

# **Bias, prejudice, and disparities in health care**

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## **Bias, Prejudice, and Disparities in Health Care**

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We live in a world of divisions and inequalities – including the area of healthcare. These divisions present across many categories including socioeconomic status, nationality, ethnicity, age, gender, diagnosis, mental health status, and the like. Tied into these divisions and the inequalities they engender are fundamentally psychological processes of language, cognition, emotion, and behaviour. These processes contribute to what we refer to when we use the words “bias” and “prejudice”. This chapter offers insights into these processes from the evidence based framework of Relational Frame Theory (RFT) and Acceptance and Commitment Therapy (ACT). It is worth highlighting at the outset that the possible varieties and locations of disparities that exist within health care are vast. The entire chapter, indeed an entire book, could be spent detailing the instances where disparities have been reported. Rather than do this, this chapter will provide the reader with a perspective that they can use to aid their conceptualisation of disparity wherever it is found.

The chapter is structured to first touch on the extent of global health care inequality and then to provide a more detailed overview of the evidence for health care disparity in just one area, namely that experienced by racial and ethnic minority groups in the US. It will then outline interventions in this area, particularly those targeted at health care professionals. Next it will outline how insights from RFT may add to our understandings of the possible roots of bias and prejudice. Then it will detail the attempts of ACT to influence such processes and highlight other potential applications of this framework.

## **Global Health Care Disparities**

Researchers note that the terms health disparities, health inequalities and health equity are used somewhat interchangeably (Braveman 2006). Writing about “health equity” for the World Health Organisation, Margaret Whitehead notes that “equity in health implies that ideally everyone should have a fair opportunity to attain their full health potential and, more pragmatically, that no one should be disadvantaged from achieving this potential, if it can be avoided” (Whitehead 1990 p.7).

At a global level, disparities are not hard to find. For example the World Health Organisation reports that the US has just 10% of the global burden of disease, but 37% of the world’s health workers and 50% of the world’s health financing. Conversely, the African region has 24% of the burden but only 3% of health workers and less than 1% of world health expenditure (WHO 2006 p.xviii - xix). Other disparities are just as easy to highlight. Regarding overall life expectancy at

birth, the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2009) report that the current average life expectancy for the world is 67.6 years, with the life expectancy for the top 3 countries ranging from 82.7 to 81.8 years (Japan, China and Switzerland), whilst the bottom 3 range from just 43.8 to 45.2 years (Afghanistan, Zimbabwe and Zambia). Figures on child mortality indicate how progress is being made, but that much more work is required before we approach health equity. The number of yearly deaths in the under 5's age range stood at 10.4 million in 2000, 8.8 million in 2009 (You et al., 2010,). Based on the 2000 data, Black, Morris and Bryce (2003) calculated that most deaths were due to neo-natal disorders, diarrhoea, pneumonia and malaria. Working with this data, and based on an understanding of the 42 countries where 90% of these deaths occurred, Jones et al (2003) conclude that roughly two-thirds of these deaths could have been prevented by applying simple prevention or treatment based interventions that are feasible but not widely available in low income countries.

### **Racial and ethnic minority disparity in health care in the US**

Research in the area of racial and ethnic minority disparity in health care in the US is not new. In the early 1900's, W. E. B. Du Bois (2003) along with fellow academics refuted the findings of Frederick L. Hoffman (1896) who claimed that death rates in African Americans were a reflection of underlying physical vulnerability. Du Bois instead argued that such disparity was a result of social and economic conditions. Decades later, Swedish economist, politician, and Nobel laureate Gunnar Myrdal wrote: "area for area, class for class, Negroes cannot get the same advantages in the way of prevention and care of disease that whites can" (1944 p.171-172).

Throughout the latter half of the twentieth century research in this area continued to grow, with the first review being published in 2000 by Mayberry, Mili, and Ofili. Parallel to this, in 1999, the United States congress asked the Institute of Medicine (IOM) to examine the evidence for disparity in health care services for racial and ethnic minorities. In 2002 the IOM published "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care" (Smedley, Stith, and Nelson 2002). The report limits its data, only including studies that provided some form of control or adjustment for the influence of insurance status, and yet still cites evidence for possible disparity in: analgesia, asthma, cancer, cardiovascular disease, cerebrovascular disease, children's health care, diabetes, emergency services, eye care, gallbladder disease, HIV/AIDS, maternal and infant health, mental health, peripheral vascular disease, pharmacy, physician perceptions, patients

perceptions, radiographs, rehabilitative services, renal care and transplantation, (general) use of services and procedures, vaccination and women's health (see Smedley, Stith, and Nelson 2002, Appendix B. p.285-383).

The chief finding of the IOM report was of significant variation in health care practices toward white and non white. The authors state that "racial and ethnic disparities in health care exist and, because they are associated with worse outcomes in many cases, are unacceptable" (Smedley, Stith, and Nelson 2002, Finding 1-1 p.6). The non-governmental organisation "Physicians for Human Rights" also reviewed the existing data and both confirmed and extended the conclusions of the IOM report. They state that "the evidence is robust, beyond reasonable doubt, of a pervasive and troubling finding in the health care system, and a cause for deep concern" (PHR 2003 p.1).

