everything you think". Many people think in distorted ways sometimes, and it sounds like this might be the case for you. Would you be willing to explore it with me?

Clinicians may consider giving clients helpful **psychoeducation** about automatic thoughts more generally and cognitive distortions in particular. Consider sharing some of these important details:

- Automatic thoughts spring up spontaneously in your mind in the form of words or images.
- They are often on the 'sidelines' of our awareness. With practice, we can become more aware of them. It is a bit like a theatre – we can bring our automatic thoughts 'center stage'.
- Automatic thoughts are not always accurate: just because you think something, it doesn't make it true.
- Automatic thoughts are often inaccurate in characteristic ways. Psychologists call these unhelpful ways of thinking 'cognitive distortions'. Everyone thinks in distorted ways sometimes.
- Signs that you might be experiencing a cognitive distortion include feeling distressed, noticing unhelpful changes in your behavior, or focusing on threatening explanations for events.
- In some circumstances, there are good reasons why we think in distorted ways. Cognitive distortions are 'mental shortcuts' that can help us make rapid appraisals and decisions. These shortcuts would probably have helped our ancestors respond quickly to dangers. In other words, thinking about things slowly and deliberately can be risky in life-or-death situations. However, cognitive distortions usually give people a false impression of things and often cause problems.

Many treatment techniques are used to address cognitive distortions:

- **Identification.** Review the list of cognitive distortions and help client identify the ones that seem most relevant or most familiar. Some individuals will endorse most or all cognitive distortions, in which case it may be useful to focus on those which are most frequent, distressing, or problematic.
- **Self-monitoring.** Monitoring for cognitive distortions can help clients become more aware of their unhelpful thinking styles *in-situ*. Signs that the client may have experienced a cognitive distortion include changes in mood (e.g., feeling sad or angry) or behavior (e.g., withdrawing from others or wanting to avoid a situation).
- **Decentering.** Meta-cognitive awareness, or decentering, describes the ability to stand back and view a thought as a cognitive event: as an opinion, and not necessarily a fact (Flavell, 1979). Help clients to practice labeling the process present in the thinking rather than engaging with the content. For instance, they might say to themselves, "I'm mind reading again" or "There goes another self-blaming thought".
- **Reattribution.** Reattribution aims to identify all the factors that may have contributed to an adverse event or outcome, aside from the client (Burns, 2020). The relative contribution of each factor can then be explored using percentage ratings (Leahy, 2017). Alternatively, the relative contribution of each factor can be depicted using a pie chart, allocating a differently sized 'slice' of the pie chart to each factor depending on how influential it was (Beck, 2011). Note that the client should consider their contribution to the outcome last.

- **Cognitive restructuring with thought records:** Self-monitoring can be used to capture and re-evaluate cognitive distortions as they occur. Useful prompts include:

Suggested Questions

- *What evidence supports this thought? Is the evidence of good quality? Would other people agree?*
- *What evidence doesn't support this thought? Are there any facts or experiences that don't fit with this interpretation?*
- *How much do you believe this thought? What makes you doubt it is 100% true?*
- *What would you say to a friend who was thinking in this way? How would you help them see the situation differently?*
- *If someone who cares about you knew you were thinking in this way, what might they say to help you see the situation differently?*
- *How would you see this situation differently if you were thinking more rationally or compassionately?*
- *Imagine you are an objective bystander. How would you see this situation differently?*

- **Retrospective mismatch.** Ask the client to recall a similar episode in which they used the same thinking style. Contrast the content of these thoughts with the actual outcome. Highlighting the mismatch between the client's thoughts and reality can highlight the inaccuracy and maladaptive nature of cognitive distortions (Wells, 1997).
- **Cost-benefit analysis.** Explore the advantages and disadvantages of unhelpful thinking styles. Useful prompts include:

Suggested Questions

- *What is helpful and unhelpful about thinking in this way?*
- *What problems has this thinking style caused you in the past?*
- *What problems is this way of thinking likely to cause if it continues?*
- *Is this thinking styles consistent with your therapy goals, life aspirations, or personal values?*

- **Data collection.** Encourage the client to purposefully seek out data that either supports or disconfirms their cognitive distortions. This might involve searching the environment for discomfirmatory evidence or soliciting other viewpoints (e.g., using surveys to determine if other people would interpret the situation differently).
- **Data logging.** Cognitive biases can be framed as 'blinkers' which prevent people from seeing the world as it is. Data logging can help the client pay attention to counter-examples that are inconsistent with their unhelpful thinking styles.

