CASE STUDY OF A PSYCHOSOCIAL MENTAL HEALTH INTERVENTION IN SÃO PAULO, BRAZIL

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ABSTRACT

Common mental disorders are responsible for a significant proportion of the global burden of disease. Differences in the availability of health care resources and the relevance of culture in the acceptability of treatments for mental disorders make it necessary to develop and evaluate interventions congruent with the context of specific settings. Group psychosocial interventions are a potentially cost-effective way of dealing with CMD in primary care. However, the literature describing and evaluating these interventions in low and middle-income countries is limited.

This case-study describes Community Therapy (CT), a group psychosocial intervention developed in Brazil and hypothesized to improve mental health through social support. Although it is now widespread in the Brazilian primary health care, CT has not yet been submitted to systematic evaluation.

This thesis analyzed data from an observational before/after design sampling 140 incident users from 12 CT groups located in primary care clinics and community settings of Sao Paulo, Brazil. Outcomes included mental health, perceived social support, quality of life, and social capital. Semi-structured interviews with CT users and facilitators as well as observation of CT sessions were also performed.

The majority of respondents were female with few years of schooling, low income and a poor mental health. After 12 weeks of follow-up, there was an average two-points improvement in mental health SRQ-20 scores (95% CI: 1.04-3.00, $p<0.001$) but no significant correlation with perceived social support change. Qualitative descriptions of CT, however, coincided with the mechanisms hypothesized to improve social support.

Poor adherence and the lack of integration of CT users with conventional mental health care services were likely to have contributed to the modest change in the mental health of CT attenders. The effectiveness of CT should be further investigated in the context of a stepped-care multi-component intervention, whereby CT is included as its psychosocial component.

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LIST OF MAIN ABBREVIATIONS

ABRATECOM   Associação Brasileira de Terapia Comunitária (Brazilian
               Association of Community Therapy)
CCDAN   Cochrane Collaboration Anxiety, Depression & Neurosis Group
CI   Confidence Interval
CMD   Common Mental Disorders
CT   Community Therapy
DALYs   Disability Adjusted Life-years
DSM   Diagnostic and Statistical Manual of Mental Disorders
FHP   Family Health Programme
FHT   Family Health Teams
GP   General Practitioner
HDI   Human Development Index
NICE   National Institute for Health and Clinical Excellence
MOS   Medical Outcomes Survey
PC   Primary Care
RCT   Randomized Clinical Trial
RTM   Regression to the Mean
SE   Standard Error
SRQ   Self-Reporting Questionnaire
SASCAT   Short Adapted Social Capital Assessment Tool
WHO   World Health Organization
WHOQOL-BREF   World Health Organization Quality of Life Instrument abbreviated

FOREWORD

My motivation for engaging in the research project to be presented in the following pages was my experience working in the mental health department of the Health Secretariat of the city of São Paulo, Brazil, between 2002 and 2004. My main responsibility at that time was to develop and supervise a mental health strategy for the primary health care of the 10.5 million inhabitants of this city, to be administered through nearly 400 primary care clinics. Needless to say I didn't think I was prepared for the task (and in this respect I believe I was right), but in the context of the reforms taking place in mental health care in São Paulo at the time, newcomers were welcomed.

One of the first things I did when I got the job was to study carefully a review commissioned by the World Health Organisation on the effectiveness of mental health services in primary care in developing countries (Cohen, 2000). It was with dismay that I read the following lines:

"Finally, in the absence of thorough documentation and rigorous evaluation of programmes we have too little knowledge about what works (…) Unless service models can be demonstrated to deliver effective treatments and care, there is little reason to believe that advocacy efforts will expand mental health services to underserved populations" (p.32)

It was while looking for psychosocial interventions that could be used in the primary care clinics of São Paulo that I first learned about community therapy. Two of its features interested me. First, it was developed in Brazil, using many elements dear to Brazilian culture, such as music and physical contact. Second, it was a group intervention, usually led by facilitators without previous mental health training, which meant that it could be easily scaled-up if effective. Its impacts, however, had never been assessed. Concerned with this discovery, I contacted Adalberto Barreto, the psychiatrist and anthropologist who had developed the practice of community therapy. I also began to ask people about community therapy in a series of meetings

with health workers interested in mental health strategies for primary care. To my surprise, one psychologist and one nurse had already independently started to experiment with community therapy in national health service centres in São Paulo. We formed a team to develop a pilot training programme and convinced the Municipal Primary Health Care Department to fund the project.

To my disappointment, however, I was unable to link this pilot project with a thorough evaluation process. The Health Secretariat of the city of São Paulo did not usually conduct systematic evaluations of its new policies, nor did it have the resources to do so. I looked for help in the academic sector, but Barreto was an outsider to that milieu and community therapy was not taken seriously there. I was also beginning to discover how difficult it was to combine the political and academic ethos.

Recalling my psychoanalytical background, I can say that this PhD is an attempt to make up, at least partially, for two frustrations I experienced while working for the mental health programme in São Paulo. Namely, the impossibility of justifying all policy choices through the presentation of empirical evidence, and the difficulty of combining the implementation of policy with the systematic evaluation of impact. In reality, I don't believe anyone can honestly claim to resolve these issues in any area of (health) policy making. Society will always have to rely on ethical values and social control to orient and justify its policy choices. On a personal level, however, I can say that this PhD has strengthened my desire to contribute to the building of mental health strategies in primary care, and to bridge the gap between the worlds of health policy making and research in Brazil.

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and critical reader of this thesis as well as a constant guide through the journey of a PhD student. Professor Vikram Patel, my co-supervisor, provided fundamental support in the development of the design of this project and help with interpretation of the quantitative results of my research. Professor Trudy Harpham contributed to the methodology, particularly its qualitative aspects. Andrew Hutchings kindly oriented and revised my statistical analysis. Professor Paulo Menezes helped me to secure funding from CNPQ and made available all his experience in conducting fieldwork in São Paulo. He was also my first mentor in research and encouraged me to apply for this PhD. Professors Roberto Tykanori Kinoshita and Valentim Gentil gave me much support in applying for a CAPES scholarship. I also owe to Tykanori's example, as my boss at the Mental Health Programme in São Paulo, the inspiration to engage in a Public Health career. Professor Adalberto Barreto patiently answered my questions on the beginnings of community therapy and the theories that influenced its development. A number of friends and colleagues also helped me throughout the course of this PhD: Jessie Sklair, Dorothea Rischewski, Wun Wong, Sergio Martins, Eduardo Correa, Jenni Burt, Sarah Sowden, Martin Cartridge, Vivian Comiti, Renata Nunes, Marcela Soares, Juliana Peppi, and Vanda Lucena. I also want to thank all the people who took part in this study, for believing that I would make good use of their time and personal experiences. I hope I have not disappointed them

Finally I want to mention the people who have inspired me – each in their own ways – over the years: Elisabeth, MAG, Zilah, Sonia and Benjamim.

And Daniela, without whom this journey – and others – would simply be impossible.

Cohen, A. (2000). The effectiveness of mental health services in primary care: the view from the developing world. Geneva, World Health Organization.

CHAPTER ONE

BACKGROUND

This chapter discusses themes that form the background of this research. In the first section I discuss epidemiological, conceptual and policy matters related to the most common manifestations of mental ill health seen in primary health care. In the second section I undertake a systematic revision of the literature on mental health group interventions for primary care in poor and middle-income countries. In the third section, I review the epidemiological literature and policy issues related to common mental disorders in Brazil.

SECTION I
MENTAL HEALTH IN PRIMARY CARE

1.1.1 THE BURDEN OF COMMON MENTAL DISORDERS

Studies have shown the high prevalence of mental disorders in the community and among primary care (PC) users. A review of 12 studies from nine countries found prevalence of mental disorders ranging from 10.3% to 28.8% in men and 18% to 37% in women (de Girolamo and Bassi, 2003). The average prevalence among PC users was 24% in a study including 15 different cities in developed and developing countries (Goldberg and Lecrubier, 1995). Depression, anxiety, substance-related and somatoform disorders are the most common mental disorders both in the community and in PC settings. Mild to moderate symptoms of depression, anxiety and somatisation tend to overlap, share similar risk factors and follow the same course (Goldberg and Huxley, 1992). Somatic presentations of psychological distress and mixed anxiety-depressive states are a common feature of PC users. These patients are often labelled as having common mental disorders (CMD)(Goldberg and Huxley, 1992). Findings reported from studies using the term 'common mental disorders'

usually refer to patients scoring above a certain threshold on screening instruments (such as the General Health Questionnaire and the Self-Reporting Questionnaire) that indicate a probable diagnosis of depression and/or anxiety without defining a particular nosological category (Lorant et al. 2003).

In addition to being prevalent, CMD are associated with significant self-evaluated general and occupational role disability. Patients rate depression as more disabling than other common conditions as arthritis, back pain, and diabetes (Ormel and Costa e Silva, 1995). A linear gradient starting at subdiagnostic levels of symptoms (below diagnostic thresholds) was found between common mental ill-health and disability (Goldberg, 2000).

If we consider the global public health impact of CMD, depression is the forth most important condition in terms of burden of illness, accounting for 4.5% of Disability Adjusted Life Years (DALYs) estimated for 2002. In developing countries with lower child mortality rates (a group which includes Brazil) this figure rises to 6.0% of DALYs putting depression as the most important cause of burden of illness (Mathers, Bernard et al., 2004).

Besides the burden they directly cause, depression and CMD also have indirect effects by impacting on physical health. There is consistent evidence that depression and other CMD are independent risk factors for coronary heart disease and stroke (Prince, Patel et al., 2007). The association of depressive symptoms with heart disease and with stroke follows a continuous dose-response pattern beginning at subdiagnostic levels of depressive symptomatology (Rozanski, Blumenthal et al., 2005; Prince, Patel et al., 2007; Surtees, Wainwright et al., 2008). This means that even mild manifestations of mental ill-health have an impact on these cardiovascular diseases. Although CMD are associated with a number of lifestyle risk factors for cardiovascular disease, these do not fully explain the positive association between the two. A number of likely direct biological mechanisms linking mental ill-health and physical disease have been identified (Marmot and Wilkinson, 2001; Prince, Patel et al., 2007). There is also consistent evidence that CMD worsen the prognosis of patients in treatment for diabetes and HIV/AIDS. Finally, it has been shown that

depression in mothers may also have a negative impact on the growth and development of their children (Prince, Patel et al., 2007).

The economic implications of the burden of CMD are significant. In Britain, roughly 40% of incapacity benefits are due to mental disorders. This represents one million people living on those benefits, more than the total number of people receiving unemployment benefits in 2005. Based on these figures, the estimated loss in economic output for depression and anxiety alone was set at 1% of Britain's total national income (The Centre for Economic Performance's Mental Health Policy Group, 2006). The best available estimate for the economic impact of depression in Brazil is a study which puts affective disorders (including bipolar disorder) as the fifth cause of incapacity benefits in the formal sector of the labour market (Anonymous, 2007).

1.1.2 THE TREATMENT GAP FOR COMMON MENTAL DISORDERS

In spite of the evidence on the burden of CMD and on the effectiveness of existing treatments (Patel, Araya et al., 2007), there is still a significant gap between treated and untreated cases of CMD. The median treatment gap for CMD has been estimated to be between 55.9% (panic disorder) and 57.5% (generalized anxiety disorder) in a review of studies from different regions of the globe (Kohn, Saxena et al., 2004). Scarcity of resources, inequities in their distribution, and inefficiencies in their use have been identified as the three main obstacles to closing the mental health gap, particularly in low and middle-income countries (Saxena, Thornicroft et al., 2007).

1.1.3 DIMENSIONAL AND CATEGORICAL APPROACHES OF COMMON MENTAL DISORDERS

There is an ongoing debate about whether common mental disorders are best defined by dimensional or categorical approaches (Goldberg and Goodyer, 2005; First, 2006). The choice between these two different models has implications for the analysis of research data and for the delivery strategies of treatment interventions. There is empirical evidence that symptoms of common mental disorders have a unimodal, continuous distribution both in the general population (Melzer, Tom et al., 2002) and in those consulting primary health care services (Goldberg, 2000). This means that no natural boundary was found between normality and psychiatric caseness in terms of

presence and severity of symptoms. As mentioned above, the associations of mental ill health with physical illness and disability also follow a continuous gradient starting at sub-clinical levels of symptoms.

Similarly, findings from research on biological markers of major depression do not allow a clear demarcation between normality and caseness (Belmaker and Agam, 2008). A genetic influence on major depression is likely to be explained by the interaction of a number of genes whose modest individual effects are themselves modified by environmental factors. This can only result in a smooth gradient of genetic influence determining different levels of depressive symptoms (Kendler and Prescott, 2006).

Dichotomized diagnostic criteria are also of limited utility in terms of predicting the course of depression in individuals (Kendler and Gardner, 1998). Seen from a long-term time perspective, depressive symptoms also do not follow an "all or nothing at all" pattern. Depressive symptoms fluctuate along time from full recovery to clinical depression levels, with minor symptoms and borderline sub-diagnostic periods in between (Judd *et al.* 1998).

Thus it does not seem possible to justify the definition of a threshold for caseness of CMD in terms of ethiology, physiopathology or prognosis. Present thresholds simply try to establish a mean level of symptom severity at which the distress and disability they cause is believed to require treatment. Categories are therefore defined not because they reflect an elusive concept of disease but because there is a pragmatic necessity to identify which groups (categories) can benefit most from available treatment options, as it is the case for hypertension or obesity.

1.1.4 RISK FACTORS FOR COMMON MENTAL DISORDERS

Cross sectional and longitudinal studies have identified a number of risk factors for CMD. Taken in isolation, each of these risk factors is likely to bring a relatively small contribution to the onset and persistence of CMD symptoms. Kendler and Prescott's "simplified" model for the causation of depression in women, for example, included 18 variables divided into five developmental tiers with dozens of interactions between variables (Kendler and Prescott, 2006).

A systematic review concluded that prevalence of unipolar depression is consistently higher in women than in men, with sex ratios varying from 1.3 to 2.1 across studies in high and low income countries. In addition to biological differences, this ratio is most likely explained by psychological and gender role differences between men and women (World Health Organization, 2000; Kuehner, 2003).

Three systematic reviews have summarized evidence on adverse socioeconomic characteristics as a risk factor for common mental disorders. Fryers et al reviewed nine studies from high income countries using a number of measures of social position including education, employment status, income, assets and material standard of living (Fryers, Melzer et al., 2003). Four out of five studies measuring education found a significant association of fewer years of education with common mental disorders. Six out of seven studies found an association between unemployment and CMD. The most consistent association was found between income, assets or material standards and mental health: all six studies measuring these variables found a significant association between material poverty and CMD. Most odds ratios indicated a moderate effect of these poverty markers on CMD prevalence. Patel and Kleinman conducted a similar review but focused on poor and middle income countries only (Patel and Kleinman, 2003). They reported that ten out of eleven studies found an association between poverty markers and CMD, the most consistent result being for low education, rather than for income as Fryers et al found in high income countries. Lorant et al undertook a more inclusive review of 56 studies from high and low income countries (Lorant, Deliege et al., 2003). The majority of studies measured prevalence, but incidence and persistence of depression or CMD were also examined. A meta-analysis was performed and found that the overall unadjusted odds ratio for the lowest compared to the highest socioeconomic groups was of 1.24 (95% CI: 1.04-1.48) for incidence, 1.81 (95% CI: 1.57-2.10) for prevalence, and 2.06 (95% CI: 1.39-3.05) for persistence of depression or CMD. More recent studies do not differ significantly from these findings (Thomas, 2005; Skapinakis, Weich et al., 2006; Lorant, Croux et al., 2007).

The relation between income and depression or CMD in Lorant et al's review was found to be stronger than the association with education, probably reflecting the

greater weight of high-income countries' studies in the meta-analysis. The greater importance of education as compared to income in low and middle-income countries may be due to poor education being a marker of childhood adversity in these settings, which has been related itself to increased vulnerability to mental ill-health (Araya, Lewis et al., 2003).

The work environment was also related to mental health in a systematic review of longitudinal studies. Working positions which combine high demand with low decision latitude and unfair effort-reward balance have been found to increase the risk of future CMD in men, but not in women, when controlling for all relevant socioeconomic status variables (Stansfeld and Candy, 2006).

In conclusion, it is likely that poor socioeconomic conditions may have a small effect in the incidence of CMD and a moderate effect in the persistence of CMD.

With regards to the impacts of socioeconomic adversity on health, Marmot and Wilkinson characterized CMD as a clinical expression of the emotional meanings of socioeconomic adversity (Marmot and Wilkinson, 2001). Individual genetic and psychological factors, of course, also take part in the causation of CMD. Together with cultural contexts, they contribute in shaping the meanings people attribute to their social experiences. If the individual attribution of meaning to social experiences lies on the causal pathway between socioeconomic adversity and health, then it is also necessary to investigate this relation with qualitative tools capable of revealing these meanings.

Brown, Harris and a number of collaborators have investigated the emotional impacts of social experiences on CMD during more than 30 years of research in the UK and abroad. They combined in-depth qualitative investigation of individual meanings of life-events and context with quantitative analysis of their association with incidence of depression in longitudinal studies (Brown and Harris, 1978; Harris, 2000; Brown, 2002). They developed a typology of severe life events that commonly preceded the incidence of depression. Investigating a sample of 303 working class women from London, they found that 75% of the severe life events reported after one year were characterized as bringing feelings of humiliation or entrapment. 20% of the events

were felt as a loss but without feelings of humiliation or entrapment. The remaining 5% of events were perceived to be associated with danger and were related to the onset of anxiety. Humiliation was frequently related to the separation from a core tie, a delinquent act from a close person or being put down in a significant public situation. Entrapment events were described as those that confirm one's imprisonment in an ongoing punishing situation. Many of these humiliation and entrapment events involved loss. Although 29 of the 32 incident cases of depression were preceded by a severe life event, only around one in five women experiencing severe life events developed a depressive episode. This led Brown and his collaborators to investigate vulnerability risk factors that might account for the different impact of life events in women with similar socioeconomic characteristics. Two relevant dimensions were highlighted: a negative psychological dimension and a negative environmental dimension. The first consists of either low self-esteem or chronic subclinical anxiety and depression. The second accounted for the lack of an emotionally supportive close relationship. Women who had experienced a humiliation or entrapment event and had both vulnerability factors increased their chance of having clinical depression to 50%. Similar findings were replicated by other research groups in different settings (Brown, 2002; Goldberg and Goodyer, 2005).

What Brown et al described as the lack of an emotionally supportive close relationship corresponds to the concept of social support. High social support is consistently reported to have a protective effect against the onset and persistence of CMD (Brugha, 1995). More recently, the concept of social capital, which encompasses social support in addition to a civic participation dimension, has also been hypothesized to have a positive effect on mental health (De Silva, McKenzie et al., 2005) (see Chapter Two).

Low self-esteem is likely to be linked to the quality of both early attachment relationships and current core ties (social support) (Brown, 2002). Early attachment models also have an effect on the capability of individuals to build social support (Brown, 2002).

Other authors who investigated CMD also include neuroticism as a major dimension of vulnerability (Goldberg and Goodyer, 2005; Kendler and Prescott, 2006).

Neuroticism, a personality dimension measuring the predisposition to negative emotions, is likely to have a genetic component (Kendler and Prescott, 2006). However, neuroticism, just as self-esteem, is also influenced by environmental factors, notably, childhood adversity (Kendler and Prescott, 2006). Genes may influence CMD also by increasing the likelihood of people exposing themselves to severe life events, in what Kendler and Prescott call "the genetic control of exposure to environment" (Goldberg and Goodyer, 2005; Kendler and Prescott, 2006).

In conclusion, common mental disorders are the result of complex interactions between non-specific biological, psychological and environmental variables along the life course.