Perhaps the strongest evidence for disparity comes from the field of cardiovascular disease where "the consistency of findings from these studies, many using large sample sizes, is striking" (Smedley, Stith, & Nelson 2002 p.43). Evidence in this area includes research from administrative databases where, for example, white patients were 4 times more likely than African Americans to be given a coronary artery bypass graft (n=86,000; Goldberg et al. 1992). Evidence from clinical data is also included where, for example, in prospective research, researchers found that African Americans were less likely than whites to receive bypass surgery even when the researchers adjusted for co morbidities and disease severity amongst other factors (Peterson, Shaw, and Califf 1997; Taylor et al. 1997). In other health areas, the IOM report found lower levels of diagnostic and therapeutic procedures among African Americans with cerebrovascular disease (Oddone et al. 1999; Mitchell et al. 2000). In the field of renal transplantation, despite a higher prevalence of renal disease in African Americans, the evidence suggests that disparities exist (Kasiske, London, and Ellison 1998; Young and Gaston 2000). Regarding HIV / AIDS the evidence again suggests disparity for racial and ethnic minorities (Moore et al. 1994; Shapiro et al. 1999).

In the years since the IOM and PHR reports, evidence has continued to accumulate. Klonoff (2009) has selectively reviewed the latest research in the area and reports that in the field of vascular disease recent evidence suggests that African Americans and other ethnic groups still receive less or different treatments for myocardial infarction and different anticoagulants (Sonel et al. 2005; Bhandari et al. 2008). Research also suggests that new technologies such as implantable cardioverter defibrillators (ICD) are used less for African Americans than for whites (Stanley, DeLia, and Cantor 2007). Hernandez et al (2007) found that the adjusted odds of ICD use in black men were 0.73 and in black women 0.56 when compared to white men. In surgery, racial and

ethnic minorities are less likely to undergo kidney transplants (Stolzmann et al. 2007) and similar disparity has been found in African Americans awaiting liver transplants (Reid et al. 2004). Similar patterns of disparities also appear to exist in orthopaedic surgery (Skinner et al. 2003). Skinner, Zhou, and Weinstein (2006) report racial disparity in area of total knee arthroplasty where, compared to white men, the adjusted odds ratio for surgery was 0.36 for black men and 0.28 for Asian men. Klonoff also reports disparity in breast cancer where African American women were less likely to receive the same treatment as white women. For example, Mandelblatt et al. (2002) reports that, compared to white women, black women are more likely to receive a mastectomy rather than breast conservation, odds ratio 1.36, and more likely to receive breast conservation without radiation treatment, odds ratio 1.48. Finally, when at risk of developing breast cancer, African American women were less likely to have genetic counselling for breast cancer genes BRCA1/2 testing than equivalent white women (odds ratio 0.22; Armstrong et al. 2005).

The IOM report is over 700 pages long. It contains the findings of hundreds of research articles and many dozens more have been written since. If then, disparities towards racial and ethnic minorities exist in health care, two important issues arise: from where does it arise and how can it be countered?

### **Reasons and solutions**

The IOM report suggests a number of reasons why disparities may exist. The report is clear that differences in patient biology or behaviour across race (along with many other possible explanatory factors) can not explain the disparities (Smedley, Stith, and Nelson 2002). Understandably, the authors situate their explanation for disparity in health care within the much broader context of wider racial and ethnic minority inequality and discrimination that has existed in the US and throughout the world in both the past and the present. However, on top of this they conclude that the disparity found in health care may also be maintained as a result of influences and interactions between health systems, health professionals and patients.

Whilst systemic factors such as the fragmentation of health care systems, lower-cost health plans, and incentives on health care professionals to limit the services they offer may play a role, the IOM is also clear that factors within the encounter between patient and health care professional may contribute to disparities. Again, there was an acknowledgement that any relationship between a health care professional and his or her patient involves a complex interaction drawing on the

history and context of each individual. It was noticeable however that the IOM highlighted the possible role of "bias, stereotyping, prejudice, and clinical uncertainty" on the part of the health care professional (Smedley, Stith, and Nelson 2002, Finding 4-1, p.178). The IOM committee concluded that there is "strong but circumstantial evidence" (Smedley, Stith, and Nelson 2002 p.178) for this and encouraged more research.

The role of prejudice within the health care professional and its relationship to disparity is not merely hypothesised; it has also been investigated empirically. In one study, Schulman et al. (1999) investigated the possible role of prejudice on physicians recommendations for cardiac catheterization. The research surveyed 720 physicians using a computer programme which modelled the assessment of patients suffering from chest pain. Physicians watched a scripted interview with "patients" (played by one of eight actors) who were either 55 or 70 years old, white or black, of either gender, and who also varied according to chest pain type and stress-test results. Physicians assessed one of 144 possible combinations and were asked if they wanted to order more cardiac evaluations or to refer the patient for cardiac catheterization. Results indicated that while patient race made no significant difference in physicians' assessment of the probability of coronary artery disease, both women and blacks were less likely to be referred for cardiac catheterization with black women being significantly less likely than white men to be referred for the procedure (odds ratio 0.4). These results remained even after the researchers adjusted for variations in symptoms and for physician's perceptions of patient personality. The authors rightly acknowledge that their study used actors and videos and accordingly may lose some ecological validity. However other studies investigating similar topics have used actual clinical data.