Instructions

- **Chairwork and role-play.** Experiential methods can be a powerful way to bring head-level and heart-level changes in distorted thoughts (Pugh, 2019). Examples include:
  - **Role-play:** The therapist plays the role of the thinking style so the client can practice responding to it. If the client finds this difficult, the roles are reversed, so that the therapist models the process of responding.
  - **Two-chair dialogues:** The client speaks as the thinking style in one chair and practices counter-responding in a second chair (with coaching from the therapist, if necessary).
- **Stories and metaphors.** Therapeutic stories and metaphors can normalize cognitive distortions, provide insights into these thinking styles, create distance from unhelpful thought patterns, and support guided discovery and the recollection of important therapeutic concepts (see Stott et al., 2010). For example, a client who uses an all-or-nothing thinking style might be asked if they can ride a bike. Did they ever fail off while they were learning, and was this a sign of failure or a step toward success? Thinking about these issues can help the client see that shades of grey are not only acceptable, but often essential.
- **Testing beliefs and assumptions.** It can be helpful to explore whether the client holds beliefs or assumptions that drive their cognitive distortions. For example, disqualifying the positives might be associated with the assumption, "Accepting the positives makes me vulnerable to rejection or egotism". If assumptions like these are identified, clients can assess how accurate and helpful they are. Their attitudes toward healthier assumptions may be explored, such as, "Accepting the positives gives me a balanced perspective on things". Assumptions can also be tested using behavioral experiments, including surveys (e.g., "Let's see if other people disqualify their positives, and whether they think it is an unattractive or risky thing to do").

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Cognitive Distortions – Unhelpful Thinking Styles (Extended)

Cognitive Distortions

We all have **automatic thoughts** – thoughts that happen so quickly and effortlessly that we might not even be aware we've had them. When we assume they're true, we feel strong emotions (such as fear, anger, or shame) and can react equally severely. Automatic thoughts may feel convincing, but they are often exaggerated or distorted by certain biases, which psychologists call **cognitive distortions** or **unhelpful thinking styles**. Here are 20 of the most common biases:

All or nothing thinking
You think in extremes about situations, other people, or yourself. Your thoughts might be polarized: things are either 'perfect' or 'terrible'. You may also act in just as extreme ways, veering between extreme effort and none at all.

Arbitrary inference
You reach a conclusion without any evidence to support it, or even when the evidence suggests the opposite is true. Thoughts might be about what other people are thinking, or about things that will happen in the future.

Catastrophizing
You jump to the worst possible conclusions. You ask yourself "What if ... ?", think about the most catastrophic outcomes, and assume these scenarios are likely to occur.

Disqualifying the positive
You ignore, dismiss, or discount your positive attributes and experiences. Receiving positive feedback might feel strange or uncomfortable to you, so you automatically reject it.

Emotional reasoning
You assume something must be true because you feel it strongly. Your feelings, hunches, or instincts guide how you interpret a situation.

Externalizing
You blame others for negative events and avoid personal responsibility. You might do it to protect your self-esteem, justify your actions, or to cope with difficult feelings like shame.

Fortune telling
You automatically jump to conclusions about what is going to happen in the future. Unfortunately, these predictions are often negative.

Hindsight bias
You wrongly believe that an event was predictable or forseeable. You might think that you should have done something, or known something, that wasn't obvious at the time.

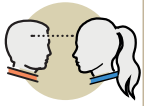
Jumping to conclusions
You make hasty judgments or decisions based on a limited amount of information. You might assume you know what other people are thinking, or use your intuition to make snap judgments.

Labeling
You give yourself, other people, or your experiences a one-word label. These labels are usually fixed, extreme, and negative – they stir up strong emotional reactions and stop you noticing other aspects of your experience.

Magnification and minimization
You exaggerate negative aspects of yourself, other people, or situations, while downplaying the positive aspects. Bad things get blown out of proportion, while good things seem unimportant.

Mental filter
You base your conclusions on a single detail taken out of context, and might ignore or discount other bits of information. People tend to filter when they are faced with evidence that doesn't 'fit' with their beliefs.

Mind reading
You automatically assume that you know what another person is thinking, or what they will think. You might assume that other people are judging you negatively or have bad intentions.



Overgeneralization
You make a sweeping judgment or conclusion based on just one experience or a small number of incidents. You believe an isolated event will become a pattern and repeat itself in the future.

Permissive thinking
You give yourself permission to do things that aren't good for you or for others. You downplay how damaging something is, tell yourself that you deserve to do it, or promise that this will be the last time.

Personalizing
You assume that situations or outcomes are related to you, especially negative ones. You might unfairly believe that you caused things to happen.

Self-blame
You blame yourself for things that are not your fault or responsibility. You might self-blame for being a certain type of person, for problems in a relationship, or for things outside your control.

"Should" statements
Your style of thinking focuses on "must", "should", "ought to", and "have to" statements. It leads to fixed ideas about how you, other people, and the world should be.

Social comparison
You compare yourself with others. Problematic comparisons tend to draw attention to your flaws and weaknesses rather than your talents and abilities.

Thought-action fusion
You believe your thoughts can directly influence the world around you, or that thinking about doing something is just as bad as actually doing it. This is sometimes called 'magical thinking'.

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