At least two additional features contribute to the complexity of the task of understanding the causation of CMD. First, the interpretation of quantitative measures of more conventional epidemiological variables has to be combined with an assessment of the meaning that particular social features have in different contexts and in both genders. The different impact of income and education on mental health in high and low-income countries and the varying effects of work environment stressors in men and women both illustrate the need to take account of social and contextual features in order to interpret epidemiological studies of CMD. Second, there is considerable overlap, let alone dispute, between concepts trying to capture the complex social and psychological processes related to mental health (i.e.: self-esteem and neuroticism; social support and social capital).

1.1.5 MENTAL HEALTH POLICY FOR PRIMARY CARE

A brief historical description of the evolution of mental health policy for primary care is now presented to contextualise the present state of research and policy in this area. The focus is on British developments and on World Health Organization (WHO) policy recommendations because of their influence in the constitution of the Brazilian National Health System, its mental health policy and Brazil's psychiatric research capacity.

It was only after World War II that concern with social welfare and community health in industrialized countries stimulated the interest of epidemiologists and public health workers in psychiatry. The development of the field of mental illness in general

practice during the 1950's and 1960's was a consequence of this growing interest in social welfare and the epidemiology of mental disorders (Shepherd, 1966). Until then, psychiatry had been more concerned with the treatment of severe and chronic mental disorders in institutions which were largely isolated from other health services and the community as a whole.

In the late 1950's, Shepherd and colleagues undertook a pioneering study on mental illness among patients attending general practitioners (GPs) in London (Shepherd, 1966). They found a high prevalence of mental illness and identified a number of difficulties concerning the care of mental ill-health in general practice. The first set of difficulties they found related to the organisation of services. Shepherd and colleagues argued that improvements in mental health care in general practice would require a reduction in GPs' caseloads to allow for more consultation time, together with the development of multi-professional teams within practices (including counsellors, social workers etc), and the integration of health care with ancillary resources such as social services. They also reported difficulties relating to GP's own concept of their professional role. GP's did not think it was their responsibility to deal with their patient's psychological health. For most of them, caring for the mental health of patients was not the reason behind their professional choice and medical school did little to motivate and train them to fulfil this task.

During the 1970's an international level policy consensus on the importance of mental health in primary health care was established. The WHO advocated the provision of basic mental health care in primary health care both in high and low-income countries (World Health Organisation, 1975; Thornicroft, Tansella et al., 1999). This resulted in the commissioning in 1975 by the WHO of a collaborative multi-site five year study on the feasibility and effectiveness of locally designed community mental health care in developing countries (Harding, Climent et al., 1983; Harding, d'Arrigo Busnello et al., 1983; Murthy and Wig, 1983; Sartorius and Harding, 1983). Most of the interventions included the training of primary care professionals to identify and treat neuro-psychiatric disorders. A pioneering experience in the State of Rio Grande do Sul in Brazil was included in the study (Busnello, 1976).

But difficulties in implementing policies to allow the management of mental health conditions in primary health care remained. Speaking at a conference on the subject in 1984, Desmond Pond, then Chief Scientist at the UK Department of Health and Social Security, stressed the difficulty of implementing measures that depended on long-term institutional and behavioural changes, such as those required to improve care for mental ill-health in primary care (Pond, Shepherd et al., 1986). He cited precisely the same difficulties that had been mentioned by Shepherd twenty years earlier. In Brazil, as in other developing countries, a handful of pioneering experiences undertaken during the 1980's to shift the management of mental health conditions into primary care did not find their way into national policy (Sartorius, Tansella et al., 1999) (see section III). WHO's 2001 annual report, which focused on mental health, put the integration of mental health into primary care as its top priority (World Health Organization, 2001). This represented an implicit admission of how little progress had been made in the previous 25 years.

Apart from generic institutional and behavioural barriers, another difficulty, more specific to the mental health policy context, led the WHO in the 1990's to revise the way it defined the relation between mental health services in primary care and community mental health. According to Thornicroft and Tansella, there was a shift from the belief that primary care was a necessary and essential foundation to allow the development of community psychiatry to the realisation that an improved community psychiatric service was necessary to enable better mental health care provision in primary care (Thornicroft, Tansella et al., 1999). Thus it was argued that mental health care initiatives in general practice could not be sustained without the supervision and support of strong community psychiatric services. This view was emphatically reinforced in a recent paper where difficulties in the implementation of mental health policy in primary care have been in part attributed to "misinterpretation of the Alma-Ata Health for All declaration to mean that the development of mental health in primary health care can be a free-standing activity" (Saraceno, van Ommeren et al., 2007) (p.84). In Brazil, the Ministry of Health indeed prioritized community psychiatric services before investing in mental health initiatives for primary care (Jacob, Sharan et al., 2007).

The difficulties in implementing mental health in the primary care of high-income countries bring different lessons. Learning from those lessons can help low and middle-income countries, like Brazil, to avoid making similar mistakes. In the United Kingdom, as in other high income countries, the emphasis during the nineties was in training general practitioners to increase recognition and treatment of CMD (Gask, 2007).

The evaluation of training packages for general practitioners, however, produced some disappointing results in high-income countries (Kroenke, Taylor Vaisey et al., 2000; Gask, 2007). Recent evidence from meta-analytical studies questioning the advantage of antidepressants compared to placebo in mild to moderate depression might partially explain those results (Kirsch, Deacon et al., 2008; Turner, Matthews et al., 2008). The reification of depression as a biological disease, therefore requiring biological treatment, and the marketing of the pharmaceutical industry raised the expectations on the benefits of antidepressants to non-realistic levels. This, combined with the paucity of studies on effectiveness of psychotherapeutic interventions, led to an over-reliance on medication.

Ensuring equity in the receipt of treatment for CMD is another challenge for mental health initiatives in primary care. There is evidence of a social gradient in the receipt of care by people suffering from common mental disorders (Kessler, Demler et al., 2005; Araya, Rojas et al., 2006; Kivimaki, Gunnell et al., 2007). In spite of their increased vulnerability to CMD, socially disadvantaged people receive less care than their more privileged counterparts. In this sense, the extension of mental health into primary care seems to have followed the "inverse equity hypothesis" postulated by Victora and colleagues for new public health programmes (Victora, Vaughan et al., 2000). In the context of child health, they showed that new packages of interventions initially reach those of higher socioeconomic status and only later affect the poor.

The lesson for low and middle-income countries is that increasing recognition of CMD and prescription of antidepressants is not enough to make a significant impact on the mental health of populations. It is necessary to develop strategies to increase the access to health care and acceptability of health interventions for CMD, particularly amongst socially disadvantaged groups. To improve the effectiveness of

interventions, other components have to be added to medication in the treatment of CMD, which is only natural if we consider the importance of psychosocial risk factors for their incidence and persistence.

1.1.6 COMMUNITY THERAPY IN THE CONTEXT OF RECENT DEVELOPMENTS FOR THE TREATMENT OF COMMON MENTAL DISORDERS

In the following paragraphs I discuss general features of community therapy and how they relate to some of the issues raised in the scientific literature for improving the treatment of common mental disorders. A full discussion on community therapy is given in Chapter Two.

1.1.6.1 Psychological therapies for common mental disorders

A number of psychological therapies are used in the treatment of CMD. The following paragraphs give a brief description of the most relevant ones and of the evidence supporting their use.

Cognitive behavioral therapy (CBT) was developed by Beck in the 1970's and has since become the most prominent psychotherapeutic technique in the psychiatric literature. It takes a psycho educational approach where patients learn to recognize distorted patterns of thinking and behaviors and develop skills to cope and counteract these thoughts and behaviors. CBT usually involves homework practice of its elements by patients (National Institute for Health and Clinical Excellence, 2009). The duration of the treatment for depression normally varies between 16 and 20 sessions. CBT can be delivered both individually and in groups. The principles of CBT have also been used to develop less intensive interventions including guided self-help and computerised CBT.

Compared to other psychological interventions for CMD, CBT is underpinned by the most extensive and robust evidence base, as a systematic review by the National Institute for Health and Clinical Excellence demonstrates. There is good evidence that it is as effective as antidepressants in the treatment of depression. Furthermore, CBT carries a lower risk of treatment discontinuation and of relapse at one-year follow-up when compared to antidepressants. The interpretation of data from studies combining CBT with antidepressants compared with antidepressants alone, and of

studies combining CBT and antidepressants versus CBT alone suggest that the main effect of the combination derives from CBT and not from antidepressants. The evidence concerning the effectiveness of group CBT is more restricted but it indicates that CBT is an effective treatment for mild depression (National Institute for Health and Clinical Excellence, 2009). CBT based group interventions have also been included in stepped-care packages for the treatment of depression (see Section Two). There is also good evidence that CBT is an effective treatment for panic disorder and generalized anxiety disorder (National Institute for Health and Clinical Excellence, 2004).

Interpersonal psychotherapy (IPT) is a structured psychological intervention derived from the interpersonal model of affective disorders. Therapist and patient work collaboratively to identify problematic areas related to interpersonal conflicts, role transitions, grief and loss. They seek to reduce symptoms by learning to cope or resolve these problems (National Institute for Health and Clinical Excellence, 2009). Compared to CBT, there are fewer studies evaluating the effectiveness of IPT. However, four RCTs indicate that IPT is as effective as CBT in the treatment of depression. There is also indication of IPT's superiority to placebo and usual general practitioner care (National Institute for Health and Clinical Excellence, 2009). Furthermore there are reports of the effectiveness of group IPT in the treatment of depression (see Section Two).

Counselling is a generic term mostly used in the United Kingdom to describe psychological interventions delivered by counsellors in primary care. There is no consistent and structured model for counselling. Studies often define counselling as an intervention delivered by an accredited counsellor, according to the British Association for Counselling and Psychotherapy (Bower, Rowland et al., 2003). The interventions delivered may include psychodynamic, systemic and cognitive-behavioural techniques (Bower, Rowland et al., 2003). Because of the absence of a clear definition of what is counselling the evidence on its effectiveness is still limited (National Institute for Health and Clinical Excellence, 2009).

Problem-solving is a structured individual psychological intervention derived from CBT principles. It focuses on learning to cope with specific problem areas. Therapist

and patient work collaboratively to identify and prioritise key problem areas, to break problems down into specific, manageable tasks, problem solve and develop appropriate coping behaviors for problems. It is mostly used in primary care but evidence of its effectiveness is limited (Huibers, Beurskens et al., 2003; National Institute for Health and Clinical Excellence, 2009).

Nice guidelines for anxiety and particularly depression favour the use of a stepped-care approach whereby low-intensity interventions are the first step of care for sub threshold and mild to moderate cases. These low intensity interventions include physical activity (particularly when it is group-based) in addition to guided self-help and computerised CBT. Group CBT is considered the first option when patients refuse low-intensity interventions. For individuals who do not benefit from these interventions, practitioners should discuss with patients the choice amongst antidepressants, individual CBT, IPT or counselling (National Institute for Health and Clinical Excellence, 2009).

Community therapy is not readily comparable to the psychological techniques described above (See Chapter Two for a description of CT). Therefore, it is not possible to extrapolate the evidence regarding these psychological therapies to CT.

1.1.6.2 Improving access to and acceptability of treatment

Public health programmes offering free intervention packages are a necessary condition to improve the access to and close the inequity gap in the receipt of treatment for common mental disorders (Victora, Vaughan et al., 2000; Araya, Rojas et al., 2006).

However, to improve the intake of care it is also necessary to increase the acceptability of treatments for patients. Some researchers advocate that health services, perhaps in partnership with other community resources, should also offer interventions not explicitly directed to "disordered" people. Interventions such as psychoeducational workshops and support groups focused on relevant underlying themes for common mental disorders (i.e. social support, self-confidence, self-esteem) could avoid stigmatisation and attract those who otherwise would not look for help (Brown, Elliott et al., 2004; Mann, Hosman et al., 2004).

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Community therapy is being offered as a free intervention in the context of the Brazilian public health system. Community Therapy groups led by primary care professionals in Sao Paulo are offered as a support group for anyone going through "personal difficulties". They are not publicized as an intervention for "disordered" people. They function as "walk-in" meetings, where no previous professional referral is needed. Besides, a significant proportion of groups take place outside clinics, in community settings as churches and local charities, which are less stigmatizing than clinics.

1.1.6.3 Improving effectiveness

Recent mental health interventions developed for primary care commonly share three characteristics: they have more than one active component, they involve collaboration between primary care and mental health workers, and they use a stepped-care approach to address patients' needs.

Systematic reviews have tried to identify which components of complex interventions are more effective in the treatment of common mental disorders. The most commonly used components are: patient education and self-management, systematic monitoring of symptoms and adherence, decision support for medication management, and specialist supervision (Williams, Gerrity et al., 2007). Bower and colleagues identified two predictors of better response in terms of depressive symptoms for complex interventions: specialist supervision and having a mental health background for care managers (Bower, Gilbody et al., 2006). These findings seem to confirm the importance of expertise and collaborative care (supervision) between mental health and primary care personnel.

Community therapy groups were not offered in Sao Paulo's primary health care as part of a multi component stepped-care intervention. They were simply added to usual care provided by primary care clinics. Therefore, community therapy should be regarded as a psychosocial technique which could be one component of a more complex intervention.

1.1.6.4 Cost-effectiveness

Cost-effectiveness is a major concern for complex mental health interventions in primary care since they have been shown to increase costs in relation to usual care (Gilbody, Bower et al., 2006). This is particularly relevant to ensure that treatment can be offered universally in the public health systems of low and middle-income countries. The stepped-care approach has the clear objective of improving efficiency in the use of resources. In a way it resembles how clinicians usually operate selecting the least intensive treatment modality according to an evaluation of patients' needs. But in complex interventions it involves a systematic monitoring of patient's progress and structured support to decide when treatment intensity must be increased (Bower and Gilbody, 2005).

There is still a significant shortage of research on less resource intensive psychosocial interventions such as self-help groups and paraprofessional-led psychotherapy which have the potential for 'scaling up' and could reach a large number of patients efficiently (den Boer, Wiersma et al., 2004; den Boer, Wiersma et al., 2005). However, evidence on the importance of a mental health background for those involved in the care of patients must caution against oversimplifying training programmes for facilitators of this kind of intervention.

Facilitators of community therapy groups are not required to have a mental health background. In Sao Paulo, most of them were nurses, social workers and health visitors. This made it possible to offer the intervention in the poorer regions of the city, which are underserved by mental health specialists, and where no other psychological treatment was available.

1.1.6.5 Context specificity

There is an obvious need for culturally-appropriate evidence to inform public health policies in mental health for primary care (Patel, 2000). Cultural differences influence the presentation of psychopathology and the response and acceptability of treatment options. Variation in health systems and resources, including numbers of specialized professionals, may also undermine the validity of evidence from different contexts. New interventions must also be acceptable to primary care workers who are going to deliver them. In 2000, a revision commissioned by the WHO examined the evidence

on the effectiveness of mental health services in primary care in developing countries (Cohen, 2000). The general conclusion was that evidence was poor for the treatment of common mental disorders. The revision also highlighted the need for considering culturally appropriate forms of group therapies in these settings.

Community therapy was developed in Brazil by a Brazilian psychiatrist well familiarized with the context of deprived urban populations. It combines elements of widespread experiences of social work with poor populations that have decades of history in Brazil and other Latin American countries.

1.1.6.6 Concluding remarks

Evidence of the significant burden of CMD has not been enough to make it a public health priority. The complexity of the processes leading to CMD called for the development of equally complex interventions. Such intervention models are now available (Patel, Araya et al., 2007). The evidence reviewed favours interventions that include psychological strategies, and medication when needed, as well as strategies to make an efficient use of available resources. Features of community therapy make of it a potential component of complex interventions for CMD in low and middle-income countries.

SECTION II

MENTAL HEALTH GROUP INTERVENTIONS FOR PRIMARY CARE PATIENTS IN POOR AND MIDDLE-INCOME COUNTRIES: A SYSTEMATIC REVIEW

This section reviews the literature on interventions for common mental disorders in primary care that include a group psychotherapy (or "talk therapy") component. The choice to restrict the review to interventions using group psychotherapy in primary care is justified because it allows comparison with the intervention being studied in this thesis. To increase the relevance for the Brazilian context, only studies based in low and middle-income countries were included.

1.2.1 METHODS

1.2.1.1 Selection criteria

- Period of publication covered: from 1982 to May 2008

- Language of studies: English, Spanish, Portuguese and French

- Types of study design: As the objective of this review was to identify group interventions for CMD used in low and middle-income countries, any type of study, observational or qualitative was included. A quality assessment of the methodology of selected studies was performed.

- Types of participants: Adults (18years old +) living in low and middle-income countries diagnosed with CMD in primary care. Low and middle-income countries were defined according to World Bank classification lists based on gross national income (World Bank, 2008). The definition of CMD used corresponds to the International Classification of Disorders' (10th edition) categories of mood disorders (excluding bipolar, cyclothimic and psychotic mood disorders), anxious disorders (excluding obsessive-compulsive disorder), somatoform disorders and adjustment disorders (World Health Organization, 1992). Primary care was defined as health services offering the first level of contact of individuals with generalist health professionals (Green, Phillips Jr et al., 2004).

- Types of intervention: any intervention for CMD in primary care using group talk therapy. Talk therapy was defined as any kind of technique based on spoken interaction between therapists and patients and patients amongst themselves. Only

studies providing a description of the intervention (or an available bibliographic reference with this description) were included in the review.

- Types of outcome measures: measures of mental health status were the main interest. Functional impairment, social support, use of health services and user satisfaction were also considered relevant outcomes and were investigated.

1.2.1.2 Search strategy

Sources:

- Databases: Medline, Embase, PsycInfo, Web of Knowledge, Cochrane, LILACS, ELDIS.
- Reference lists of retrieved articles, reviews and books were scanned and references followed up.

Strategy: search terms used by the Cochrane Collaboration Depression, Anxiety and Neurosis (CCDAN, 2005) and 2 Cochrane reviews (Bower, Rowland et al., 2003; Huibers, Beurskens et al., 2003) were used as a basis for searching Medline, Embase, Psycinfo and the Cochrane Database. For complete search strategies, see Annexe I.

1.2.2 RESULTS

Figure 1 summarizes the results of the main search. An additional search with additional terms was performed, but no new references were retrieved (see Annexe I). The searches were originally performed during March and April 2005 and were updated (using the same search strategy and sources) in May 2008.

The majority of studies eliminated by reading title or abstract were not located in primary care settings or included other diagnostic groups than common mental disorders. Many studies were concerned with the evaluation of interventions for depression and anxiety in patients with chronic or severe physical illnesses (e.g. AIDS, diabetes, cancer and dementia).

23 articles were selected for reading. 19 of these articles were considered not relevant for analysis. 12 of them were not located in primary care and recruited a number of specific population groups: AIDS patients (Molassiotis, Callaghan et al., 2002), survivors of natural disasters with Post-Traumatic Stress Disorders (Chemtob, Tomas

et al., 1997; Basoglu, Livanou et al., 2003), war refugees (Morris, Silove et al., 1993; Weine, Kulenovic et al., 1998; Layne, Saltzman et al., 2001; Neuner, Schauer et al., 2004; Bolton, Bass et al., 2007), battered women temporarily living in institutions (Kim and Kim, 2001), and Puerto Rican women living on social security in the United States of America (Comas-Diaz, 1981). Two articles described interventions taking place at tertiary teaching hospitals with patients referred by psychiatrists (Knijnik, Kapczinski et al., 2004; Hsiao, Yang et al., 2007). Five other articles were evaluating individual psychotherapeutic techniques (Sumathipala, Hewege et al., 2000; Zhang, Young et al., 2002; Liu, Huang et al., 2007) or relaxation and meditation techniques that had little to do with talk therapy (Vahia, Doongaji et al., 1973; Johnson, Shala et al., 2001). One further study (Luk, Kwan et al., 1991) was excluded because it did not include a description of the intervention used neither a supporting bibliographic reference describing it. It was not clear if it was a group or individual intervention. One article discussed the cost-effectiveness aspects of one of the trials selected for complete analysis (Araya, Flynn et al., 2006).