van Ryn and Burke (2000) published research investigating the effect of patient race and socio-economic status (SES) on physicians' perceptions of patients. They collected data from 618 physician encounters with post-angiogram patients collecting information on patient race, SES, along with various physician reports of patient ability and likelihood of patient behaviour. The authors controlled statistically for many factors in the physician (including age, sex, race and speciality), the patient (including age, sex and health risk status) and variously for patient race or SES. The results suggested that black patients were perceived to be less intelligent and physicians liked them less. They were also perceived to be more non compliant, more likely to abuse substances and have poorer levels of social support than white patients. Equally, patients of lower SES were seen to have less self-control, less responsibility for family members, be less physically active, less intelligent, more irrational, and more likely to be non compliant.

## Ways forward

If, as above, evidence suggests that bias and prejudice in the behaviour of physicians or other health care providers is a contributing factor in the levels of disparity that racial and ethnic minorities experience in health care, what can be done about it? Examination of the contemporary literature suggests that the related notions of patient centred care and cultural competence are in the vanguard of current attempts to address the issue.

Patient centred care and cultural competence are related concepts with both shared and unique aspects (Beach, Saha, and Cooper 2006). Central to both is the appreciation of the individual patient. The phrase "patient-centred medicine" was coined by Balint who highlighted the importance of understanding the patient "as a unique human-being" (Balint 1969 p.269). More generally, patient centred care seeks to facilitate more individualised interaction and communication between professional and patient (Mead and Bower 2000). Work in cultural competence began with increasing awareness of different cultural contexts and traditions but has since expanded to include notions such as being aware of ones owns biases and stereotypes. Cultural competence is defined as "the ability of individuals to establish effective interpersonal and working relationships that supersede cultural differences" (Cooper and Roter 2002 p.554). The IOM report recommends the integration of cross-cultural education into all future training and all current professional development programmes (Smedley, Stith, and Nelson 2002).

Beach et al. (2005) conducted a systematic review of research published between 1980 and 2003 in the area of cultural competence. The authors found 34 eligible studies and applied a pre-existing system to rate the quality of the research collected from A (strongest) to D (weakest) (West et al. 2002). These studies were divided up into those who reported on provider knowledge, provider attitudes, and provider skills. The best evidence (grade A) came from studies demonstrating improvements in knowledge on cultural concepts, improved in 17 of 19 studies. Twenty one out of 25 studies demonstrated a change in attitudes, for example cultural self efficacy (grade B). Regarding skills, such as communication and social interaction, 14 out of 14 demonstrated improvements (again grade B). Despite the apparent success of this research stream, only 3 studies measured patient outcomes and all of these measured patient satisfaction, no study examined health related outcomes. It is important to note that despite evidence that training can improve knowledge and attitudes related to cultural competence, it appears that there is not yet any evidenced that an increase in cultural competence has any impact on disparity.

Regarding patient centred care, a brief cohort study of 177 third year medical students found all students performed equally well interacting with a white patient but students with higher levels of person centred attitude performed significantly, but modestly, better when interacting with an African American patient (Beach et al. 2007). Whilst evidence such as this supports a relationship between patient centred attitudes and interactions, large, as yet unanswered, questions remain as to how to manipulate person centred attitudes themselves. In other literature in this area researchers propose broader frameworks to educate professionals and improve patient centred care (Cooper et al. 2006; Burgess et al. 2007). They highlight the importance of factors such as appropriate emotional expression and regulation.

Research which has focused on understanding and influencing health professionals potential impact on racial and ethnic minority disparities in health care appears to be at an early stage. Despite the intuitive importance of notions such as cultural competence or patient centred care there are little or no data suggesting how to enhance these processes or that doing so leads directly to improvements in health or disparity related outcomes. Perhaps looking closer at psychological processes at the core of prejudice is a means toward a better solution.

### **Psychological accounts of prejudice**

The word prejudice comes from Latin “praejudicium”, suggesting advance (prae) judgement (judicium). The compact Oxford English dictionary defines prejudice as preconceived opinion that is not based on reason or experience, or unjust behaviour formed on such a basis (AskOxford n.d). In traditional psychological accounts, prejudice is often seen as an “extreme” attitude containing a cognitive, an evaluative / affective and a behavioural component. Theories about the origins of prejudice differ. Personality theorists propose explanations rooted within the personality of the individual; examples include the Authoritarian personality (Adorno 1950), the open and closed mind (Rokeach 1960) and tough / tender mindedness (Eysenck 1954). Social psychologists place more of an emphasis within society; for example inter-group conflict (Sherif 1966) and social identity theory / minimal groups (Tajfel, Bilig, and Bundy 1971). More recently social cognitive theory has emphasised the role of social schema (Macrae and Bodenhausen 2000) and implicit and explicit prejudice (Devine 1989). Many also conclude that despite obvious drawbacks, prejudice serves a function and can provide cognitive short cuts by reducing the need for problem solving particularly in novel or threatening situations (Macrae, Milne, and Bodenhausen 1994).

Popular ideas of prejudice reduction fall into three main categories: firstly equal-status contact; which involves interacting with others on an even footing (Aronson 1980). A second approach is the pursuit of successful co-operation towards interdependent goals (Sherif et al. 1961). A third approach, as illustrated above, is education. However results in these areas have been mixed. Classic research into equal status contact found that behaviour only changed towards the individual(s) concerned and not to the group generally (Hewstone & Brown 1986) and also found prejudice was only reduced in certain social settings (Minard 1952). Similarly, research into intergroup contact suggests that positive results might not have long term impact, however extensions of this research continues (Hewstone, Rubin, & Willis 2002). The education literature produces similarly mixed results with both positive and mixed evidence, alongside questions over the risks of paradoxical or rebound effects – where providing information appears to make prejudice worse (Macrae et al. 1994). Numerous studies in the area of education have been undertaken in the field of mental health (Corrigan et al. 2001; Corrigan et al. 2004) .

The evidence above suggests that new and more effective approaches to reduce the adverse impacts of prejudice are clearly needed (Lillis and Hayes 2007 p.390). The remainder of this chapter will attempt to provide an account of prejudice as seen from the perspective of Relational Frame Theory (RFT) and Acceptance and Commitment Therapy (ACT). The former (RFT) provides a basic psychological theory on which the therapeutic approach (ACT) is based.

### **Relational Frame Theory**

Relational Frame Theory (RFT) provides a scientific understanding of human language and cognition. The framework is consistent with and builds on the foundations of behavioural analysis. It is important to note that RFT does not just aid our understanding of language and cognition in isolation, but also how these processes contribute to complicated human interactions such as bias and prejudice and other behaviours which are often described under the umbrellas of psychopathology, developmental psychology and social psychology (Hayes, Barnes-Holmes, and Roche 2001). A growing research base demonstrates that human language is dependent on the processes described below and although it is beyond the scope of this chapter to provide a complete introduction to RFT readers can seek this information elsewhere (Hayes, Barnes-Holmes, and Roche 2001; Ramnerö and Törneke 2008).

The “R” of RFT highlights the central importance of “relations” to human language and cognition,

but it is important to clarify what this means as non humans can also act in accordance with relations. Rhesus monkeys, for example, can select the “taller” of two stimuli in experimental settings. They can continue to do so even if the shorter of the current choices was previously the tallest (Harmon, Strong, and Pasnak 1982). This suggests that they are behaving on the basis of the relationship between stimuli, meaning, they are making a relational response. It is important to note that in the above experiment one stimuli *is* longer than the other - the relationship exists in the world. Humans, on the other hand, can also act on the basis of relations which do not depend on the formal properties of objects. We can build relations which are independent of the physical properties of stimuli and which exist merely because of social context or our own individual history. Because of this virtually anything can be brought into a relationship with anything else, this ability is known as “*arbitrary applicable relational responding*”.

The acquisition of relational responding starts when we are very young. As infants we are taught to relate objects to names (for example an object like a “teddy” and its corresponding name “t-e-d-d-y”). Curious as it sounds, the words we use to relate to objects are arbitrary. The word “t-e-d-d-y” only relates to the object “teddy” because of history, context and social convention. The relationship only seems natural to us because our history has paired the two things together on many occasions. When we are first learning these relationships each relationship is explicitly taught and reinforced but over time “*generalised relational responding*” emerges. This means that each individual relationship no longer has to be taught as responding has become generalised and can emerge indirectly.

Of course, relations are not just formed between words and objects, but between words and words and objects and objects, and people and words, and so on. What is more, these relations do not need to be trained; they can be “*derived*”, often without awareness. The notion of “*derived stimulus relations*” expands on the notion of stimulus equivalence (Sidman 1971). In Sidman's classic experiment, a subject with learning disabilities was taught to match spoken words to pictures and also taught to match spoken words to printed words. On top of this, despite the fact the relationship was never directly taught, the subject became able to match printed words to pictures. This last relationship, between printed words and pictures, had formed spontaneously. In other words, the stimuli had become equivalent to each other without training or reinforcement. Put simply, a derived stimulus relation is a relationship between two or more stimuli which is not directly trained or taught.

There are three important properties of human language and cognition which are key to RFT:

*Mutual entailment, combinational entailment and the transformation of stimulus functions.* In mutual entailment if a relationship from “a” to “b” is learned and reinforced, then the reverse relationship, from “b” to “a”, is also derived despite never being reinforced itself. Combinational entailment involves three or more stimuli. Here, if the relationships between “a” to “b” and “b” to “c” are established, “a” to “c” and “c” to “a” are again derived without direct learning taking place. The third property concerns the transformation of stimulus functions, here stimuli exchange properties and stimuli become “*functionally equivalent*” to other stimuli they are related too. This means, for example, that if stimuli “a” is aversive to an individual, and the individual learns that “a” is similar to “b”, then “b” also becomes aversive as the function is transformed from “a” to “b”.