Only four articles were included for complete data extraction and analysis: (Araya, Rojas et al., 2003; Bolton, Bass et al., 2003; Bass, Neugebauer et al., 2006; Rojas, Fritsch et al., 2007). The article by Bass et al refers to the extended follow-up of the same trial described by Bolton et al in 2003. Tables 1 and 2 summarize data extracted from these studies. When sufficient data were available, calculations for attrition proportions, number needed to treat and effect size were performed. All three studies were randomised controlled trials of very good methodological quality, as assessed by the CCDAN score (see Annex II).

Figure 1- Flowchart of search results

| 1620 references | → | 23 selected for reading | → | 4 selected for analysis |
| 1603 excluded by title/abstract | 6 new references selected by review update in 2008 | 19 not relevant for analysis | |
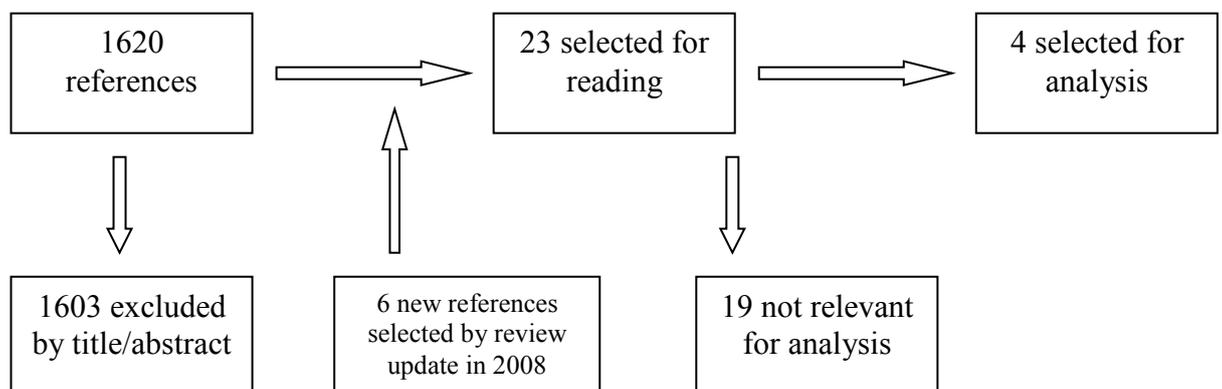
Table 1- Methodological characteristics of included studies

Trial	Setting	Study design	Sample size	Follow-up	Outcome measures	Quality score*
Araya et al, 2003	Chile 3 primary care clinics in deprived areas of Santiago, Chile's capital.	Randomized clinical trial (RCT)	n=240 (120 in each group) Attrition (6 months) Int.= 16 (13.3%) Control= 13 (10.9%)	3 and 6 months after initiation of treatment	Depression scale: HDRS Functional impairment: SF-36	38/42
Bolton et al, 2003 and Bass et al 2006	Uganda Rural villages No info on where the sessions took place	Cluster R54CT	30 villages n=248 patients (intervention=116 control=132) Attrition (10 months): Int.= 13 (11.2%) Control= 19 (14.4%)	4 and 10 months after initiation of treatment	Depression section of HSC Functional impairment 9 item questionnaire DSM-IV depression algorithm	39/42
Rojas et al, 2007	Chile 3 primary care clinics in deprived areas of Santiago.	RCT	n=230 (intervention=114 control=116) Attrition (6 months): Int.= 8 (7%) Control= 14 (12.1%)	3 and 6 months after randomization	Postnatal depression scale: EPDS Functional impairment: SF-36	38/42

Int.- intervention group   EPDS- Edinburgh postnatal depression scale   HDRS- Hamilton Depression Rating Scale SF-36- Short Form 36 questionnaire
HSC-Hopkins Symptoms Checklist
* See Annexe II for detailed scores.

Table 2- Clinical characteristics of included studies

Trial	Patients	Intervention	Comparison group	Results
Araya et al, 2003	Female primary care users with DSM-IV depression	Multi-component stepped care: 9 psycho-educational group sessions + structured pharmacotherapy if needed + systematic progress monitoring + training to doctors Therapists: nurses/s. workers 12h training + 8h supervision	Usual care of primary care clinics, including medication and possible specialist referral	**3 months** (recovered): Intervention= 49% Control= 15% Number needed to treat= 2.9 **6 months** (recovered): Intervention= 70% Control= 30% Number needed to treat= 2.5
Bolton et al, 2003 and Bass et al 2006	Sub-threshold and DSM-IV depressed patients from the community	Interpersonal therapy segregated by sex 16 weekly sessions of 90 min Locally trained therapists (2 weeks intensive training)	Usual care (not described but likely to be poor)	**4 months** (recovered): Intervention= 67.7% Control= 27.8% Number needed to treat= 2.5 Depression score mean difference: Intervention= 17.5 Control= 3.6 Effect size= 1.19 **10 months:** Depression score mean difference: Intervention= 17.5 Control= 4.0
Rojas et al, 2007	First-year mothers attending primary care clinics with DSM-IV depression	Multi-component intervention: 8 weekly psycho-educational group sessions + structured pharmacotherapy if needed +systematic progress monitoring + training to doctors + specialist supervision Therapists: nurses/midwives (12h training + supervision)	Usual care of primary care clinics, including medication and possible specialist referral	**3 months** (improved*): Intervention= 79% Control= 49% Number needed to treat= 3.3 Depression score mean difference: Intervention= 9.2 Control= 4.3 **6 months** (improved*): Intervention= 67% Control= 49% Number needed to treat= 5.6 Depression score mean difference: Intervention= 6.8 Control= 4.6

* according to a 4 point cut-off in the Edinburgh postnatal depression scale

The two studies by Araya et al and Rojas et al tested very similar interventions with similar methods and had many of the same research team members. Both recruited women attending primary care clinics in Chile's capital (Santiago), but Rojas et al's study focused on postnatal depression whilst Araya et al approached all females attending primary care clinics. In contrast, Bolton et al's study was located in rural villages of Uganda with very poor health resources and therefore recruited individuals directly from the community.

All three studies selected patients based on screening with validated short instruments and further confirmation of diagnosis according to DSM-IV criteria. However, Araya et al and Rojas et al included only women with symptoms scoring above screening thresholds in two repeated measures with a two-week interval between them. Their justification was to prioritize those in greater need. Bolton et al included individuals with subthreshold depression to ensure a sufficient sample size. The representativeness of the three samples was increased by the researchers' decision not to exclude anxious and somatizing co-morbidity, often difficult to disentangle from depression in primary care settings.

The Chilean studies used a multi-component intervention with increased intensity of care according to severity of illness (stepped care). All women were referred to weekly group psycho-educational sessions. Groups had approximately 20 participants and were lead by nurses, social workers or midwives who received eight to twelve hours of training and frequent supervision. Sessions lasted 50-75 minutes and were structured but left ample time for "sharing experiences". Information about depression, simple problem-solving and cognitive behavioural techniques were used. Patients with higher symptom scores were assessed by local physicians to evaluate the need for medication. A non-professional trained person used structured guidelines to regularly monitor attendance to sessions and consultations and give advice and support about treatment. Physicians providing care for the intervention group were trained to use a medication algorithm and in Rojas et al's study they received regular supervision. Attendance to psychoeducational sessions was good in Araya et al's study (mean number of 6.26 out of 9 sessions) but much lower in Rojas et al's study (mean of 2.7 out of 8 sessions).

Araya et al's study showed a significant difference in the prevalence of depression favouring the intervention group at follow up. The intervention group also achieved significant improvements in functional impairment. Rojas et al's trial had more modest results, particularly at the final 6 months assessment (see table 2). The two Chilean trials followed participants up to 6 month after the first assessment, or just two months after the end of psycho-educational sessions. Participants in the Chilean trials were still using other elements of the intervention, including antidepressants, at the final 6 months assessment. Araya et al reported that 79% of women in the intervention group said they were using antidepressants at 6 months, compared with 34% in the control group. Rojas et al study indicated that loss of adherence to the intervention could explain worsening of results at 6 months for mothers in the intervention group. Intake of antidepressants was as low as 36% in the intervention group (11% in the control group) compared with Araya's et al trial.

Bolton et al's study did not rely on existing health facilities either to identify patients or to deliver their intervention. Group therapy was the sole component of their intervention. Researchers trained local people with high school degrees but no previous mental health or counselling experience using a two-week intensive programme on interpersonal therapy. The choice of interpersonal therapy was justified for reasons of cultural acceptance. Qualitative research and discussions with local representatives convinced the researchers that a therapy focused on relationships between people would be more adequate than the individual focus of cognitive-behavioural techniques. Groups in Uganda were smaller (5-8 participants), sessions longer (90 minutes) and more numerous (16 along an equal number of weeks) than in Chile, reflecting the absence of any other treatment component in the Ugandan intervention. During sessions, each patient was encouraged to review his or her depression symptoms and link negative and positive events (particularly when arising from interpersonal relationships) to his or her current mood. The exchange of suggestions and support between group members was encouraged. Attendance of sessions was very high in the Ugandan study, with 75% of patients attending at least 80% of 16 sessions.

The effect of Bolton et al's intervention on reduction of depression prevalence (and functional impairment) at four months was strong and very similar to Araya et al's

results. The Ugandan trial had the advantage of following participants for a longer period: 10 months after the first assessment, which corresponds to six months after the end of the formal intervention. This showed that the intervention's effect was sustained during this period. It is relevant to note that in the Ugandan study, 85% of participants of the therapy groups continued to arrange informal group meetings after the end of the 16 sessions course. Researchers were not able to assess the frequency of these meetings. They report that the main subject of these meetings was the development of income generating initiatives and informal counselling.

Figures 2-4 show the evolution of depression scores for the three trials as a proportion of their respective baseline scores for the intervention group. When compared to the Ugandan trial, Araya et al's graph seems to confirm that the initial severity of Chilean patients was higher than the Ugandans, since after three months the control group in Chile maintained their mean score unchanged. The continuing increase in the effect of the intervention after 3 months, observed only in Araya et al's trial, agrees with the stepped-care model in which patients with poor initial response have their treatment plans enhanced after a number of weeks and may then start to respond. Low adherence to the intervention in Rojas et al's trial may explain why this continued improvement of depression scores was not observed in its intervention group. Interestingly, Bass et al reported that Ugandan patients who did not continue with informal group meetings after the end of the intervention had a small but significant worsening of their depression scores, although the difference in relation to the usual care group was still significant. Those who kept meeting in an informal basis, without the therapist, maintained the initial benefit brought by the intervention even after 6 months of its interruption.

Figure 2- Evolution of mean depression scores (HSC) over time (Bolton et al, 2003 & Bass et al, 2006)
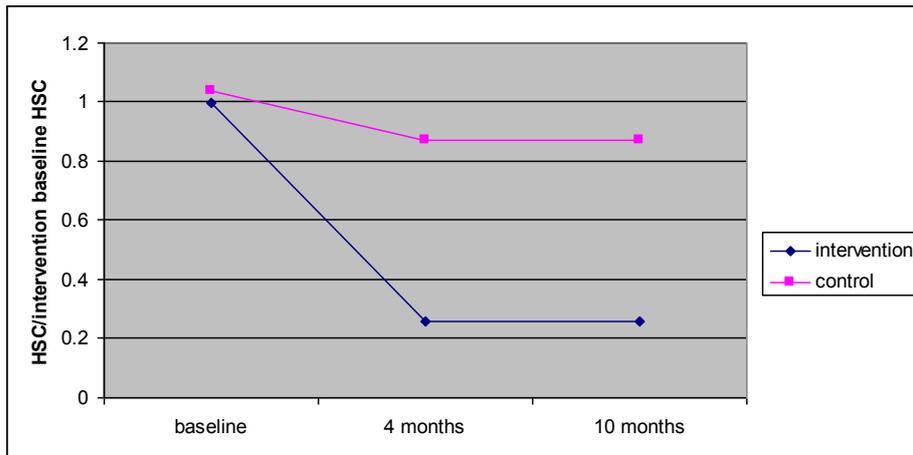
Figure 3- Evolution of mean depression scores (HDRS) over time (Araya et al, 2003)
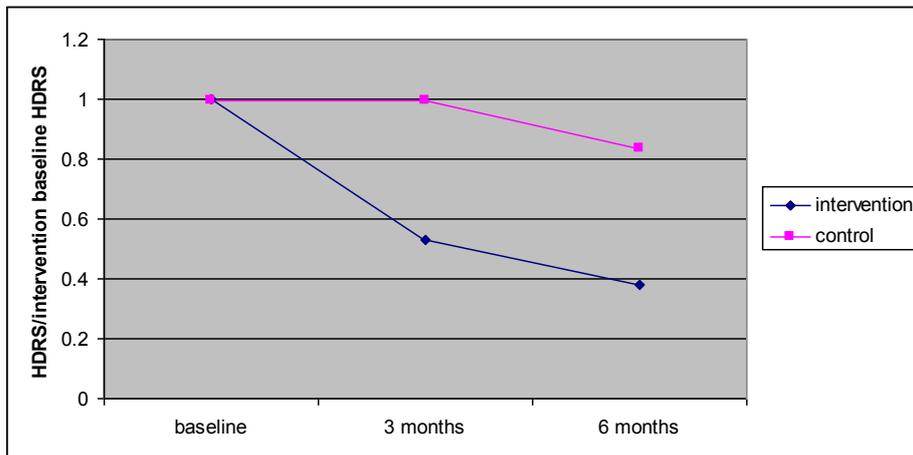
Figure 4- Evolution of mean depression scores (EPDS) over time (Rojas et al trial, 2006)
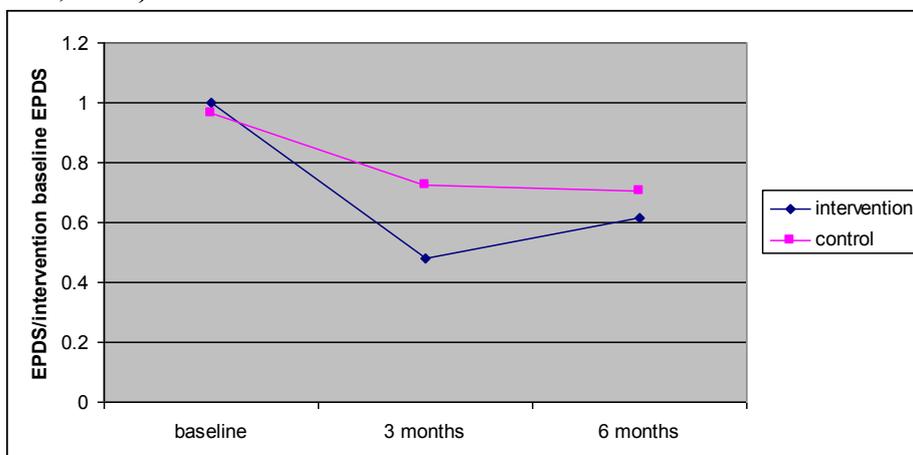
1.2.3 DISCUSSION

1.2.3.1 Methodological considerations

All three trials examined were of very good methodological quality, as assessed by the CCDAN score (see Annex II). However, some aspects of their methodology may be discussed according to well-acknowledged criteria (Tansella, Thornicroft et al., 2006; National Institute for Health and Clinical Excellence, 2009).

The length of the studies follow-up was of six months in the Chilean trials and ten months in the Ugandan study. Longer follow-up periods (i.e.18 months) are recommended to assess the impact of interventions in the prevention of depression relapses (National Institute for Health and Clinical Excellence, 2009).

The sample size of the Ugandan trial was not defined by statistical calculations. Because of a previous agreement with local leaders, Bolton and colleagues had to perform their research in the same villages previously sampled for a prevalence survey. A possible consequence of this was that inclusion criteria had to be expanded during the trial because of insufficient recruitment numbers. The inclusion of sub-threshold depression may have decreased the effect size of the intervention when compared to controls because of higher rates of spontaneous recovery amongst milder cases. Another problem of the study was the absence of any description on the kind of care received by the control group. Finally, there was no measurement of the degree of fidelity of the intervention delivered during the research in relation to its original model. No information was available on the possible interference of therapist characteristics on the outcomes of study subjects.

The Chilean trials used a multi-component intervention and did not try to evaluate the effects of each of its components. Therefore it is not possible to know if all components are necessary. However, the use of stepped-care multi-component interventions is being increasingly recommended in the literature and the evaluation of separate components is difficult to perform (National Institute for Health and Clinical Excellence, 2009). The Chilean trials were conducted in three primary care clinics only and the choice of these clinics was not random. It is therefore possible that professionals delivering the intervention in those clinics were not representative,

in terms of motivation and skills, of the universe of health professionals in real life primary care. This could compromise the generalizability of the findings.

1.2.3.2 Effectiveness and adherence of interventions

The three studies reviewed produced highly positive findings. Measures of effect as number needed to treat and effect size indicate highly significant clinical results, especially when compared to recent meta-analyzes evaluating the effectiveness of antidepressants **alone** versus placebo (Kirsch, Deacon et al., 2008; Turner, Matthews et al., 2008).

Because of the differences in the instruments used to measure outcome and in the way data were reported, it is not possible to directly compare the results of all three trials at similar points of follow-up. The significant differences in the population recruited by the studies and treatment offered to controls also prevent direct comparisons.

The findings from these three trials suggest that continued adherence to treatment is fundamental for interventions to treat depression. The context of the Ugandan study, set in small rural villages, and the intensity of its intervention (small groups, long sessions, numerous meetings) possibly contributed to its high adherence. In the case of the Chilean trials, the significant difference in adherence between them can be attributed both to differences in the delivery of the multi-component intervention or to the difficulties of mothers of babies in maintaining their commitment to the treatment. Rojas et al pointed to these difficulties in their analysis attributing their failure to adhere to treatment to the many competing demands of mothers with less material resources. Breast-feeding mothers may also be less willing to use antidepressants for long periods, particularly after initial improvements. Rojas et al attributed the smaller clinical significance of their results when compared to Araya et al's mostly to non-adherence to medication. However, difference in attendance of the psycho-educational sessions was also large and cannot be ruled out as a contributor to the overall effectiveness gap between the two trials. It must also be remembered that the Ugandan study relied exclusively on psychotherapy to achieve its results.

Ultimately, it is not possible to disentangle the active elements of these multi-component intervention trials. Araya and Bolton have nevertheless suggested that

enhanced social support from group meetings was one of the possible main mediators of their interventions' effects on mental health (Patel, Araya et al., 2004).

1.2.3.3 Group psychotherapy research in low and middle-income countries
The number of studies evaluating or describing group psychotherapy at the primary care level in low and middle-income countries was found to be very small. To judge by the number of studies on post-traumatic stress disorder excluded in our final selection, it seems that mental health impacts of natural and human catastrophes attract more attention and research resources than the routine care of CMD in these countries.

Publication bias is possibly an issue. It has already been highlighted how research from less developed countries may not find its way to indexed scientific journals (Tyrer, 2005). The logistical costs and difficulties of such studies are another obstacle. Two of the studies excluded from this review illustrate how local researchers often choose small samples from teaching psychiatric hospitals because of funding limitations (Knijnik, Kapczinski et al., 2004; Hsiao, Yang et al., 2007). This greatly limits the validity of their results in terms of orienting mental health policy in primary care. The Ugandan trial and the RCT undertaken by Araya et al relied on external funding and long-standing international collaborations. The trial by Rojas et al was locally funded and built upon the conclusions of Araya et al's trial. The intervention has since been adopted as a national policy in Chile (Patel, Araya et al., 2007). An ongoing study in India is now using elements of the Chilean intervention in a large cluster-randomized trial (Patel, Kirkwood et al., 2008). The Ugandan intervention was designed to assist World Vision, a non-governmental organisation running health projects in Africa, and is now regularly in use in that country (Bass, Neugebauer et al., 2006). Its use has also been extended to teenage survivors of conflict in the region (Bolton, Bass et al., 2007).