When stimuli become related to each other they are said to exist in a “*relational frame*”. If the object “teddy” is in a relational frame with the word “teddy” they are said to be in a frame of co-ordination (or sameness) with each other. The “a” to “b” examples given above are also in frames of co-ordination. Other families of relational frames also exist such as opposition (e.g. “a” is the opposite of “b”), distinction (“a” is not “b”), comparison (“a” is bigger / smaller than “b” or better / worse). Hierarchical, temporal, spatial and deictic relational frames also exist along with relations concerning conditionality and causality (see Hayes, Fox, et al. 2002). Remember, the workings of these frames are initially trained and reinforced but the capacity of relating eventually become generalised and elaborated automatically and outside of awareness.

Taken together, these processes lead to the many efficiencies (and problems) of living with human language. Because of arbitrary applicable relational responding, derived stimulus relations and relational frames “words” (spoken language and thoughts) allow our behaviour to be shaped without direct contact with the environment. Experience of words alone can change what we think, feel and do because, the words alone are all that is necessary to bring us into contact with the function of the objects that they relate to. Not only that, but these functions can change and continue to be changed without us ever needing to directly contact the objects themselves due to the transformation of stimulus functions. The working of such processes are perhaps best illustrated with an example:

*Imagine that a child learns that “men and women are opposite sexes” (a relational frame of opposition) and also that “men are strong” (a frame of coordination). From this you may derive that “women are weak” (coordination) without it ever being taught. If you later learn that “strength comes with age” you may again derive that “younger women are weaker than older women” and that “younger women are weaker still than older men”. (adapted from Roche et al. 2002 p.76).*

The implications of these processes are vast. The verbal relationships which structure our world and guide our behaviour can be formed automatically and without our control. Not only this but researchers suggest that such processes are self sustaining and make us insensitive to the world outside of our network of relational frames (Hayes, Niccolls, et al. 2002; Roche et al. 2002).

## **RFT and Prejudice**

We saw earlier how prejudice has been multiply understood and targeted from within the psychological literature. Let us now look at it from the perspective of RFT. Researchers propose that RFT “a theory and technology of language, provides the empirical and conceptual tools for the analysis of such modes of social discourse and their roles in the establishment, maintenance, and amelioration of prejudice”(Dixon et al. 2003 p.134). Other RFT researchers have defined human prejudice as “objectification and dehumanization of human beings because of their participation in verbal evaluative categories” (Hayes, Niccolls, et al. 2002 p.298). What this means is that through the processes described above individuals or groups of people are arbitrarily and automatically placed within taught and derived relational frames. It is then very possible that our behaviour towards these individuals or groups is influenced by the transfer of stimulus functions within relational frames and becomes entangled in verbally-based processes. Sadly, the more our behaviour comes under the control of verbal categories and the arbitrary functions they carry the more we lose contact with aspects of the world that are not structured by these verbal processes. Notice that RFT does not see prejudice as an abnormal process, more an understandable over extension of human language. Indeed it can be seen as being inherent in “human beings, because it is built into language itself”(Hayes, Niccolls, et al. 2002 p.297).

RFT also provides possible explanations for the results of previous prejudice research. Reasons why equal status contact appears to have benefits which do not extend more widely than the individual can be hypothesised through RFT. It may be that equal status contact only adds multiple features to the relational frame associated with the individual and not the group itself. Indeed the contact may also inadvertently loosen the connection between the individual and the group through the transformation of stimulus functions, whilst leaving the relational frame associated with the group untouched. RFT also suggests that some well-meaning educational techniques designed to reduce prejudice may be counterproductive. Some researchers working in health disparities already raise concerns that promoting specific cultural information might promote rather than

reduce stereotyping (Beach et al. 2005) and other research suggests that using education to confront and correct prejudicial attitudes is not always helpful (Thornton and Wahl 1996; Wahl and Leftkowitz 1989). RFT helps explain this by noting that providing information about prejudiced groups might simply increase the strength of the discriminating relational frame that contains the group by firstly referring to it and secondly by adding to its features (Dixon et al. 2003; Roche et al. 2002). Important research parallel to RFT also suggests that telling people not to think certain things can make thoughts occur more frequently and increase their influence on behaviour (Wenzlaff and Wegner 2000).

Much of the recent work concerning RFT and prejudice has been as a result of the events and ramifications of the terrorist attacks on September 11 2001 (Dixon et al. 2003; Dixon, Zlomke, and Rehfeldt 2006; Hayes, Niccolls, et al. 2002). An example from this literature provides another illustration of how easily prejudice can be established and spread:

*An American witnesses the attacks of 9/11 (A), in so doing he experiences emotions of rage and hate (B). A little later the media also broadcasts images of terrorists (C), suspected of being responsible for the attack (A). Notice that A relates to B and A separately also relates to C. However derived relations may also come to exist between B and C so that images of terrorists now give rise to feelings of rage and hate. The distinctive features of the terrorist group (C) include their race, skin colour, religion and country of origin. RFT illustrates how easy and automatic it will be for the feelings of hate to be felt not just to the terrorists but to all individuals of Middle Eastern descent (D) who share the same characteristics as the terrorist group. (adapted from Dixon et al. 2003 p.135).*

## **RFT Interventions**

RFT is a bottom up data driven approach to understanding human language and cognition and much of its research takes place in laboratory conditions. One of the key processes relevant to RFT and prejudice is the transformation of stimulus functions. It is this process which explains how the feelings associated with the falling of the twin towers can come to be associated with individuals of Middle Eastern descent in the example above, or how a doctor may make different choices when treating Black women than a white man, for example. Researchers have investigated whether a transformation of stimulus functions could occur between stimuli associated with obesity and with arbitrary, neutral stimuli. Subjects participated in a “matching-to-sample”

preparation where they were indirectly trained to respond to horizontal and vertical lines as if there were stimuli associated with obesity or thinness. The results suggest that the functions of obese stimuli transformed to the neutral stimuli through derived training. Moreover, the research provided evidence that transformations of this kind only require a very brief training history (Weinstein, Wilson, and Kellum 2008).

Basic research provides support for the RFT conceptualisation of prejudice, and laboratory based protocols may reveal ways to undermine it. Key to this might be the ability to loosen relational networks perhaps by adding to the functions of groups or by making the relational frames of stereotyped groups overlap or merge with the other groups (Dixon, Zlomke, and Rehfeldt 2006). However doing this under laboratory conditions has proved difficult.

In stimulus equivalence experiments, researchers noted that in Northern Ireland surnames often distinguished one religious background (i.e. Protestant or Catholic) from another (Watt et al. 1991). They conducted a study using subjects from both Northern Ireland and England. Subjects were trained to relate 3 Catholic surnames to 3 nonsense syllables and later to relate the nonsense syllables to three Protestant symbols. Subjects were then tested to see if relations of equivalence had been established. They were presented with the Protestant symbols and given the options of selecting a Catholic name from training or a new, novel Protestant surname. All of the English subjects followed their experimental training and chose the Catholic name, but 12 of the 19 subjects from Northern Ireland chose the new novel protestant name. It seems that laboratory based training was weaker than the pre-existing relationships that had already been established for the Northern Irish subjects. Results such as this are not uncommon. Responding to the events of September 11, 2001, researchers tried to form frames of coordination between terrorist and American images, in subjects, in an effort to reduce prejudice (Dixon, Zlomke, and Rehfeldt 2006). However, across two experiments most participants did not form such frames and the researchers concluded that the training within the laboratory based experiment was not yet sufficient.

It appears that, as yet, laboratory based procedures related to RFT are not sufficient to counter real world examples of prejudice. However fruitful research has already taken place using a clinical, behavioural approach that is “consciously derived from RFT” (Wilson et al. 2002 p.231), namely ACT.

## **Acceptance and Commitment Training**

While RFT provides the basic psychological theory to explain how prejudice can arise from human language, ACT may provide the behavioural antidote. In brief, the ACT model suggests that six inter-related, double-sided, processes are key to much human suffering or, conversely, psychological flexibility (i.e. the ability to sustainably move towards that which truly matters to you, in full contact with the present moment). The ACT model has been written about extensively (Luoma, Hayes, and Walser 2007; Hayes et al. 2006; Hayes, Strosahl, and Wilson 1999). In short, ACT can give us the ability, not to stop prejudicial thoughts or feelings, but to have the flexibility to let our mind do what it will and at the same time to live life in accordance with that which we value most. It can provide personal, experiential insight into what our mind does, how this can dictate our behaviour, and how awareness of this can allow us more control over what we do, moment to moment, in everyday life.

ACT, unlike other psychological approaches, does not set out to change the form or content of thoughts (including prejudicial ones) but to change their function or context – including the influence they have on us and our behaviour. Typically, when we become entangled with thoughts we may respond in accordance with them or do what they say. Prejudicial thoughts are seen as a natural part of human existence but this does not mean that our behaviour needs to be directed by them. Instead of trying to change the thought (either its occurrence or what it says), ACT would suggest it might be more useful to change our relationship with the thought. ACT encourages flexibility in the face of such events including the willingness to experience. Such work includes becoming more aware of our own prejudices, biases and intolerances.

It may seem odd to work with prejudicial thoughts without trying to change and challenge them, but evidence for successfully working in this way existed before ACT existed as an approach. In one experiment, children in one room were told that a disabled child was in the next. The children were then asked to name any prejudicial thoughts they had. One group of children had their thoughts acknowledged, the other had them corrected. Then both groups were taken into the room where the disabled child was. The group of children who had had their thoughts corrected avoided the disabled child more than the group who had such thoughts acknowledged (Langer, Bashner, and Chanowitz 1985). As well as providing support for an ACT way of working, the results of research such as this might again help us consider the potential for accidental detrimental side effects of some forms of education.

The research evidence for using ACT as a therapeutic approach is growing steadily in both mental

health and behavioural medicine (Hayes et al. 2006); there is also evidence that it is useful in organisational settings (Bond and Hayes 2002). A small but growing evidence base is demonstrating its use in the amelioration of prejudice. Although it may seem a leap, researchers in this area argue that the thoughts that might potentially be involved in prejudice (e.g. “The poor are undeserving”) are not dissimilar to thoughts that potentially bring people into therapy (e.g. “I am undeserving”) (adapted from Lillis and Hayes 2007).