In addition to the limitations imposed by publication bias and lack of resources, it is possible that researchers in developing countries direct efforts to research which has less relevance from a public health perspective. Sartorius pointed how resources are often concentrated on replicating studies from high income countries which examine expensive treatments, mostly medications, in academic settings (Sartorius and

Emsley, 2000). In this way, scarce resources are channelled to testing interventions that cannot be transformed into public health policy because they are too expensive and because study results cannot be generalized to non-academic settings.

1.2.4. CONCLUSION

The conclusions of these three trials are complementary. The Ugandan trial demonstrated that it is possible to treat effectively depression in contexts with virtually no previous mental health resources. The intervention relied on a short intensive training of local first-time therapists. Although costs of the intervention are likely to be low, a cost-effectiveness evaluation would be needed to ascertain this. The Ugandan trial has also shown that group interpersonal psychotherapy is effective by itself in the treatment of depression and suggests that communities are capable of taking over the continuation of support groups, with benefits to their attenders.

The Chilean trials were set in a middle-income country with a pre-existing primary care system. Their intervention built upon existing resources and combined constant monitoring, structured medication guidelines, and group psycho-education and support. They showed significant improvements in a moderate to severe depressive population when compared to the usual care offered in primary care clinics. Comparison of results between the two Chilean trials highlighted the importance of adding intensive adherence strategies in more vulnerable groups, such as poor mothers of young babies.

The trials showed that improving social support may be a promising avenue for multi-component mental health interventions in primary care or community settings. To date, few studies have systematically evaluated the effects of improving social support on mental health interventions (Rook, Underwood et al., 2000; Hogan, Linden et al., 2002).

These trials also show that research on mental health interventions in primary care settings for low and middle-income countries can have a high impact on local policy and, consequently, on the health of large populations. Collaboration between researchers can spread these positive experiences to other countries with similar resources.

SECTION III

MENTAL HEALTH IN PRIMARY CARE IN BRAZIL

In the first part of this section I review data on prevalence and risk factors for common mental disorders in Brazil. The discussion on risk factors follows the emphasis given in the literature on possible social determinants of mental ill-health. The second part of this section outlines the historical context of mental health policy for primary care in Brazil. Because Brazilian States and Municipalities are being given increasing autonomy in the management of the public health system, a particular emphasis is put in the developments concerning the Sate and Municipality of Sao Paulo, where the research of this thesis took place.

1.3.1 EPIDEMIOLOGY AND RISK FACTORS FOR COMMON MENTAL DISORDERS IN BRAZIL

A number of community and primary care based surveys have estimated the prevalence of CMD in different regions of Brazil. Many of them have used locally validated international screening instruments (like the Self-Reporting Questionnaire-20) that indicate probable CMD instead of defining specific diagnostic categories. These surveys have found prevalences ranging from 22 to 36 per cent in the general population to just over 50 per cent among primary care users (Table 3 and 4).

Table 3- Studies of Psychiatric Morbidity in the Community, Brazil.

Authors	Site	Sample size	Instruments	Prevalence
(Reichenheim and Harpham, 1991)	Slum in large city (Rio de Janeiro)	460 mothers of <5 years	SRQ	36% CMD
(Almeida-Filho, Mari Jde et al., 1997)	3 Large cities (Porto Alegre, Brasilia, Sao Paulo)	1036	1st QMPA 2nd DSM III-SC	1.3-6.7% Depression 5.4-12.1% Anxiety 1.9-5.8% Somatization
(de Lima, Hotopf et al., 1999)	Medium city (Pelotas)	1270	SRQ	22.7% CMD
(Vorcaro, Lima-Costa et al., 2001)	Small city (Bambui)	1041	CIDI	10% Depression
(Andrade, Walters et al., 2002)	Large city (Sao Paulo)	1464	CIDI	6.7% Depression 8.0% Anxiety 4.2% Somatization
(Ludermir and Melo Filho, 2002)	Large city (Olinda/Recife)	621	SRQ	35% CMD
(Almeida-Filho, Lessa et al., 2004)	Large city (Salvador)	2302	PSAD/QMPA	12.2% Depression
(Costa and Ludermir, 2005)	Rural area (Northeast region)	483	SRQ	36% CMD
(Maragno, Goldbaum et al., 2006)	Large city (Sao Paulo)	2337	SRQ	25% CMD

SRQ-20: Self Reporting Questionnaire; QMPA: Questionario de Morbidade Psiquiatrica de Adultos; DSM III-SC: DSM III Symptom Checklist; CIDI: Composite International Diagnostic Interview; PSAD/QMPA: Psychossomatic-Anxiety-Depression subscale of QMPA

Table 4- Studies of Psychiatric Morbidity in Primary Care Clinics, Brazil.

Authors	Site	Sample size	Instruments	Prevalence
(Busnello, Lima et al., 1983)	Large city (Porto Alegre)	242 1 clinic	SRQ	55.4% CMD
(Mari, 1987)	Large city (Sao Paulo)	875 3 clinics	SRQ	47-56% CMD
(Iacoponi, 1990)	Large city (Sao Paulo)	1502 38 clinics	SRQ	53% CMD
(Villano, Nanhay et al., 1995)	Large city (Rio de Janeiro)	393 1 clinic	1st GHQ-12 2nd CIDI-PHC	15.8% Depression 22.6% Anxiety 8.5% Somatization
(Simon, Fleck et al., 2004)	Large city (Porto Alegre)	155 6 clinics	CES-D	52% Depression
(Fortes, Villano et al., 2008)	Medium city (Petropolis)	714 5 clinics	GHQ-12	56% CMD

SRQ-20: Self Reporting Questionnaire; GHQ-12: General Health Questionnaire; CIDI-PHC: Composite International Diagnostic Interview- primary care version; CES-D: Centre for Epidemiologic Studies Depression Scale

The prevalence of CMD among Brazilian women is approximately twice as high as in men in those studies. For Brazilian women, with small variation within the main country regions, depression was the single most important cause of life years lost to disability or premature death, accounting for 6.3% of DALYs (Ensp/Fiocruz, 2002). Lower willingness to acknowledge psychological symptoms by men may be a source of bias in Brazil (Ludermir and Lewis, 2005). Nevertheless, a study using lower screening thresholds for men revealed a smaller but still highly significant gender effect (Lima, Beria et al., 1996). Interestingly, the gender effect has been shown to be stronger in the lower social classes and among disadvantaged ethnic groups (Almeida-Filho, Lessa et al., 2004). Concerning age groups, Brazilian studies have consistently found 34 to 60 years old adults as those at higher risk of CMD compared to other age groups. There is no straightforward association between mental ill-health and marital status or parity in Brazilian cross-sectional studies.

Four household surveys have studied the association between income and mental ill-health. After adjusting for confounding variables, three have found that lower income increased the risk of mental ill-health (de Lima, Hotopf et al., 1999; Ludermir and Lewis, 2001; Maragno, Goldbaum et al., 2006) and one failed to show any association (Blue, 2000). The association between poor schooling and mental ill-health, also adjusting for other variables, was shown to be more consistent: five studies

demonstrated this effect (de Lima, Hotopf et al., 1999; Blue, 2000; Ludermir and Lewis, 2001; Almeida-Filho, Lessa et al., 2004; Maragno, Goldbaum et al., 2006) while only one failed to do so (Vorcaro, Lima-Costa et al., 2001). A survey in Santiago-Chile also found that poor schooling, but not low income, was associated with minor psychiatric morbidity (Araya, Lewis et al., 2003). As already mentioned in section one of this chapter, poor schooling may be considered a marker of child poverty in Latin American countries.

A possible way of understanding the development of CMD in developing countries is to consider gender, poor schooling and some consequences of poverty (for example insecure tenure and overcrowding) as long-term difficulties which interact with negative life-events (Harpham, 1994). Two Brazilian studies have shown an association of recent life events with mental ill-health when adjusting for socio-demographic variables (Lima, Beria et al., 1996; Lopes, Faerstein et al., 2003) (Lima *et al.* 1996; Lopes *et al.* 2003). Violence, loss of job, severe financial difficulties, illness and separation were the most relevant ones. But it is also true that long-term difficulties themselves may increase the risk for life events with an impact on mental health. Loss of job was found to be the most common life event amongst the poorest and less educated in one study (Lima, Beria et al., 1996). Qualitative methods to investigate the individual meanings of life events, as those developed by Brown and Harris (Harris, 2000), have not as yet been used in Brazil.

Social support can be added to this model as a buffer for negative life events. In developing countries, rapid urbanization processes may decrease social support through the loss of social networks (due to migration) and the changes in occupational, recreational, familial and institutional aspects of life that occur when people migrate from rural to urban areas (Harpham, Phillips et al., 1994; Marsella, Harpham et al., 1995). Only one study has explored the relation of social support with mental health in the general population in Brazil. Costa and Ludermir (2005) have shown that low social support increased the risk of CMD (odds ratio= 2.09; CI 95%: 1.35-3.24; p=0,001) in a rural area of the Northeast Region of Brazil, even when adjusting for age, schooling and employment status.

1.3.2. MENTAL HEALTH POLICY FOR PRIMARY CARE IN BRAZIL

The 1968 Conference on Mental Health in the Americas stressed the study of community sources of support and community solutions to mental health problems as priorities (Leon, 1972). A decade later, Brazil was among the research sites of the pioneering WHO study on the feasibility and effectiveness of locally designed community mental health care (Sartorius and Harding, 1983).

However, in the early 80's when mental health services began to be delivered in primary care clinics of Sao Paulo, the policy adopted was to include specialist mental health professionals in primary care clinics working isolated from other professionals and community resources (Antunes, 1998). The reasons for this choice, which differed from research-based recommendations from the WHO, have not been clarified. One possibility might be that the primary care model chosen by the state of Sao Paulo at the time was not based on general practitioners but deployed pediatricians, gynaecologists and general clinicians in primary care clinics. This means there was a trend for dividing care between some broad specialties. The pressure from mental health professionals, particularly psychiatrists, may have played a role too. Mental health care in Brazil at the time was almost exclusively based in large old-fashioned psychiatric hospitals, which until the mid-nineties still consumed 95.5% of the national mental health budget (Andreoli *et al.* 2007). Psychiatrists might have feared that they would loose control over a significant part of their field if other professionals were left to treat common mental disorders in primary care.

By the mid-eighties, the economic crisis and the consequent structural adjustments in Brazil, and many other low and middle-income countries, led to reduced investments in health, a situation which persisted until the nineties (Cohen, Kleinman et al., 2002). At the same time, in the global primary care policy debate, bottom-up community approaches and general strengthening of health systems were giving way to vertical programmes focusing on specific health conditions in primary care (Asthana, Phillips et al., 1994; Cueto, 2004). Mental health was not amongst the priorities of these new vertical programmes. These factors may have lead to the initial investment effort to implement mental health in primary care being discontinued. By the end of the 80's

only 25% of primary care clinics in the city of Sao Paulo had a psychiatrist (Iacoponi, 1990).

Throughout the 90's and the beginning of this decade, mental health care in primary care clinics of Sao Paulo continued to be centred on the role of psychiatrists working in an isolated fashion away from other doctors. This experience did not contribute to improving the ability of primary care doctors to detect mental disorders (Iacoponi, 1990) and reinforced the divide between mental and physical health care within primary care clinics. Interaction with social workers, nurses and psychologists was poor. Group interventions for mental ill-health were scarce and dependent on individual initiatives from professionals. There were neither guidelines for the treatment of common mental disorders nor community care programs linking specialist services and primary care clinics. In 2004, the 386 primary care clinics of Sao Paulo had 118 psychiatrists and 202 psychologists serving a population of 10.8 million (SMS-SP, 2004).

In 1994 the Ministry of Health launched the Family Health Programme (FHP) to reform primary health care in Brazil. Family health teams (FHT) composed of one family doctor, one nurse, two nurse assistants and four to six health by visitors were deployed in primary care clinics, each team assuming responsibility for the care of approximately 3,500 inhabitants from a geographically defined area. Health visitors, who must belong to the communities where they work, were given a major role in health promotion and disease prevention activities. The teams aim to handle approximately 80% of health problems presenting to the clinics (Sousa, 2001). The Family Health Programme has been the main priority of the Ministry of Health for the last decade (see Figure 5). It is considered to be partly responsible for the significant fall on child mortality rates in Brazil during that period (Macinko, Guanais et al., 2006). By the end of 2007, around 25,000 family health teams were active in Brazil, offering coverage to nearly 88 million people (47% of the population) (Ministerio da Saude do Brasil, 2008).

Figure 5- Population covered by the Family Health Programme (in millions)

(x1.000.000)

Pop. Coberta	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	abr/08
	1,1	2,5	2,9	5,6	10,6	14,7	29,7	45,4	54,9	59,7	69,1	78,6	85,7	87,7	89,9

FONTE: SIAB - Sistema de Informação da Atenção Básica
SCNES – Sistema de Cadastro Nacional de Estabelecimentos em Saúde
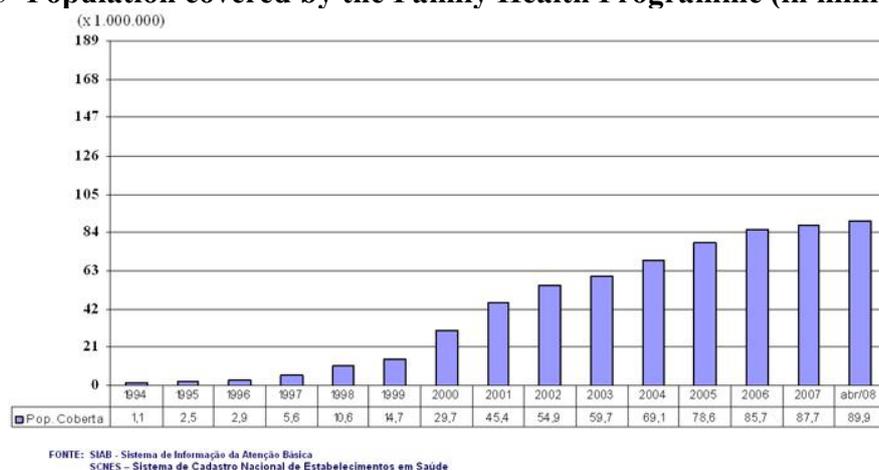
The progress made in the Brazilian mental health policy for severe mental disorders in the last 10 years (Jacob, Sharan et al., 2007) has not been accompanied by similar gains concerning common mental disorders and the integration between primary care and mental health services (Ministerio da Saude do Brasil, 2007). The Ministry of Health has followed the WHO recommendation of prioritizing the constitution of community psychiatry services for severe disorders before investing in mental health initiatives in primary care. In the Brazilian context, however, there would have been advantages in simultaneously investing on mental health policies for primary care because of the profound restructuring and large investments brought by the Family Health Programme during this same period (see Figure 5). In the last 10 years, the population covered by the FHP rose from 10 to almost 90 million people. This means that around 220,000 health workers have been engaged and trained by the FHP since 1998. In this sense, an opportunity was lost to integrate mental health with a primary care system which was being (re)built from scratch. Shortage of funds may explain this choice. The 50% fall in the proportion of the mental health budget spent on psychiatric hospital admissions in the last ten years was mostly channelled to psychiatric community centres for people with severe disorders and new generation antipsychotics (Andreoli, Almeida et al., 2007; Ministerio da Saude do Brasil, 2007).

It was only in 2008 that the Ministry of Health approved a scheme of financial incentives to share with local governments the costs of employing mental health professionals to work in collaboration with the FHP. However, the scheme still prioritizes the care of severe mental disorders (Ministerio da Saude do Brasil, 2008).

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CHAPTER TWO

COMMUNITY THERAPY: A GROUP SUPPORT INTERVENTION DEVELOPPED IN BRAZIL

I begin this chapter by describing in what context community therapy was developed and how it spread as a mental health intervention in Brazil. I give more particular details about the implementation of CT in the city of São Paulo. I then discuss the objectives and rationale for CT and describe its technical features. Following that, I present and justify the hypothesis that social support and social capital may mediate CT's effect on mental health. I conclude by summarising the potential of CT as a mental health intervention and sketching a research agenda for it, which this thesis aims to initiate.

2.1 WHAT IS COMMUNITY THERAPY?

2.1.1 DEVELOPMENT

Community Therapy began to be developed around 1987 by the psychiatrist Adalberto Barreto in an impoverished community of Fortaleza, a city of two million inhabitants and capital of the State of Ceara in the northeast of Brazil. Dr. Barreto was a lecturer in Community Medicine at the Universidade Federal do Ceara (UFC) and had an academic background in anthropology (PhD) and theology, in addition to his medical qualification.

Barreto, representing the Department of Community Medicine of UFC, was first called to the community of Quatro Varas by a human rights organization that identified high levels of mental distress in the local population. This community of 7,000 people is situated inside the huge "favela" (shanty town) of Pirambu, a neighbourhood of 250,000 inhabitants in the outskirts of Fortaleza. The scenario encountered by Barreto was one of painful familiarity for a psychiatrist living in the

developing world: a poor population of rural migrants living in a deprived urban area with high levels of unemployment and street violence. There was no mental health assistance in the community at that time. Barreto initially devised a programme that was focused on interventions directed towards individuals and families, relying strongly on the use of psychotropic medication. However, he soon realized that this was not enough to deal with the mental distress of that population. The resources he could offer were insufficient to respond to the needs of this population and he felt he was not addressing the fundamental determinants of their distress, which he strongly related to the devastating effects of their social context. Group meetings were then established on a weekly basis with those that sought psychiatric help. The technique of Community Therapy was developed and refined as a result of years of experience and reflection on these meetings (Barreto and Boyer, 2003; Barreto, 2005).

During the 1990s, a diverse range of psychosocial and income generating activities flourished in the community of Quatro Varas linked to the original community therapy meetings and with the support of the human rights organization which first organized Barreto's clinical activities. External funding transformed these activities into a significant community project, with its own purpose-built premises. It is clear that this was only possible because Barreto's role in the community went beyond community therapy groups and had the support of a dynamic non-governmental organization (NGO). One of the sources of funding for the project were paid on-site community therapy training packages devised for external professionals who were attracted by the initiative's success (Barreto, 1994; Barreto, 2000; Barreto, 2005).

The first large-scale attempt to train community therapy facilitators[1] was made by a Brazilian catholic charity (Pastoral da Crianca) in 1998. For 20 years this charity had been developing a huge preventive programme focusing on child health that involved more than 130,000 volunteers and reached nearly two million children around the country (Conferencia Nacional dos Bispos do Brasil, 2005). Hundreds of these

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[1] Barreto prefers to name those leading community therapy groups as "therapists" (*terapeutas*, in Portuguese). The word therapist, however, is mostly used in Brazil nowadays to refer to highly skilled professionals (mostly psychologists) performing psychological therapies. Because there is no previous educational requirement to train CT group leaders, many health professionals, and their associations, strongly resist the idea of calling "therapist" someone without any (health) professional background. The word "facilitator" (*facilitador*) causes less resistance and describes quite accurately the role of CT leaders during sessions.

volunteers (most of whom had no background in mental health) were trained in Community Therapy, but no report on the results of this programme could be found. NGOs and a few academic institutions have organized other training programmes for CT.

Some municipal governments have introduced CT groups as part of their health services provision in the last six years. One of the first to do so was the city of Sobral in the state of Ceara, which in 2003 trained 23 facilitators to offer sessions in 10 primary care clinics and one specialized mental health service (Silva, Barros et al., 2005).