## **ACT Interventions**

Below are the details of three illustrative interventions that use ACT to reduce (1) racial and ethnic minority prejudice in students, (2) stigma towards individuals with mental health problems and (3) drug and alcohol counsellors stigma towards clients. In these group based interventions the “T” in ACT which usually stands for therapy is replaced by a “T” for training.

From the perspective of ACT and RFT, in all three cases, the core of bias, prejudice and stigma is felt to be the objectification and dehumanization of human beings because of their participation in verbal evaluative categories, and it is these processes that studies of ACT have been designed to address.

In 2007, Lillis and Hayes published a study that applied ACT to the reduction of prejudice towards racial and ethnic minorities (Lillis and Hayes 2007). The research compared the effectiveness of an ACT intervention to one based on education. The study used a counterbalanced within-group design and subjects included 32 undergraduates all of whom participated in both the ACT and the education condition. A new questionnaire was designed for the study called the “Prejudicial Biases Awareness, Defusion, and Action Questionnaire”. It contained items which examined positive action intention and other relevant domains within the ACT model (awareness and acknowledgement of bias, acceptance and flexibility, thought control and general defusion skills). The questionnaire was administered 5 times (before the first session, after the first session, before and after the second session and at follow up one week later). Each session lasted 75 minutes.

The education intervention was based on material from a popular psychology textbook on cross-cultural counselling. It explored the characteristics of three different racial groups (African Americans, Asian Americans and Hispanic or Latino Americans) particularly their strengths and common stereotypes. Time was also spent identifying and correcting ones own biases, and seeing

the unique aspects of others. The ACT intervention aimed to raise awareness of personal private prejudicial events (thoughts, feelings and behaviours), increase acceptance of these, increase ability to notice other general evaluative language processes, and to act in accordance with their personal values.

The ACT intervention improved the primary outcome, positive action intention, significantly at post treatment and at follow up 1 week. It produced an average improvement of between 18 and 19%. Education produced no significant overall change in positive action intention. In terms of process change, “acceptance and flexibility” as measured by the questionnaire produced the largest differences at all time points. In a subsequent analysis, acceptance and flexibility were shown to partially mediated the impact of the ACT intervention on positive outcomes.

Also in 2007, another study investigated the impact of an ACT intervention on the stigma associated with psychological disorders (Masuda et al. 2007). The study utilised 95 undergraduates, half of whom were assigned to an ACT condition and half to education. Both interventions lasted 2 ½ hours. The study used the “Community Attitudes Toward Mentally Ill – CATMI questionnaire (Taylor and Dear 1981), which was redesigned for a college population, and the Acceptance and Action Questionnaire - AAQ (Hayes, Strosahl, et al. 2004). Scores on the AAQ were used to determine whether subjects were psychologically inflexible ( $\leq 66$ ) or psychologically flexible ( $\geq 67$ ). Thirty percent of those in the ACT condition and 26% of those in the education condition were classified as psychological inflexibility before the training. Measures were taken at pre and post intervention and at one month follow up.

The education condition included group activities, discussion and didactic presentation. The material was delivered in a non-confrontational manner to avoid paradoxical effects but still aimed to replace subjects' stigmatising thoughts with new non-stigmatising ones. Conversely, the ACT condition emphasised that stigma is built into natural language and instead drew its material from a series of experiential tasks based on a classic ACT textbook (Hayes, Strosahl, and Wilson 1999).

Subjects with higher levels of psychological flexibility at pre-treatment reported less stigmatising on the CAMI compared to those with lower level of psychological flexibility. At post treatment, results indicated that the ACT intervention reduced stigma score in both people who had high and low psychological flexibility. The education condition only reduced stigma for people with high levels of psychological flexibility at pre treatment. At follow up, all scores showed slight but non significant

drops.

Finally, a third study included an ACT intervention designed to impact stigmatizing attitudes within drug and alcohol abuse counsellors (Hayes, Bissett, et al. 2004). The study contained three conditions: control, multicultural training and ACT. One hundred fifteen counsellors took part (30 in the ACT condition, 34 in the multicultural training and 29 in the control). The training took place on 1 day and all interventions lasted 6 hours.

Measures were taken at pre treatment (the start of the day), post treatment (the end of the day) and follow up data was collected 3 months later. The primary measure for the study was the Community Attitudes Toward Substance Abusers (CASA), an adapted version of CAMI (Taylor and Dear 1981), the Maslach Burnout Inventory – MBI (Maslach, Jackson, and Leiter 1996) and an ACT measure called: “Stigmatizing Attitudes – Believability” (SAB) constructed for the study. The SAB contained 20 common thoughts about individuals with substance use problems and asked subjects to rate the believability of such thoughts.

The control group received education on drugs which, among other things, emphasised the biological factors involved in addiction and treatment. The multicultural training condition contained information on culture, race, ethnicity, family structure, spirituality, and language - with the latter focusing on making subjects more aware of the stigmatising effects of cultural bias. Similar to the above studies, the ACT condition explored the role of natural language processes within the client relationship.

The results suggest that in terms of stigma (as measured by the CASA), compared to pre intervention the control condition did not produce a significant change at either post treatment or follow-up. The multicultural intervention was found to have a significant change at post intervention but not at follow-up and the ACT showed no change at post treatment but was significantly improved at follow-up. In terms of burnout, again the control condition showed no change at either time point. The multicultural intervention showed change at post treatment but not at follow up, while ACT produced a significant change at both post treatment and at follow-up. Regarding process, ACT altered the believability of stigmatizing thoughts (as measured by the SAB) and it was this that appeared to mediate the ACT conditions influence on stigma and burnout scores.

Taken together these studies suggest a significant future role for both RFT and ACT in our understanding and amelioration of prejudice and its possible role in health care disparities. The research above does need to be placed in context and treated modestly. Some of the studies had relatively small sample sizes, all used measures constructed for the purposes of the study and none contained direct measures of behaviour (only self report). That said, the suggestion that useful changes can be achieved as a result of such brief interventions hint at the possible potency of such approaches. Researchers are clear that these studies should not be taken to suggest that multi-cultural and educational approaches should not be used; instead it might be more useful to combine them with ACT interventions in order that the ACT related material might prevent the “psychological misuse” of the educational information (Hayes, Bissett, et al. 2004).

### **Widening the scope**

This chapter focuses its attention at the level of the health care professional, at the same time the IOM and PHR reports discuss the need for awareness and changes at many levels (e.g. general public, patients, insurance companies, policy-makers *and* health care professionals). Each of these levels involves human beings subject to the same processes of language and thinking that have been described and investigated by RFT. All of us have similar potential to be caught in the prejudicial traps that are set by human language. Accordingly wide ranging benefits could be achieved from wide application of ACT-consistent methods designed to help individuals live alongside and not at the beck and call of their psychological experiences. Research in this area is just beginning and much more is needed both to substantiate these initial findings and to fully investigate the potential scope of the methods described above.

This chapter deliberately focused its attention on bias and prejudice within US health care towards racial and ethnic minorities. Indeed within the US, the term “health disparities” tends to have such a focus (Braveman 2006). However, it is hopefully clear that this is not the only place where prejudice in health care can be found, nor the only place where the application of ACT and RFT might be useful. Bias, prejudice, and therefore potential disparity in one form or another are likely to be found wherever we are prepared to look, wherever the categorical qualities imposed on people dominate over their individual human qualities. In these instances human beings can become objectified and dehumanized because of their participation in processes of normal, automatic, verbal evaluation.

Disparities have been documented in many other health areas. In chronic pain, for example, research used to suggest that apparent racial and ethnic minority differences in pain perception might reflect underlying differences in biology (Edwards, Fillingim, and Keefe 2001), although increasingly research now reports that differences may be reduced or eliminated when subjects are matched more closely on different variables (Edwards et al. 2005; McCracken et al. 2001) . However disparities in the treatment for chronic pain echo the story told repeatedly above (Bonham 2001; Carey and Garrett 2003), which is also echoed in mental health research (Cook, McGuire, and Miranda 2007; McGuire et al. 2008; Zito et al. 2005). There are many areas of division and inequality and researchers are now even examining the role of multiple disparities. Here individuals may have to contend with the combined impact of belonging to two or more powerful verbal evaluative categories, for example a racial and ethnic minority group and a lower socio-economic class (Williams and Jackson 2005; Chu, Miller, and Springfield 2007), or categories related to “medically unexplained” chronic pain, those considered to be “somatizing” patients, and those regarded as “mentally ill”.

Of course racial and ethnic minorities are not the only area within which disparity has been investigated. Other domains include socioeconomic status (Braveman, 2006; Morenoff et al. 2007; Krupski et al. 2005), gender (Healy 1991; Orth-Gomer 2000), and multiple disparities, such as gender and disability (McCarthy et al. 2006). Indeed the list of personal differences that can provide the basis for disparities is practically unending. Presenting illness, co-morbid condition, race, ethnic origin, gender, age, weight, height, accent, religion, intelligence, job status, job title, social class, sexual orientation, mental health, emotional state, disability, perceived attractiveness and dress are but a tiny selection of words which arbitrarily relate to other events or experiences that might, on occasion, come to influence our behaviour towards others.

Braveman (2006) notes that pursuance of fair and equally accessible health care is not a matter of ethics but of human rights and states that the “right to health can be operationalized as the right of all social groups to attain the level of health enjoyed by the most privileged in society” (Braveman and Gruskin 2003; Braveman 2006). Increasingly researchers are looking not just within national boundaries but across national boundaries to explore the disparities and inequalities in health (Wallace 2008).

Disparities in health care are rooted in multifaceted, complex, historical causes. They are built into natural processes of language, categorization and judgement. They are acting on your behavior now as you read this chapter. Addressing inequalities of service access and health is no less

important than addressing effects of infection, heart disease, cancer, or other diseases and yet the challenge may be greater in some ways. Our methods of detecting, understanding, and treating the root causes of health disparities are in their infancy. It appears, however, that there is a clear role for the use of RFT and ACT to help examine the innumerable accumulating individual choices, the actions and contexts that constitute disparities in health care, and to use this knowledge to help reduce inequalities in health care at local, national and global levels.

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