In 2006, the Brazilian federal government decided to co-fund, together with municipalities, the training of several hundred facilitators around the country and it is now promising to invest another 1.3 million US dollars in the training of 1,100 more facilitators (Agencia Estado, 2008). Unfortunately, none of these initiatives to implement CT has been coupled with a systematic evaluation of implementation processes or impact on the mental health of participants. CT leaders and policy makers seem to have trusted their "gut feeling" about the therapeutic potential of the intervention, supported by the enthusiasm CT elicits among socially committed health workers (Barreto, 2005). On the other hand, Brazilian academic psychiatry so far showed little interest in evaluating the impact of this local and original, but unconventional, contribution to the care of common mental ill health. Devoid of explicit connections with either of the two dominant paradigms for psychological therapies in Brazil (psychodynamic or cognitive-behavioural), CT appears to academic psychiatry as yet another complementary or alternative therapy outside the realm of evidence-based medicine.

Four national congresses on Community Therapy have been organized since 2003. The focus of these encounters, which have brought together hundreds of participants each year, has been the exchange of practical experiences in forming and conducting CT groups. Research initiatives have been limited to case reports of single groups of CT, describing its use on particular settings or discussing some of its technical aspects (Fukui and Marchetti, 2004; Camargo, 2005; Guimaraes, 2006; Holanda, 2006; Camarotti, 2008; Fix, Leite.M.S et al., 2008; Peddrazzi, 2008; Silva and Muniz,

2008). To date, there has been no attempt to evaluate CT's impact on mental health or other outcomes with validated instruments and systematic data collection. In 2004, a National Association of Community Therapy (ABRATECOM) was created, its main concerns being the development of standards for training programmes and the recognition of CT as a valid health intervention by professional organizations and governmental agencies.

Approximately 7,000 people have now received some training in CT in Brazil (Abratecom, 2005). In addition to working in primary care and mental health services, many of them practice CT in NGOs or as autonomous voluntary initiatives in most Brazilian states. They are working with a range of disadvantaged groups: people living in poor communities, adolescents, victims of violence, epileptic patients and their families etc.

2.1.2 CONTEXT OF THE IMPLEMENTATION OF COMMUNITY THERAPY IN THE CITY OF SAO PAULO

Community therapy was implemented in Sao Paulo as a policy in the context of important changes in primary health care. The next paragraph briefly summarizes these changes.

The initial establishment of the Brazilian Family Heath Programme (FHP) in Sao Paulo's primary care was slow. Changes in mental health care were limited to a few pilot experiences involving severe patients (Lancetti, 2001). It was only in 2001 that the Municipality of Sao Paulo prioritized the FHP, allocating financial resources for a rapid expansion. In two years the number of teams rose from 150 to 645, covering approximately two million people (or 20% of its population)[2] (SMS-SP, 2004). The priority given to primary health care by the municipality was seen by the mental health managing team in Sao Paulo as an opportunity to improve care for common mental disorders. In 2002, family doctors and nurses began to receive training for the detection and management of common mental disorders. The Health Secretariat of Sao Paulo published clinical guidelines for the diagnosis and treatment of common mental disorders in 2003 (SMS-SP, 2003). Basic psychotropic drugs were largely

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[2] Coverage rose to 26.5% of the population by the end of 2007, with 846 family health teams operating in Sao Paulo (Ministério da Saúde do Brasil, 2008).

available in primary care clinics. By then, a comprehensive pilot scheme of supervision by mental health specialists and referral protocols was designed for primary care services in the southern region of the city, where 20% of Sao Paulo's population lives (its implementation, however, proved difficult and was never completed). At that time, there was no policy guidance regarding psychosocial interventions in primary care in Sao Paulo. Initiatives were left at the discretion of professionals and managers of primary care clinics. It was in this context of transformation of mental health care in primary care that the necessity to offer a cost-effective psychosocial intervention was identified. The mental health coordination began to look for psychosocial interventions that could fit the local context both in terms of acceptability by users and use of resources. There was a particular interest for interventions that could be delivered by non-specialists as the 2,000 plus health visitors and nurses who were being hired and trained at that time for primary care clinics.

Since the year 2000, a nurse and a psychologist had independently established the first two CT groups in primary care clinics of Sao Paulo (di Mauro, 2004; Nascimento, 2004). Eventually, in 2003, building on the experience of these professionals and with the advise of Barreto, the Health Secretariat of Sao Paulo devised a pilot programme to train 90 of its workers (mostly health visitors and nurses but also psychologists and social workers) in the technique. The training consisted of three intensive three-day workshops led by Barreto spread out over 10 months and intercalated by fortnightly two-hour supervisions with previously trained facilitators. In spite of the long period of training (a total of 140 hours), trainees started to deliver the intervention, under supervision, after the first month.

The mental health managing team discussed with primary health care managers at the central and local levels which population should CT groups target. It was agreed that patients diagnosed with CMD by generalists and psychologists would be referred. Individuals with mental distress identified by nurses and health visitors would also be directly referred to CT groups (and to generalists concomitantly if necessary). Users were oriented about time and venue of CT groups but did not have to make an appointment. Thus, CT groups did not have pre-scheduled patients or waiting lists. Most importantly, it was decided to keep CT groups open to the community. People

could come without referral from a professional. CT attenders were encouraged to bring friends and neighbours they felt could benefit from CT. Groups were advertised to the public in clinics and in the community (community centres, churches). The aim was to increase the access of people with mental health needs who were looking for care but were not receiving treatment in time (i.e. people who were waiting for appointments with generalists and psychologists). The other group being targeted were those people with mental health needs but who were not looking for health care. This prompted the decision to locate a significant number of groups in community venues. It was hypothesized that this could help to reduce the stigma that discouraged some people to seek care in primary care clinics. Leaflets and posters should make clear that CT groups were not a treatment for the mentally ill but informal meetings where people could talk about their problems and distress. The possibility of locating CT groups closer to some socially disadvantaged communities was another justification for not restricting their venues to clinics. All these guidelines were based on the personal experience and the judgement of Barreto and other senior CT facilitators and managers from the Health Secretariat.

After the pilot, the Health Secretariat initiated other training programmes, answering to the demands of managers and professionals from regions not included in the pilot. By the end of 2004, 183 community therapy facilitators had been trained. They were delivering 108 weekly CT groups in 17 of the 31 regions of Sao Paulo. The average number of users per session was 12 (ranging from six to 27). Approximately 40% of CT groups were delivered by health professionals in community settings including local associations, Christian churches, schools and sports centres. It was estimated that by December 2004 about 20,000 people had been to at least one CT session in Sao Paulo (SMS-SP, 2005).

It is relevant to notice that the fast implementation of CT groups in the city of Sao Paulo was not accompanied by a coordinated change in the reality of mental health care in primary care clinics. Many primary care professionals working in clinics where CT was implemented had not received any mental health training. Supervision of generalists by mental health professionals was practically inexistent. There was no agreed protocol structuring the flow of patients with CMD within primary care clinics and between clinics and specialist services.

2.1.3 OBJECTIVES AND RATIONALE OF CT

The emphasis of Barreto's work since developing CT has been to diffuse its general principles, mostly in non-academic milieus, and to train new facilitators. The literature on CT, both that written by Barreto and by his early collaborators reflects this practical emphasis (Barreto, 1994; Grandesso, 2003; Barreto and Binde, 2004; Barreto, 2005).

Barreto has, however, sketched five conceptual underpinnings of CT: systemic theory, communication theory, cultural anthropology, resilience and Paulo Freire's pedagogy of the oppressed (Barreto, 2005). Barreto draws on these concepts to provide the rationale for the two main objectives of CT: to put individual mental health in its broader context; and to value individuals' and particularly communities' own resources to deal with their mental distress. The general aim of CT is, of course, to improve mental health. Occasionally, though, Barreto seems to extend this aim to include a broader issue: empower poor communities to struggle for better living conditions.

The underpinnings outlined by Barreto are discussed in more depth below. They provide an initial indication of what may be the active components of community therapy (if there are any). My research will further explore and examine this. Barreto has drawn on ideas that do not strictly belong to the mental health field. He uses ideas and practices very much identified with important Latin American social movements. This seems to respond to the previously mentioned need for culturally acceptable interventions for CMD. Additionally, because social determinants seem to play a significant role in the incidence and duration of CMD, ideas originated from grassroots social movements might prove useful if integrated with medical strategies of care for mental ill-health.

2.1.3.1 Individual mental health in context.

Barreto mentions systemic theory as one of the underpinnings of CT (Barreto, 2005). Systemic theory is, together with social constructionism, one of the main theoretical bases for Family Therapy (Dallos and Draper, 2000). CT draws on a number of elements derived from Family Therapy, although it extends its scope to communities.

Systemic theory, as applied to Family Therapy, sees individuals as parts that interact with and influence each other to form larger units, called systems (families or, in CT's case, communities). The implication for the mental health field is that individual distress must always be viewed in the context of one's relations in the system to which he/she belongs (family or community). Social constructionism adds to this the broader influence of dominant societal values which determine the way people think about their lives and speak about their experiences. This will in turn influence the way in which individuals experience things (Dallos and Draper, 2000). Accordingly, what people experience and name as depression, for example, is highly influenced by social constructions of what is depression, its causes and how to deal with it. Put in the context of other explanatory models for mental ill-health, social constructionism emphasizes its social rather than individual (psychological or biological) determinants. A radical use of social constructionism may even dismiss the objective existence of mental disorders to say they are ideological constructs whose purpose is to assign to individuals (and their biological or psychological idiosyncrasies) the problems of society. This is a recurrent criticism social scientists direct to psychiatry, and particularly to the expansion of the frontiers of depression since the DSM-III (Horwitz, 2007). Although Barreto tends to avoid the use of formal psychiatric diagnosis, he does not get into the discussion on their validity (Barreto, 2005).

Barreto argues that within CT, mental distress should be dealt with using a systemic approach, i.e. taking into account the complex web of connections between the biological, psychological and social phenomena that underlie it. Each individual should be helped to see himself/herself as part of a system of relations. In practical terms, this implies that during CT sessions facilitators should be able to elicit and stress in the participants' accounts of their stories, the relevant familial and social correlates of their distress.

But CT aims to put individual mental health in context by taking account of the community, more specifically the social relations between its members, **therapeutically**. One of the aims of the conversations held during the sessions is to create a shared narrative of common situations experienced by those belonging to a same community (Grandesso, 2004). By recognizing common experiences and identifying some of their systemic (familial and social) causes, individuals can

strengthen their links and prepare themselves to assume co-responsibility. Two things seem to be at play for Barreto here: the capability of **supportive** social relations, i.e. social support, to improve individual mental health and the importance of empowering communities, by increasing social connectedness, to ameliorate their social situation. Social support has been previously associated with better individual mental health. More recently, researchers have been investigating if greater social connectedness (also referred as social capital) could by itself be associated with better mental health, independently of its effect on changing living conditions. The possible mechanisms by which CT could improve social support and social connectedness (social capital) will be discussed later in this chapter.

Another conceptual reference of CT sketched by Barreto and also shared with Family Therapy are Watzlawick's ideas on communication (Barreto, 2005). Barreto stresses three aspects of communication as important for CT: (a) facilitators must be able to understand that behaviours and symptoms as well as words are means of communication; (b) facilitators must avoid ambiguity in their interventions and help participants in doing the same; (c) communication must be valued as a means people use to be recognized by others as belonging to a social group. Thus:

(a) The interpretation of particular behaviours and symptoms as means of communication may be a complex task for facilitators. Usually, individual interpretations are avoided and facilitators limit themselves to make generic statements about the necessity to recognize behaviours and symptoms as possible means of communication. A regular way they have to do that is say at the beginning of sessions, to stimulate participation, that "when the mouth silences, the body speaks".

(b) The preoccupation with the ambiguity of discourse is what justifies facilitators' constant efforts to clarify what participants say and stimulate other participants to do the same. Participants are also requested at the beginning of sessions to avoid using the "we" instead of "I" (a very common feature of colloquial Portuguese) when referring to their own experiences.

(c) Finally, the value given to communication is one of the basic justifications for CT groups. In this sense, CT is largely a technique to facilitate people's conversations about their distress. Inasmuch as this is supposed to contribute

to one's sense of belonging, and therefore of feeling supported by others, it should have a positive effect on mental health.

2.1.3.2 Valuing the resources of individuals and communities.

Barreto's general stance is that any offer of help to disadvantaged populations must make a point of stressing the value of their experiences and of their culture. To justify this, Barreto uses the concepts of resilience, cultural anthropology and the pedagogy of the oppressed by Paulo Freire. By valuing individual and community resources community therapy is expected to empower its participants. Community therapy is designed to particularly focus on people who are disempowered, both because of their social status and of their mental ill-health.

Resilience refers to the ability of certain individuals to have relatively good outcomes despite suffering experiences expected to bring about significant psychological sequelae (Rutter, 2006). Barreto expands this idea to argue that resilient individuals can in some way transmit their capacity to others going through similar experiences. According to Barreto, this can be achieved during community therapy sessions in which people bringing their stories of distress meet other people from the same community (therefore sharing their social background) who describe the psychological processes they used themselves to overcome their situation. Barreto does not provide details of the mechanisms by which those in distress achieve benefit from listening to the experiences of resilient people.

Barreto uses cultural anthropology to justify the need to value the cultural references of disadvantaged people (Barreto, 2005). CT carries a positive vision of the diversity of cultures and of the contribution they can bring to dealing with mental distress. Community therapy stimulates the use of popular culture manifestations, such as songs (including religious ones), poems and sayings during the sessions to reinforce the value of people's cultural identities. It also facilitates the communication within the group.

Finally, Barreto uses the ideas of Paulo Freire's pedagogy of the oppressed as a model to define the relation that community therapy facilitators must establish with those attending the groups. Barreto's central concern is rooted in the difficulties that the

cultural and social distance between health professionals and disadvantaged people may pose to the provision of mental health care to the latter. For him, it is necessary that health professionals go beyond the diagnosis of disorders and problems, to recognize the competences of disadvantaged people and communities. Barreto believes that the clinical situation may favour a hierarchical relation between health professionals and patients which can damage patient's often already fragile self-esteem and can stimulate passivity.

Paulo Freire developed a highly influential pedagogy for the education of adults in Brazil and Latin America during the 1950s and the 1960s. He was a teacher himself and was directly involved with the practice of his method. Deeply influenced by political ideas of his time, Freire viewed education as a means of liberation for those he called the oppressed. According to Freire, confining students to silence and the passivity of receiving information only adds to their oppression. Therefore, a liberation education must create a new form of relation between teacher and student, one based in dialogue, without hierarchy, where themes brought by students, put in their wider social context, are the starting point for the pedagogical task (Freire, 1972). Bringing this to the clinical setting, Barreto draws a parallel between student-teacher relation and the patient-facilitators' one.

The ideas of Paulo Freire also have links with another important social movement in Latin America which has itself influenced community therapy. Liberation Theology is a movement in Christian theology born in the 1960s in Latin America. It combines Christian tradition with social theory to promote the insight of the poor and marginalised into their situation with the clear objective of changing their living conditions (Gutierrez and Rowland, 1999; Rowland, 1999). Three aspects of Liberation Theology movement can be recognized to have influenced community therapy. First, as community therapy, it makes a point of valuing poor people's own resources when offering them the help of the church. For Liberation Theology, the very difficulties of poor people's lives make them more apt to understand and propagate Christian principles. Second, Liberation Theology fosters the intensification of communal life as a means of improving individual well-being and of enabling poor communities to claim for better living conditions. Third, Liberation Theology relies on lay people to organize and perform many of the activities of the church in their

communities, thereby expanding the reach of spiritual work to areas where priests are not present. Some of these lay practitioners were gradually transformed into local leaders, taking responsibility in social movements, including health promotion initiatives such as the previously mentioned "Pastoral da Crianca" in Brazil (Dawson and Rowland, 1999). Barreto drew upon these ideas when deciding to train lay people to become community therapy facilitators and therefore spread CT to areas where health resources are scarce. Although his training guide to community therapy contains a number of religious quotes and references, Barreto is not explicit about the influence of Liberation Theology (Barreto, 2005). However, he was himself trained to become a priest in the Brazilian Catholic Church (although he eventually did not join the Church) and was deeply influenced by key figures linked to the Liberation Theology movement (Barreto, 2005).

2.1.4 TECHNIQUE

The following section describes the practical elements of community therapy sessions.

2.1.4.1 The setting

Group sessions of CT are usually offered on a weekly basis at a fixed time and location. They have an approximate duration of 90 minutes and there is no limit to the number of people who can attend. People can come every week or as occasionally as they wish. Any room with enough place and seats is suitable for the sessions. No specific equipment is required. Depending on the composition and abilities of the group, music can be included. A guitar is often used during the sessions.

At least two facilitators are needed for each group. One leads the session and the other helps with 'warming-up' the group, keeping track of all that is said and giving individualized attention in the event that an attender suffers from an intense emotional breakdown during the session. Facilitator pairs may change their roles every week. It is preferred that the same pair keeps a regular schedule and venue for the sessions.

As attendance to sessions is usually open to anyone, people may be referred by staff from local health centres or charities, friends, neighbours and relatives. There is no minimum or maximum limit of the number of sessions to be attended; each session is

independent of the previous ones. It is highly desirable, however, that users belong to a single community, being defined mainly by neighbourhood. It is expected that in any session there will always be some people coming simply to meet other people and not primarily because of any particular mental distress.

2.1.4.2 The session

Approximately ten people usually attend each session. They sit in a circle around the room. Sessions begin with a welcoming activity proposed by the therapists. It may be singing a song (eg. a birthday song for someone of the group) or doing a simple interactive exercise like shaking or clapping hands with neighbours. The facilitators will introduce themselves and one of them takes the lead and explains the purpose and the rules of CT. This excerpt exemplifies the typical beginning of a CT session:

"We get together here every week to find solutions to our problems. We sometimes forget that these solutions can be closer than we imagine. Solutions are to be found in the community, with its wisdom and resources. Everyone has his or her wisdom: descendents from Indian Brazilian natives have the wisdom of Indian culture, old people have the experience of life and so on.

Now it is time to speak about what is bothering us, what is making us suffer. There is a saying that goes like this: "when we are silent our body speaks, when we speak our body heals". So it is important that we talk about what we feel. Frequently we get ill because we stop talking about our feelings.

We have a few essential rules that we need to follow to develop our conversation:

1. *Everyone should listen while someone is speaking*
2. *One must always speak in his or her own name ("I" and not "we") and tell only about his or her own experiences.*
3. *One shall not preach, give advice or judge those who speak in this session.*
4. *Anyone who comes up with a song related to what is being said may ask the group to let her/him sing it.*
5. *Finally, we cannot ask for secrets to be kept here, so if you have a big secret, you'd better not tell it here. If you ask me at the end of the session I'll help you find the right place to talk about it."*

(Transcribed from a video-recording of a CT session lead by Barreto)

The leading therapist then asks the group who would like to share his/her preoccupation or distressing problem. Those who volunteer say their names and very briefly tell their story. Next, the therapist summarizes in a few words the stories told (usually around five stories) and asks the group to choose one of them as the main theme for the session. The chosen person then tells his or her story with greater detail. Facilitators ask the person to emphasize his or her personal experience of the situation, how he/she was affected by the events. Others in the group may ask questions to elucidate the story. Usually this is a moment of high emotional intensity during which people frequently cry whilst speaking. The facilitator or anyone else in the group may start to sing a song or tell a saying related to what is being told. This may be used to give the person time to feel better and encourage him/her to go on.

The facilitator then distils the essence of the situation and the feelings involved and summarizes it in more general terms. He asks the group if anyone has also been through this kind of suffering or experience before. There are usually a number of people who then reveal similar experiences. The therapist asks those people to share their experiences and, particularly, how they were able to overcome them.

In closing, the facilitator thanks the person who shared her or his story with the group. The facilitator may add a brief positive synthesis and ask people to stand up, hold hands in a circle and say what each one has taken from this session. There may be a closing song and a final farewell encouraged by the facilitators.

2.1.5 THE TRAINING OF COMMUNITY THERAPY FACILITATORS

There is no structured or detailed programme for training community therapy facilitators (Barreto, 2005). Only general features are required of training programmes by the Brazilian Association of Community Therapy. All trainees must attend 80 hours of workshops (usually divided in four sets), lead 20 CT sessions and participate in 40 hours of group supervision (Abratecom, 2005). Workshops use Barreto's Manual of CT as a guide for describing the technique and its theoretical foundations (Barreto, 2005). As discussed earlier, the theoretical elements and psychological techniques used by CT are only superficially described in this Manual. The structure of sessions, however, is described in detail and the approximate timing of each phase

is provided. A number of examples of interventions are provided to help facilitators clarify the objectives and rules of CT for participants. Workshops include role-playing of difficult situations that may occur during CT sessions. There is no formal evaluation of trainees' performance during the workshops or supervisions. In short, there are significant variations amongst CT training programmes and no "gold standard" programme to which they can be compared. Consequently, facilitators trained in different programmes can differ in the way they deliver CT.

Individual characteristics of facilitators, as their professional background and social skills, also influence the mood of sessions, the resources used (music, physical contact amongst participants, humour) and therefore the way in which CT is delivered (See more on this in Chapter Six). As a consequence, significant therapist effects can be expected in the delivery of CT.

Furthermore, there are no instruments devised to evaluate the fidelity of a CT session to CT's original concept. This makes the investigation of the influence of therapist effects in the impact of CT more difficult. The absence of evidence that the technique of CT can be reproduced with fidelity by different facilitators with different trainings is a serious disadvantage. It undermines the generalizability of research on the impacts of CT.

2.2 SOCIAL SUPPORT AND SOCIAL CAPITAL AS TWO POSSIBLE MECHANISMS OF COMMUNITY THERAPY

I believe it is fair to define community therapy essentially as a technique that facilitates the exchange of experiences between people with a common background. Accordingly, I hypothesize that the concept of social support encompasses much of what community therapy sessions' seek to generate. I believe that most of the effect that community therapy might have on mental health, if it has any, will be associated with changes in social support.

Secondarily, I believe that social capital might be a useful concept to test the hypothesis, highly valued by Barreto, that community therapy can empower people for collective action by bringing them together within the community and increasing their trust in each other. There is an ongoing debate on the relations between social capital and mental health and this study is an opportunity to test the association of these two variables among users of a mental health intervention.

I will discuss below the definition of social support and social capital, their associations with mental health outcomes and how they can be related to features of community therapy.

2.2.1 SOCIAL SUPPORT

2.2.1.1 Definition

Social support can be defined as "the functions performed for the individual by significant others, such as family members, friends and co-workers" (Thoits, 1995) (p.64). These support functions may be divided into three different, although highly correlated, dimensions: instrumental (help with family or work responsibilities, financial aid), informational (advice about sources of help) and emotional (acceptance, esteem from others). Social support is dependent both on the number of relations of one individual with "significant others" (i.e. his or her social networks) and on the qualitative context of those relations. It is the quality of the relational context that gives behaviours a supportive meaning and effect (Thoits, 1995). Some authors have stressed that peers who share significant common experiences may be a better source of support in stressful situations than close relations. They may be seen as more capable to understand shared situations than close relations. Receiving support from peers could also avoid a feeling of over dependence of vulnerable individuals on their partners and family (Cohen, Gottlieb et al., 2000; Antonucci, 2001).

Because the qualitative context of relations is important, measures of perceived rather than objectively received social support have been favoured as more meaningful to health research (Wills, Shinar et al., 2000). There is evidence that perceived support is more strongly related to mental health than received support is (Thoits, 1995). Cross sectional studies, however, cannot define which is the direction of the association

between social support and mental health. Personality traits may influence the perception of social support. Thus, there is evidence that social support scores of one individual tend to be quite stable across time (Rook, Underwood et al., 2000; Wade and Kendler, 2000). Beside the influence of personality traits, it is possible that the relative stability of the social environment and individual's networks contribute to the stability of perceived social support. In developing countries, however, this assumption on the stability of social support may not be true. Two important social processes of these countries are the rapid urbanization of rural populations and massive internal migration flows, thus provoking significant changes in the social environment and networks of individuals (Harpham, Phillips et al., 1994). However, there is no empirical evidence of how these social processes might have affected social support in these countries.

There is conflicting evidence (which includes data from Brazilian studies) regarding the associations of social support with gender and with social status (Thoits, 1995; Fuhrer, Stansfeld et al., 1999; Brugha, Morgan et al., 2003; Costa and Ludermir, 2005; Griep, Chor et al., 2005). The lack of consistent findings across studies may be due to differences in the way social support is conceptualized and measured and to the effect of country-level cultural contexts on these associations.

2.2.1.2 Social support and mental health

A number of psychological mechanisms have been hypothesized to explain the protective effect of social support on mental health. The main hypothesis considers social support a buffer to stressful life-events (i.e. experiences that cause an individual to substantially readjust his or her behavioural patterns) (Thoits, 1982; Thoits, 1995; Antonucci, 2001). Support received from others would help the individual to cope with difficult situations. Supportive others can do this by helping the individual to reinterpret more positively situational demands; bolstering self-esteem by reassurance; and sustaining the individual's sense of control with feedback and encouragement (Thoits, 1995). Social supports effects' also include more material coping resources, described in its instrumental and informational dimensions.

A different, and perhaps complementary hypothesis uses a social constructionist perspective which emphasizes the importance of how one is viewed and relates to

one's social network in order to determine the experience of "self" (Lakey, Cohen et al., 2000; Antonucci, 2001). It is hypothesised that a supportive environment should produce a continuing positive experience of "self" (increasing self-esteem) and make individuals feel less vulnerable and more confident in relation to the future. Reciprocal support is also supposed to improve mental health. The possibility to provide support is said to improve the feeling of worthiness (and thus self-esteem) of individuals (Antonucci, 2001).

However, it is admitted that these hypothesis on the mechanisms of social support's effect on mental health have been insufficiently tested. They remain as theoretical assumptions still lacking direct evidence to be confirmed (Thoits, 1995; Antonucci, 2001).

2.2.2 How community therapy might increase social support

In the next paragraphs, I trace parallels between the postulated mechanisms described in the literature for social support and the features of community therapy that could be hypothesised to employ these mechanisms. A critical discussion of these mechanisms is provided in Chapter Six in which I have included insights from my data.

Community therapy can be considered as a support group. Support groups are distinguished from self-help groups because they use professionals to facilitate the exchanges between participants. On the other hand, they differ from therapy groups in that systematic clinical activities such as diagnosis and interpretation are not used (Helgeson, Gottlieb et al., 2000). Thus, their therapeutic effects are not directly due to the techniques employed by professionals, but rather they are dependent on the interaction amongst participants.

It can be hypothesized that CT, by valuing and using the cultural background and clues of its participants, manages to create a more welcoming and egalitarian context than one marked by the technical knowledge asymmetry of traditional patient-therapist relations. Also, recognition of the opportunities for reciprocity (i.e. the one that is helped today may be helping newcomers tomorrow) create an interdependence that avoids the "damaging effects on self-esteem of casting one party exclusively and permanently in the role of help-seeker and recipient" (Gottlieb, Cohen et al., 2000)

(p.214). Thus, CT is preoccupied with creating an appropriate context such that the relations established within the group can be viewed as supportive ones.

The social support literature mentions that "voluntary" ties, such as those linking fellow CT group users, may be more effective in terms of support than "obligatory" ones (spouse, parent, co-workers). As Helgeson et al (Helgeson, Gottlieb et al., 2000) wrote: "Peers are able to understand one another's situation in a way that naturally occurring network members may not. There is evidence that in times of stress, members of one's social network do not always behave positively, partly from a lack of understanding of the stressful experience and partly from feelings of threat" (p.224-225).

Users of CT groups in Sao Paulo usually belong to the same neighbourhood and share many of the living conditions that have been associated with mental ill-health. Comprising mostly women, they may also share experiences of relationship conflicts, domestic violence and caring for an ill relative, all of them related to mental ill-health. Not surprisingly, these are the most frequent themes discussed at CT groups (SMS-SP, 2005). The emphasis that CT poses on a systemic view of individual problems and stressors, pointing to their relation to broader social and relational issues, favours the focus on these shared living conditions. Shared experiences of chronic strains and stressors may stimulate expressions of understanding, concern and caring among group members (Helgeson, Gottlieb et al., 2000). It can also help individuals to reinterpret more positively situational demands (i.e. "I am not the only one to go through this situation, others have gone through this before"). CT facilitators also explicitly stimulate manifestations of encouragement and reassurance by group members.

CT groups may also contribute in terms of the material and informational dimensions of social support. The "Weak Ties" hypothesis suggests that people who do not belong to our inner circle are the ones likely to have access to new information, social contacts and job opportunities: "those to whom we are weakly tied are more likely to move in circles different from our own and will thus have access to information different from that which we receive" (Granovetter, 1973) (p.1371). Facilitators and users of community therapy groups fall into this category of weak ties and can

provide individuals in distress with information on useful resources and, possibly, practical help with everyday needs.

2.2.3 SOCIAL CAPITAL

2.2.3.1 Definition

Social capital is a concept that originated in the social sciences literature and which generated interest in the health sciences initially as one means of understanding the persistence of health inequalities in affluent societies (Wilkinson, 1996). It can be defined as "those features of social structures- such as levels of interpersonal trust and norms of reciprocity and mutual aid –which act as resources for individuals and facilitate collective action" (Kawachi, Berkman et al., 2000) (p.175). It has built on the extensive literature on social networks and social support that has, since the 1970's, explored the relations between health and the psychological experience of individuals and their relationships to others in their community (Szreter and Woolcock, 2004). Social capital is considered to include social support within its definition, adding trust in fellow citizens and participation in civic institutions as key elements. It is hypothesised that the social support component of social capital accounts for the individual-level effects of social ties and in this way, social support is considered as one of the mechanisms by which social capital influences health (Kawachi, Berkman et al., 2000; Harpham, Grant et al., 2002; Putnam, 2004). Other mechanisms have been postulated such as social identity and risk behaviour (as in accounts of adolescent smoking), access to health related resources, and increased stress levels (through disempowerment and isolation) (Putnam, 2004). These are mechanisms related to the so-called *cognitive* and *structural* components of social capital. Cognitive components include perceived support, trust, social cohesion and perceived engagement. Structural components encompass existing networks, associational life and civic participation (Harpham, Grant et al., 2004). Another refinement of the concept is to distinguish the so-called bonding, bridging and linking forms of social capital. Following Szreter and Woolcock: "bonding social capital refers to trusting and co-operative relations between members of a network who see themselves as being similar […] Bridging social capital, by contrast, comprises relations of respect and mutuality between people who know that they are not alike in some socio-demographic (or social identity) sense" (Szreter and Woolcock, 2004) (p.654-655). Linking social capital is defined by the "norms of respect and networks

of trusting relationships between people who are interacting across explicit, formal or institutionalized power or authority gradients in society" (p.655). In this, Szreter and Woolcock include the relations between health services (professionals) and their users.

There is still an ongoing debate as to whether social capital should be considered a feature of individuals or groups. Regardless of this conceptual debate, measuring ecological social capital has proved a difficult task. The only systematic review examining social capital and its relation with mental health found 14 studies measuring individual social capital versus seven measuring ecological social capital (De Silva, McKenzie et al., 2005). Most ecological studies, however, aggregate individual measures of social capital instead of searching for truly contextual measures (De Silva, McKenzie et al., 2005; De Silva, Huttly et al., 2007). It is acknowledged that aggregated individual measures of social capital face the difficulty of defining geographical units for research that reflect respondents' concepts of their community (De Silva, McKenzie et al., 2005). Truly contextual measures of social capital also face the difficulty of defining geographical units that reflect respondents' concepts of their community. In addition to that, they have to avoid the risk of including likely consequences of social capital (such as characteristics of public institutions and the built environment) in its measurement. For Putnam, broadening the definition of social capital by including some of its likely consequences would render causal claims about its importance tautological. He has therefore argued for a "lean and mean" definition of social capital, and its measurement should reflect this view (Putnam, 2004). This is not to discard the importance of the built environment and other contextual features for mental health (Evans, 2003; Araya, Montgomery et al., 2007; Kim, 2008; Mair, Diez Roux et al., 2008).

The debate around the influence of social capital on health is intense. The fluidity of the concept and the consequent difficulties in operationalizing its measurement and dealing with confounders are frequently mentioned. No wonder that in dealing with such an issue as social cohesion and carrying the words "social" and "capital", the uses of the expression and the concept are many; indeed, they can be traced back to the very beginnings of social science (Farr, 2004). To mention one example,

Bourdieu, unanimously cited as one of its founding fathers, conceptualized social capital in the early 1980's as a way of understanding how dominant classes use different sources of capital (social, cultural and economic capital) to reproduce it and maintain the power relations it entails (Bourdieu and Richardson, 1986). This is a very different understanding of the concept from that envisioned by the World Bank, which sees social capital as an instrument to improve sustainable development in disadvantaged communities (Grootaert and van Bastelaer, 2002). It is possible that one of the reasons for the recent wave of interest is precisely the fact that people can mean quite different things by what they call social capital.

An important component of the debate on social capital and health boils down to a disagreement over the causes of health inequalities. Critics of social capital argue that health inequalities are fundamentally rooted in differences of access to material resources and the interest in social capital takes away attention from structural inequalities and power relations (Lynch, Smith et al., 2000; Muntaner, Lynch et al., 2000; Macleod and Davey Smith, 2003; Muntaner, 2004; Smith and Lynch, 2004). The response to this criticism is that studying social capital is not a way of ignoring inequalities but precisely one means of understanding more comprehensively *how* they affect health (Marmot and Wilkinson, 2001; Szreter and Woolcock, 2004; Szreter and Woolcock, 2004). In this sense, social capital could be considered a way of measuring the impact of structural social inequalities on the perception of one's place in society and its effect on social cohesion. Social capital would have the advantage of considering the cultural and political factors that make the experience of inequality different among societies. The underlying assumption is that there is a psycho-physiological pathway connecting an individual's perception of inequality to stress and illness. Critics insist that this pathway is less important than the deprivation of resources that leads to worse access to health services, increased exposure to accidents, violence, pollution and unhealthy food (Smith and Lynch, 2004).

2.2.3.2 Social capital and mental health

In the mental health field, the contribution of social capital has also been received with caution (McKenzie, Whitley et al., 2002; Henderson and Whiteford, 2003). Nevertheless, a systematic review (De Silva, McKenzie et al., 2005) has found higher levels of cognitive social capital to be associated with a lower risk of common mental

disorders in seven of a total of 11 studies reviewed. Measures of structural social capital show a weaker inverse association with common mental disorders. Another author has suggested that mental health programmes could be a mean to enhance social capital (Sartorius, 2003).

2.2.4 How community therapy might increase social capital

In the context of recent urban settlements with high levels of deprivation, such as the one where Barreto first started community therapy, it is possible to imagine that community therapy sessions could be one of the few opportunities for people to get together and be acquainted with the problems their peers were facing. Because community therapy explores the systemic (social) causes of their distress, which are common to all, and implies that communities have the power to find solutions, it can be expected to increase bonding social capital:

> "For trusting social norms to develop there needs to be a minimum degree of understanding among the participants […] that they share each other's goals and purposes, and are working together towards mutually compatible ends" (Szreter and Woolcock, 2004)(p.656).

It is also possible that community therapy might increase linking social capital. Because all groups are open without need of referral and many of them take place in community settings, community therapy should be able to put in contact with the health system people who otherwise do not access them. And it does so by valuing people for their culture and resources, giving them an active role in the health of their community. It can therefore help to create "the norms of respect and networks of trusting relationships" between users and health services mentioned above.

2.3 CONCLUDING REMARKS

The development of community therapy was deeply embedded in the cultural and social environment of those most at risk for common mental disorders in Brazil. It is a low-cost group intervention that also proved popular with health workers in different parts of the country. However, in spite of the widespread use of CT now in Brazil,

including in the National Health Service, a number of significant questions remain to be answered concerning its role as a mental health intervention. Is CT an acceptable form of psychotherapy for patients? Is it an effective way of reaching people in need of mental health care, particularly those less willing or less able to access care? Does placing CT groups in community settings contribute to increase access to mental health care? Should CT groups remain open to self-referrers or do they risk favouring the "worried well"? By which mechanisms is CT likely to improve mental health (i.e. which are the essential ingredients of CT)? And, crucially, is CT cost-effective in the treatment of common mental disorders?

The following chapters aim to contribute to the evaluation of CT as an intervention for common mental disorders.

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CHAPTER THREE

OBJECTIVES, HYPOTHESIS AND QUANTITATIVE METHODS

In this chapter I begin by setting the objectives and hypotheses for my research. I then justify and describe the methods I used during the fieldwork and in the statistical analysis of data. For clarity, details on the qualitative data collection and the analysis of such data are described in Chapter Six, together with the presentation and discussion of qualitative results.

3.1 OBJECTIVES

The principal objectives of this research are the following:

1. to describe the characteristics of CT attenders in São Paulo in terms of: their socio-demographic profile, the source of their referral, their previous use of health care, and their baseline status regarding four health and social outcomes (mental health, quality of life, perceived social support and social capital);

2. to examine the pattern of attendance of users to CT sessions and to observe changes in the four health and social outcomes 12 weeks after initial attendance to CT groups;

3. to compare the characteristics of CT users attending groups located in primary care clinics versus CT users attending groups in the community and of self-referred CT users versus CT users referred by health professionals;

4. to explore the views of attenders and facilitators on the functioning of CT groups and their possible effects.

3.2 HYPOTHESES

The hypotheses of this research are the following:

1. The mental health of CT attenders improves after 12 weeks of follow-up (main hypothesis);
2. The quality of life of CT attenders improves after 12 weeks of follow-up;
3. Improvement in mental health among CT attenders is associated with improvement in social support;
4. Improvement in mental health among CT attenders is associated with improvement in social capital.

3.3 METHODS

3.3.1 GENERAL APPROACH

3.3.1.1 Overview

This research is a case study in which the unit of analysis is the delivery of CT as a mental health intervention in the primary health care of the city of São Paulo. It includes an observational quantitative component, sampling and following attenders of CT, and a qualitative component, combining semi-structured interviews with CT attenders and facilitators, and observation of CT sessions.

To attain objectives one and three of this study (see above), I recruited a sample of incident attenders from CT groups taking place in community settings and inside primary care clinics in São Paulo. At recruitment, each attender was assessed using a specially designed questionnaire, which included socio-demographic data, and information on their origin of referral and use of health services. Additionally, four structured instruments generating scores for mental health (SRQ), perceived social support (MOS), quality of life (WHOQOL-bref) and social capital (SASCAT) were used. To attain objective two, assessments were repeated for each attender after 12 weeks of follow-up, irrespective of their subsequent attendance to CT sessions. To attain objective four, after completion of follow-up, semi-structured interviews were

carried out with a purposefully sampled sub-group of these attenders. I also carried out semi-structured interviews with facilitators from groups whose CT attenders were followed. Finally, I directly observed CT sessions of some of these groups.

Table 1 below offers a summary of the instruments and statistical methods used to test the hypotheses made and the results that were expected.

Table 1- Methods for testing research hypotheses

Hypotheses	Instruments	Statistical method	Results expected
1	SRQ	Mean difference with confidence intervals and significance test	Minimum two-point decrease in scores ($p<0.05$)
2	WHOQOL-bref	Mean difference with confidence intervals and significance test	Increase in scores ($p<0.05$)
3	SRQ and MOS	Linear regression	Unadjusted linear association ($p<0.05$)
4	SRQ and SASCAT	Linear regression	Unadjusted linear association ($p<0.05$)

Before proceeding to detailing the methodology, I will expand on the reasons for choosing a case study design.

3.3.1.2 Reasons for choice of study design

Researchers have argued for the use of limited pilot trials as well as observational and qualitative methods before embarking on expensive randomized clinical trials (RCT) of new treatments, particularly for complex ones as psychotherapy techniques (Campbell, Murray et al., 2007). Observational study designs and qualitative data collection contribute to refining interventions and adapting them to real-life contexts. They should also assist in informing further evaluative research (Black, 1996; Murphy, 2001). In the particular case of CT, the intervention was rolled out as a policy without previous evidence on its efficacy, and on how it should be delivered in the context of primary health care. At this stage of knowledge regarding CT, it would be precocious to perform an expensive experimental design (RCT or cluster RCT). It would also be beyond the scope of a PhD research.

I decided to take advantage of the fact that CT had been implemented in a large scale in São Paulo to (i) describe with observational data the way it was being delivered and the context of its integration within primary care; (ii) assess changes in mental health related outcomes amongst CT attenders, (iii) and qualitatively explore CT's mechanisms. In achieving this, I aimed to contribute to refining CT and its integration within primary health care. Additionally, I wanted to investigate the questions raised in the conclusion of Chapter Two about CT's capacity of reaching a population in need of but not accessing mental health care and how pathways of referral and location of groups might influence this capacity. Furthermore, I aimed to set the grounds for the design of a future randomized trial of CT, defining population to be recruited and outcomes to be measured.

Considering this, I decided to use a case study methodology because it allowed the investigation of CT in its real-life context and the combination of qualitative and quantitative data (Yin, 2003). In recent years, a growing number of case studies have contributed to bring evidence on mental health interventions in low and middle-income countries (Cohen, Kleinman et al., 2002; Almeida and Cohen, 2008).

The main limitation of my study design is that changes in the mental health related outcomes of research subjects cannot be directly attributed to CT. They may be due to spontaneous remission or other treatments received by subjects (see more on Chapter Five, section 5.2.2.1). The reason for this is that it was not possible to find a control group comparable to CT attenders. Two important features of the delivery of CT in São Paulo contributed to this: allowing the attendance of self-referrers and locating groups in community settings. Which individuals could be compared with those who first attended CT sessions self-referred or who attended groups located in community settings? Recruiting controls that presented with psychological complaints at the reception of clinics where CT was not available and comparing them with people presenting to clinics where CT was available would pose two problems. First, I would have to restrict my CT sample to groups located inside clinics, as people attending community CT groups could be expected to have significant differences in relation to people attending primary care clinics. This would exclude almost half of CT groups in São Paulo from my sample and restrict the generalizability of results. Second, even excluding community groups, it could be argued that clinics where CT is available

attract more users, and perhaps, with better mental health than clinics where CT is not available. The ready availability of treatment (CT groups have no waiting list) influences the health seeking behaviour of users who might otherwise not look for treatment at all. This same argument can be used against recruiting only subjects referred to CT by professionals and comparing them with patients of clinics where CT was not available but whom professionals referred to other psychological interventions. Health professionals' decisions to refer patients are also likely to be influenced by the ready availability of treatment alternatives. The use of a waiting list control group was not possible because there are no waiting lists for CT groups in São Paulo. It would be unethical to introduce waiting lists in already existing CT groups as those sampled for this thesis. Thus, it was not possible to have a control group to study CT in its real-life context with an observational study design.

3.3.1.3 Methodological considerations

Case studies rely on multiple sources of data to describe reality accurately (Yin, 2003). Therefore, case studies benefit from the prior development of theoretical propositions to guide data collection, and from triangulation of results, bringing together different sources of evidence, to formulate conclusions (Yin, 2003). This is why in Chapter Two I described the context of the implementation of CT in São Paulo and undertook a theoretical discussion of how CT could be related to the concepts of social support and social capital. The hypothesis that these concepts might reflect crucial mechanisms of CT's impact on mental health is what justifies the inclusion of social support and social capital among the outcomes of this study. In my analysis of this research I also looked for converging evidence from different sources of qualitative data (Chapter Six) and triangulated conclusions from qualitative sources with those from quantitative ones (Chapter Seven) to increase the depth and validity of my findings.

Regarding the analysis of data collected, particularly but not only from qualitative sources, it is necessary to make clear what is the status given to evidence in this research. I have adopted the stance of "subtle realism" defined by Hammersley in relation to ethnography and applied by Fulop et al to health services research (Hammersley, 1992; Fulop, 2001). According to this view, people's actions and accounts, as expressed in structured or semi-structured interviews for example, are

considered as constructions of reality. These are not necessarily true or rational in their own terms. However, in many circumstances we must rely on these accounts to access phenomena that cannot be directly observed (one's mental health, for example). The triangulation of evidence and its comparison with previous evidence and theory contribute to increase the validity of these constructions of reality. The result of this kind of research is to be judged according to the relevance of the features it highlighted to the objectives it previously established. Nevertheless, it is necessary to view conclusions as selective representations rather than reproductions of reality. According to subtle realism, there can be multiple, non-contradictory and valid representations of reality, each of them stemming from the different points of view of different researchers. Different representations of reality favour distinct features of a phenomenon as more or less relevant (Hammersley, 1992).

3.3.2 INSTRUMENTS

I chose four previously validated instruments to undertake the quantitative assessments of mental health, perceived social support, quality of life, and social capital. In the next four items I justify the reasons for their choice and describe the characteristics of those instruments. The instrument used to assess social capital was the only one which had not been adapted to the Brazilian context. Therefore, I give a description of the adaptation process I undertook in the preparation for my main fieldwork in Annexe IV.

3.3.2.1 Mental health

The Self-Reporting Questionnaire 20 items (SRQ) was chosen for this study because it is a short and easy to use instrument capable of identifying mental ill-health in patients with depressive, anxious and somatisation symptoms. It has also been extensively used in Brazil and other countries in community and primary care settings. The possibility of comparing prevalence of mental ill-health in this study with previous findings in community and primary care samples of São Paulo is an advantage of using the SRQ.

The SRQ was developed in the context of a WHO collaborative study and has been translated into at least 21 languages (Harpham, Reichenheim et al., 2003). It is a screening instrument composed of 20 questions yielding a score that indicates

probable mental disorders (non-psychotic) but does not differentiate among diagnostic categories.

The SRQ is easy to use asking simple yes or no questions, although amongst responders with low schooling it requires an interviewer to read the questions and mark the answers. It usually takes 5-10 minutes to answer its questions (Mari and Williams, 1986). The investigation of symptoms includes examination of their frequency and intensity in order to avoid positive answers based on very transient or irrelevant mood swings. The recall period used was of two weeks to minimize recall bias (Harpham, Reichenheim et al., 2003) and seek coherence with the quality of life instrument being used. Two weeks is also the minimum duration of symptoms required for the diagnosis of depressive episodes according to most diagnostic classifications (World Health Organization, 1992; American Psychiatric Association, 1994).

A study in primary care clinics of São Paulo investigated the internal consistency and inter-rater reliability of the SRQ-20. The coefficient of internal consistency (KD-20) was found to be 0.81 and the inter-rater reliability (intra-class correlation coefficient) was 0.96 (Iacoponi and Mari, 1989). A shortcoming for my study is the absence of studies reporting on the responsiveness of the SRQ.

A validation study by Mari & Williams in primary care clinics of São Paulo compared the SRQ and the General Health Questionnaire 12 items with a semi-structured psychiatric interview, the Clinical Interview Schedule (CIS). The SRQ was shown to be slightly superior to the GHQ-12 both in terms of validity and as an indicator of severity (Mari and Williams, 1985). As a screening instrument, the SRQ indicates probable cases of common mental disorders. It was found that its optimal cut-off point (the best trade-off between sensitivity and specificity) was of eight or more "yes" answers (Mari and Williams, 1986).

In this study the SRQ was used primarily to generate continuous scores of mental ill-health for all respondents and, secondarily, as a categorical indicator of probable mental disorder in those above the previously mentioned cut-off points.

Recent debates concerning the forthcoming fifth edition of the DSM suggested the systematic use of continuous scores of symptoms together with traditional dichotomized diagnosis for depression (First, 2006). In research, there is good reason to defend the use of dimensions in parallel with categories. Continuous dimension scores improve the power of epidemiological studies and help to evaluate the impact of interventions. Moncrieff and Kirsch have demonstrated how minimal differences in improvement of continuous measures of symptoms scores between two groups can result in relatively large differences in the proportion of individuals categorically classified as clinically respondent to an intervention (Moncrieff and Kirsch, 2005). Using only categorical results may therefore lead to biased conclusions.

Furthermore, the use of a continuous scale is particularly relevant for assessing mental health in CT groups, where attenders comprise a likely mixture of healthy people with others carrying clinical and sub-clinical mental syndromes. An exclusively categorical assessment would therefore be inappropriate to evaluate this range of mental health states and possible sub-threshold improvements (i.e. a possible primary prevention effect).

On the other hand, the categorical approach is still preferred by clinicians, especially general practitioners having to take everyday decisions on when to initiate treatment. Policy makers also prefer the categorical approach to estimate disease prevalence, define resource allocation and evaluate use and performance of health services. Since it is an objective of this study to inform clinical and policy decisions, both the continuous and the categorical approaches were used.

3.3.2.2 Social support

In order to identify instruments measuring social support in the Brazilian context I undertook a search in PubMed using MeSH terms "social support" and "Brazil" (see Annex III for details). A manual search for additional references in articles retrieved was also performed. Four different methods of measuring social support in Brazil were found. One of them differed radically from the usual procedures by comparing individual assessments of social support to a culturally construed ideal of support (Dressler, Balieiro et al., 1997). In spite of the advantage of proposing a culturally informed measure, the uniqueness of this method weakens the comparability of its

results. It was far more demanding from a statistical point of view. Of the other three social support measures adapted for Brazil, one was specifically designed for pregnant and puerperal women (Langer, Farnot et al., 1996). Another group of researchers adapted the Saranson's Social Support Questionnaire (Matsukura, Marturano et al., 2002). Shortcomings of this adaptation were the absence of any validity and responsiveness measures, no detailing of the three main support dimensions mentioned in the literature (emotional, informational and instrumental) and a poor test-retest reliability (network component Kappa= 0,33 and perceived support Kappa= 0,49). Finally, I could not find any additional Brazilian study using this instrument.

The instrument chosen for my research was the Brazilian version of the social support questionnaire of the Medical Outcomes Survey (MOS) (Chor, Griep et al., 2001). The original MOS was developed for a longitudinal study in the United States involving 2987 adult outpatients with a variety of chronic conditions (Sherbourne and Stewart, 1991). It has since been used in great number of studies and is considered to be one the most psychometrically robust scales for social support (Bowling, 2001). This instrument contains 19 items covering the availability of support for the individual. Possible answers are: never, little, some, most and all of the time, yielding scores from one to five (Chor, Griep et al., 2001). It therefore measures perceived social support, in common with the majority of instruments in this field (Wills and Shinar, 2000). The questions of the MOS are divided in five dimensions of social support: (1) emotional support (receiving positive affect, understanding and encouragement to express feelings); (2) informational support (information on sources of help); (3) tangible support (material aid); (4) positive social interaction (having company for leisure activities); (5) affectionate support (receiving expressions of love and affection). In spite of the different terminology, analyzing the items of each of these five dimensions one can reasonably relate them to the emotional (emotional, positive social interaction and affectionate), informational and material support dimensions described in Chapter Two. The recall period I used was of three months.

The MOS was selected by a group of Brazilian researchers for a large cohort study of more than 4,000 civil servants in Rio de Janeiro. In choosing this particular instrument, researchers analyzed available questionnaires according to the relevant dimensions of support emerging from focus groups done in Brazil. The original

questionnaire was submitted to a forward and back translation process. The number of unanswered questions in the piloting was considered very small indicating a good acceptability (Chor, Griep et al., 2001).

The evaluation of the construct-validity of the Brazilian MOS questionnaire confirmed the expected association of high levels of perceived social support with better self-evaluation of health, fewer chronic diseases and better mental health (Griep, Chor et al., 2005). Lower social support was associated with old age and living alone.

The evaluation of the internal consistency reliability of the instrument was performed calculating Cronbach's alpha coefficient. Results for the dimensions varied between 0.83 and 0.94 (Griep, Chor et al., 2005). Coefficients of test-retest reliability were within the range of 0.60 to 0.86 (Griep, Chor et al., 2003).

The Brazilian MOS has been used in a cross-sectional study investigating the association of social support and mental health in a rural population (Costa and Ludermir, 2005). In this study, as in the piloting of the instrument in Rio de Janeiro, scores were skewed to the higher end of the scale, a common finding in the literature (Wills and Shinar, 2000). Because of the way in which the Brazilian MOS was used so far I had no information on its sensitivity to change. Again this seems to be an issue for the whole literature in the field. As Wills et al put it: "a technology of support measurement for intervention contexts is currently not well developed" (Wills and Shinar, 2000). Still, the MOS scale seemed to be the best available instrument to measure social support in the Brazilian context.

3.3.2.3 Quality of life assessment

Quality of life is increasingly being considered as a major goal of any healthcare intervention, especially in the mental health field where mortality is seldom the main issue (Detels and Breslow, 2002). In health care evaluation "quality of life indicators help to answer the question whether the treatments lead to a life worth living, by providing a more patient-led baseline against which the effects of the intervention can be evaluated" (Bowling, 2001). The World Health Organization has defined health related quality of life as involving four different domains: physical health,

psychological state, social relationships and relation to culturally significant aspects of the environment. In a multi-site study in 15 centres, common significant contributors to quality of life were identified as physical safety, home environment, financial resources, access and quality of health and social care, opportunities for acquiring information and skills, participation in leisure activities, physical environment (pollution, traffic etc) and transport (WHOQOL-GROUP, 1998). Being such a broad concept, it naturally overlaps with the concept of mental health, social support and possibly with social capital in its psychological state and social relations dimensions. Nevertheless it is valued as a means of going beyond psychopathology in the evaluation of the impact of mental health interventions(Bowling, 2001; Berlim and Fleck, 2003).

Three widely used generic health-related quality of life instruments have been adapted to the Brazilian context. These are the Medical Outcomes Study 36-item short form health survey (SF-36) and the World Health Organization Quality of Life instrument, in its complete (WHOQoL-100) and abbreviated (WHOQoL-BREF) versions.

The hundred items of the WHOQOL-100 make of it a very long instrument imposing a heavy burden on its applicants and responders. It is probably reserved for use in research where quality of life is the main outcome, which was not the case of my study. The SF-36 is much easier to use but its Brazilian version has been validated and used so far only in samples of patients with severe chronic physical diseases (Ciconelli, Ferraz et al., 1999; Neto, Ferraz et al., 2000).

The instrument chosen was the WHOQOL-BREF. Brazil was one of the centres involved in the development of this instrument (WHOQOL-GROUP, 1998) which is considered to have good cultural equivalence (Bowden and Fox-Rushby, 2003). Piloting and further use of the instrument in Brazil have included psychiatric patients (Fleck, Louzada et al., 2000; Berlim, Pavanello et al., 2005; Fleck, Simon et al., 2005). The instrument contains two items covering overall quality of life and general health and 24 items standing for each of the 24 facets present in the WHOQOL-100. This criterion of comprehensiveness was combined with a psychometric evaluation of the original 100 items of the longer version to identify the most representative item of each facet. The WHOQOL-BREF includes questions on four domains: physical

health, psychological health, social relations (satisfaction with relations with friends) and environment (satisfaction with housing conditions, access to basic services). The recall period is two weeks. It can be self-administered but because of the significant proportion of people with low schooling in the area to be researched, the questions were read to respondents.

Its testing in Brazil involved inpatients and outpatients from different specialty clinics (including psychiatry) and healthy controls (Fleck, Louzada et al., 2000). Physical and psychological domains proved to have statistically significant discriminant validity between patients and controls. Construct-validity was evaluated by comparing scores of the WHOQOL-BREF with Beck Depression Inventory. As expected, correlation indices were higher for the psychological (-0.66) and physical domains (-0.57) than for the social relations (-0.43) and environment (-0.42) ones. Internal consistency reliability was tested calculating Cronbach's coefficient alpha. The alpha value ranged between 0.69 and 0.84 for each of the four domains. Coefficients of test-retest reliability were also considered high for each of the 4 domains: physical (Fleck, Louzada et al., 2000). Another study with depressed patients receiving anti-depressants brings some information about the responsiveness of the instrument. After 12 weeks of treatment mean overall scores had a statistically significant increase of 20% (Berlim, Pavanello et al., 2005).

3.3.2.4 Social Capital

In this study I chose to use individual measures of social capital because of the conceptual reasons discussed in Chapter Two (pg. 82) but also for pragmatical reasons. There were no established and reliable methods available to perform contextual measures of social capital. In contrast, a number of instruments have been developed to assess individual social capital, although only a few have been submitted to validation processes (De Silva, Harpham et al., 2005). Most of these have been assessed regarding their discriminant validity. The absence of gold standard measures for social capital prevents the assessment of concurrent validity (De Silva, Harpham et al., 2005). A search in PubMed and Web of Knowledge has not revealed any social capital instrument used in Brazil (see Annex III). I have chosen to translate an existing instrument, the short adapted social capital assessment tool (SASCAT), to

Portuguese and adapt it to be used in the Brazilian context. A full description of this process is given in Annex IV.

The SASCAT is a brief interviewer administered questionnaire taking around four minutes to be administered, which was developed for a multi-site longitudinal study in developing countries. Its longer version, the A-SCAT (adapted social capital assessment tool) was itself adapted from a social capital assessment tool developed by the World Bank (De Silva, Harpham et al., 2005).

The SASCAT has four items measuring cognitive social capital (covering trust, social harmony, sense of belonging and sense of fairness) and five items measuring structural social capital (one question on group membership, two on social support, two on citizenship activities). These items cover all main aspects of social capital although not as comprehensively as in the A-SCAT. However, some of the aspects that have been cut from the A-SCAT, such as the distinction between different dimensions of social support (emotional, material and informational), are already covered by the social support scale used in my research.

Psychometric information concerning the SASCAT is poor compared to the other instruments used in this thesis. The little information available refers to the versions of SASCAT used in Peru and Vietnam and it is not possible to say how relevant it is for Brazil (De Silva, Harpham et al., 2006). No information is available about its convergent validity (the degree of association amongst different instruments aiming to measure the same concept) as there is no gold standard instrument to measure social capital. Concurrent validity (the ability to distinguish amongst groups that should be different) and predictive validity (the ability to predict something it should theoretically be able to predict) were not determined either. However, the SASCAT proved to have good discriminant validity, except for its ability to distinguish between support from groups and from individuals. The three major independent factors revealed by factor analysis for the SASCAT were: group membership/support from groups and individuals, cognitive social capital, and citizenship. Results were very similar in Peru and Vietnam with these same three factors according for 56% and 57% respectively of the total variance among the intercorrelations of the nine social capital variables in these countries (De Silva, Harpham et al., 2006).

The recall period used for the SASCAT in this thesis was of three months.

3.3.3 PROCEDURES

3.3.3.1 Sample size calculation

The sample size was defined in order to test the primary hypothesis of this study. It was calculated to enable the detection of a two-point difference between mean Self-report questionnaire (SRQ) scores at baseline and follow-up. The choice of a two-point difference was based on my clinical experience and on data from a previous study conducted in São Paulo. This study took place in three primary care clinics an revealed that mean SRQ scores varied from 7.95 to 9.13 amongst clinics (Mari, 1987). A two-point reduction in these scores (equivalent to 0.5 of standard deviation in the above mentioned study) would be sufficient to change the mean SRQ score from all three clinics from the probable mental disorder group (scores of eight or more) to the non-mental disorder group.

Considering a significance level of 0.05, power of 0.90 and an estimated within patient correlation of 0.5 between baseline and follow up measures the required sample size was estimated to be 43 individuals. Calculations were made using the software Intercooled Stata 8.2 (StataCorp, 2007). I corrected this figure to allow for a 20% attrition rate amongst individuals recruited. Follow-up studies in Brazil and abroad with depressive patients from primary care clinics and the community had registered attrition rates around 15% (Araya, Rojas et al., 2003; Bolton, Bass et al., 2003; Fleck, Simon et al., 2005). Attendance to CT sessions involved a less consistent initial commitment from users than accepting to take medication. For this reason I decided for a more conservative forecast of attrition rate (20%) which resulted in recruiting 52 individuals.

I decided to use two separate samples of CT users, one from community-based groups and the other from clinic based groups because of the differences anticipated between their users (see Chapter Two). Therefore, if those differences proved to be relevant, I would be able to judge the changes in mental health for both groups of CT users. The

final number for recruitment was of a minimum of 52 individuals from each type of group, or 104 for the whole study.

I decided not to adjust the sample size calculation for the effect of clustering by facilitators or group venue (clinic or community) in the sampling strategy. Even using a small estimated value for the intraclass correlation coefficient (i.e., 0.1), this would more than double the number of subjects to be recruited. I considered that this would not be feasible. Similarly, I did not consider for sample size calculations the possibility of analyzing the effect of interactions between CT and perceived social support or CT and social capital in my main outcome (mental health). The required sample size in that case would be at least four times larger than without analyzing interactions (Kirkwood and Sterne, 2003).

3.3.3.2 Choice of research sites and recruiting strategy

I presented the study project to the officials coordinating CT training and supervision activities at the Health Secretariat of São Paulo in December 2005. They provided a schedule of supervision meetings for CT facilitators and names of local supervisors. I approached supervisors and facilitators and asked them to name active CT groups in their regions. Out of 59 groups mentioned, 12 were selected, based on the professionals' reports and local statistics. As previously mentioned, I wanted to explore possible differences in results due to the location of groups. Therefore, six of the groups I selected were held inside primary care clinics and the other six in community settings, the same approximate proportion found in the total 59 CT groups. Figure 1 shows the distribution in the map of São Paulo of the seven districts where the 12 groups chosen were located (SEMPLA-SP, 2004). The map is shaded according to the scores of the Human Development Index (HDI) calculated for the areas. All 12 groups chosen were located in districts with poor HDI, as shown in the map. The 12 groups reflected the characteristics of the total number of groups in terms of the HDI of the areas where they were located. Other criteria for selection were: weekly frequency of meetings and total number of regular and new attenders per meeting. A minimum number of one new attender per meeting was required and larger groups were favoured. This had the intention to warrant a large enough sample during the planned 12 weeks of recruitment.

The period of recruitment was nevertheless significantly extended reaching five and a half months (from 19 April to 6 October 2006). Two main reasons contributed to this: most groups, particularly inside-clinics' groups, had a less than expected rate of new attenders per meeting and interviewers had difficulties in assessing more than one new attender per meeting from each group.

Each interviewer was responsible for a fixed number of research sites (i.e. CT groups) that had to be visited weekly at the time of the sessions. The standard procedure for interviewers was to await the end of the session then address the group before people left the venue. They were asked if there were any newcomers and, if so, a brief explanation of the research was given. Those newcomers agreeing to be interviewed were then approached individually. Whenever more than one of them qualified for recruitment per session, the interviewers would first approach the one available for an immediate on-site assessment. Before the interview, users were given a full explanation of the research procedures, an information sheet and asked to sign a form with their agreement to participate in it.

Study sites:
1- Perus
2- Jaraguá
3- Jaçanã
4- Arthur Alvim
5- Itaquera
6- São Mateus
7- Sapopemba

- The Human Development Index is a composite of: mean income of head of family; child mortality rate; literacy rates; and mean years of schooling (census data from 2000).
- Darker areas indicate better development.

| 10km |
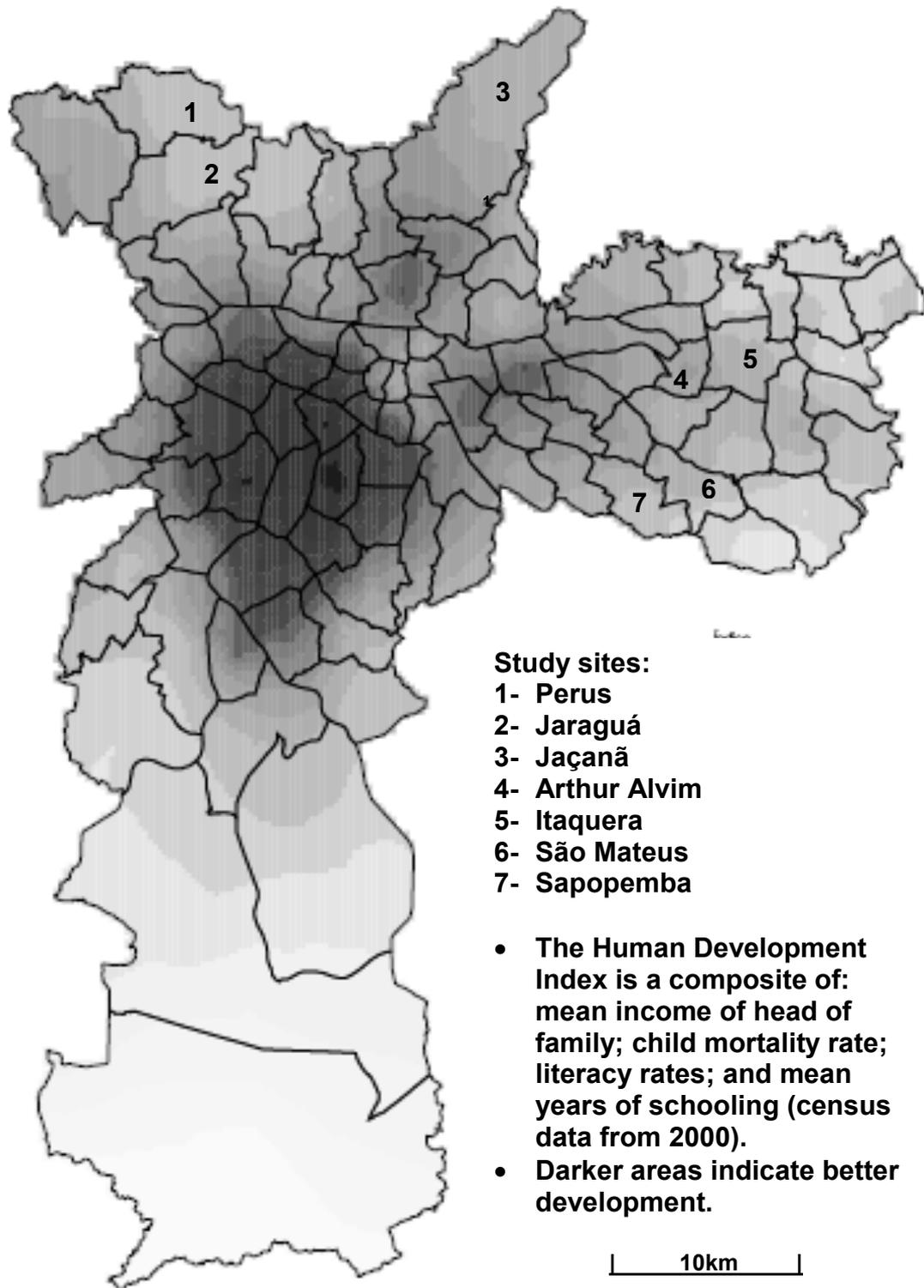
Figure 1- Research sites in São Paulo city map divided by administrative districts and shaded according to scores of the Human Development Index (SEMPLA-SP, 2004).

3.3.3.3 Inclusion criteria

All adults attending a CT session for the first time and aged 18 or more years old were recruited.

3.3.3.4 Interviewers training

Interviews were performed by me and three research assistants. All three were female recently graduated psychologists and received a full explanation of the research protocol and the questionnaire to be used. They were asked to perform a mock interview with someone of their choice which was revised individually with each of them. Finally, pilot interviews at the actual research sites with potential research subjects were performed. These were conducted by each of the assistants in my presence and we both independently marked the answers to compare results. Disagreements on marks were clarified and interviewing techniques discussed. This procedure was repeated in the beginning of the follow-up phase.

3.3.3.5 Data collection

Most baseline interviews took place on-site just after the end of CT sessions. Twelve weeks after the baseline interview, researchers contacted their interviewees for a follow-up assessment. Contacts were made primarily by telephone. Those who could not be contacted by phone were visited at least one time at their home addresses. Users who refused to be interviewed or failed to show up at two arranged appointments were offered the possibility of a full telephone interview. If this was also refused they were asked the number of CT sessions they had attended since the baseline interview.

3.3.3.6 The questionnaire

I collated questions covering socio-demographic data, use of health services and medication, origin of referral to CT, and the four scales described above together in one questionnaire. At follow-up, questions on attendance and participation during CT sessions were added. Subjects were asked about how many CT sessions they had attended and how many times they spoke about their problems during all sessions attended. Because of the expected variation in the educational level of respondents all sections of the questionnaire were administered by the interviewer. All validated scales were fully structured with closed answers. Cards with alternatives for the

responses of the scales were provided to the respondents whenever more than two answers were possible.

3.3.3.7 Data entry and checking

I built a 150 fields form and database using EpiData 3 to insert the answers from the questionnaire (Lauritsen, 2000). I checked all questionnaires for missing information and inconsistencies before data was entered onto the database. Conflicting points were discussed with the interviewers and patients were contacted to provide missing information.

A university secretary entered the data onto two parallel databases using the EpiData 3 form. Databases were compared by the software for discrepancies and those were corrected in both by returning to the paper questionnaires. This process was repeated until a full agreement was reached between databases. I performed further cleaning of the data by obtaining summary statistics for every numeric variable and looking for outliers or missing values. I tabulated categorical variables and checked them for consistency.

Many responders did not remember the names of the prescription drugs they were taken and only mentioned the reason why they used them. Because of this I have summarized their answers into three broad categories: non-psychotropic drugs (i), antidepressants plus anxiolytics and hypnotics (ii) and antipsychotic drugs plus mood stabilizers (iii).

3.3.3.8 Statistical analysis

All the statistical analyses were performed with Intercooled Stata 9.2 for Windows (StataCorp, 2007). Methods are presented below according to the objectives and hypotheses set for the thesis (see pp. 90-92).

3.3.3.8.1 Objective one: to describe the characteristics of CT attenders

Descriptive statistics were used to summarize the socio-demographic characteristics of respondents, their use of health services and attendance to CT sessions, and baseline mental health, quality of life, perceived social support and social capital. Robust standard errors were used to account for clustering effects. Each of the 12 CT

groups from which respondents were recruited was considered a cluster. Census and large official surveys data were used to compare respondent's socio-demographic characteristics with the population of the State of São Paulo and, when available, the city of São Paulo.

I used linear regression to investigate the association of baseline mental health (as a continuous dependent variable measured by SRQ scores) with a number of risk factors identified in the literature. All socio-demographic variables plus social support and social capital were examined as explanatory variables with univariate models. Quality of life was not included in this analysis because, in this study, it was considered as a broader outcome than mental health and not as a risk factor for it. Variables found to predict mental health in univariate models ($p < 0.05$) were fitted into a single multivariate regression model. A Kernell density plot and a Shapiro-Wilk W test revealed a departure from normality in the residuals' distribution of this regression model. Robust Standard Errors were used to allow for non-normality of residuals and clustering in the model.

3.3.3.8.2 Objective two: To examine the patterns of attendance of users to CT sessions and to observe changes in health and social outcomes

A non-parametric test for trend across ordered groups was performed to investigate the hypothesis that higher scores in baseline mental health were related to more frequent attendance to CT sessions during follow-up

Respondents who completed the follow-up were compared to those who did not complete it by calculating means and proportions of their baseline characteristics and comparing them with t-tests.

Changes in mental health **(hypothesis one)**, quality of life **(hypothesis two)**, perceived social support and social capital between baseline and follow-up were investigated by calculating 95% confidence intervals with robust standard errors of the mean differences in scores between baseline and 12 weeks follow-up and by performing significance tests. A paired t-test was used for comparing quality of life scores. Because of significant departure from normality, Wilcoxon signed rank tests were used for mental health, perceived social support and social capital. An additional

analysis of change in SRQ, including all 140 respondents recruited and attributing the same baseline SRQ scores at follow-up for the 25 respondents who were lost to follow-up was also performed to estimate the possible impact of attrition in mental health results.

In order to examine the magnitude of change in mental health according to baseline severity, respondents were divided in three groups with approximate equal sizes according to the distribution of their baseline mental health scores. The first group included all respondents scoring under seven points in the SRQ questionnaire, the second included those scoring from seven to twelve, and the third group included those scoring from thirteen to twenty points.

Univariate linear regression was used to investigate possible associations of mental health change with change in perceived social support **(hypothesis three)** and social capital **(hypothesis four)**. Linear regression was also used to investigate associations of mental health change with quality of life, variables related to the use of CT sessions (group location, origin of referral, frequency of attendance and number of times respondents spoke during sessions), and use of psychotropic drugs.

The hypotheses that perceived social support and social capital act as mediators of CT's effect on mental health implies that there might be interactions of these variables with CT on mental health change. This means that the effect of CT on mental health might differ according to baseline levels of social support and social capital. If most of CT's effect on mental health is mediated by increases in social support and/or social capital, people with poor mental health but high levels of social support and/or social capital, for example, might not benefit from CT. However, I decided not to examine interactions of social support and/or social capital with CT because of the increase in sample size this would require. This is a limitation of my study.

3.3.3.8.3 Objective three: to compare the characteristics of CT users attending groups located in primary care clinics versus CT users attending groups in the community and of self-referred CT users versus CT users referred by health professionals

Sub-group descriptive analyses and significance tests were performed to compare the characteristics of respondents according to location of CT groups (clinic or community) and referral origin (referred by health professionals or self-referred).

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CHAPTER FOUR

QUANTITATIVE RESULTS

4.1 THE SAMPLE

A total of 157 users were approached by researchers immediately after the end of the first CT session they attended. Five refused to participate in the research and 12 could not be assessed in time (i.e. before the following CT session). 140 respondents completed the first assessment. It was possible to contact 128 of those respondents after 12 weeks. They all gave information on number of CT sessions attended during this period. 13 respondents declined to complete the second assessment or failed to attend at arranged appointments. 115 respondents agreed to complete the second assessment and were re-interviewed, six of them by telephone (see Figure 1). The follow up period lasted from 12th of July to 29th of December 2006.

Figure 1- Flowchart with numbers of respondents recruited and giving information

```
            ┌─────┐
         ┌─ │ 157 │  approached
         │  └─────┘
Baseline │     │
         │     ▼
         │  ┌─────┐
         └─ │ 140 │  Completed 1ˢᵗ assessment
            └─────┘
               │
               ▼
            ┌─────┐
         ┌─ │ 128 │  Information on number of sessions attended
         │  └─────┘
Follow-up│     │
         │     ▼
         │  ┌─────┐
         └─ │ 115 │  Completed 2ⁿᵈ assessment
            └─────┘
```
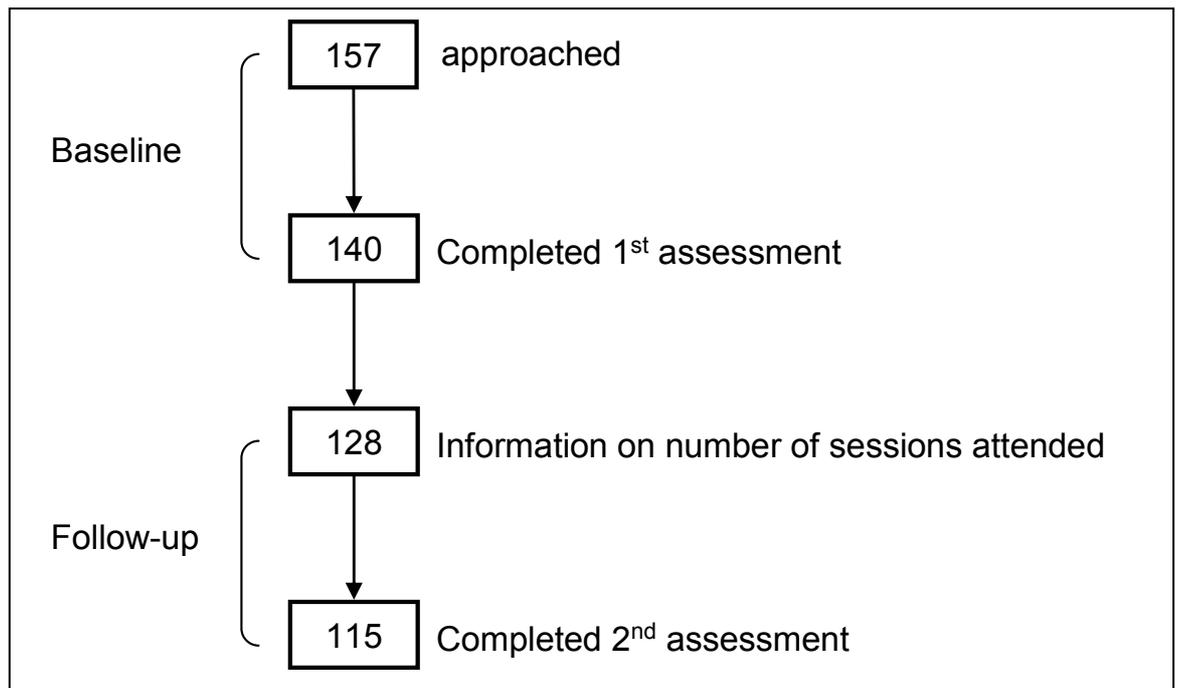
88 (63%) of the respondents were recruited from six CT groups in community settings and 52 (37%) were recruited from six CT groups in primary care clinics. Table 1 shows the 12 CT groups studied (named after the districts where they were located), the number of respondents for whom baseline assessments were completed, and attrition rates (number of respondents completing the second assessment divided by the number of respondents who completed the first assessment) for each of them.

Two CT groups located in a Pentecostal church and in the adjoining meeting room of a Catholic church (Artur Alvim I and Itaquera I, respectively) were responsible for 54 of the 140 recruitments. Differences in the recruitment numbers by CT groups mainly reflect variation in the attendance of newcomers per session. Cancellation of sessions in some groups, refusals to participate and inability to assess respondents in time also contributed to differences in total numbers of recruitment by groups.

135 of the baseline interviews were conducted in the CT groups' location, the remaining five interviews were performed up to six days later at the respondents'

homes. The duration of interviews was of 39 minutes on average (minimum=15 minutes, maximum=90 minutes).

Table 1- Respondents recruited for baseline assessment and attrition rates

Group	Location	Number of respondents (%)		Attrition %
Artur Alvim I		33	(23.6)	18%
Itaquera I		21	(15.0)	0%
Jaçanã I	Community	15	(10.7)	7%
Artur Alvim II		7	(5.0)	14%
Perus		7	(5.0)	14%
Jaraguá I		5	(3.6)	20%
Jaçanã II		13	(9.3)	23%
São Mateus		13	(9.3)	31%
Jaraguá II	Clinic	10	(7.1)	30%
Sapopemba		9	(6.4)	22%
Jaçanã III		5	(3.6)	40%
Itaquera II		2	(1.4)	50%
Total		140	(100)	18%

Total attrition was 25 (18%) for the sample, with group attrition rates varying from 0 to 50%. This wide variation can be partly explained by the small numbers of recruitment in certain groups, like Itaquera II and Jaçanã III (Table 1). CT groups which were located within primary care clinics had a larger overall attrition rate than community groups, 25% and 13.6% respectively.

4.2 BASELINE ASSESSMENT

4.2.1 SOCIO-DEMOGRAPHIC DATA

The socio-demographic characteristics of the respondents are shown in Table 2. 113 of the 140 respondents were women (81%), aged between 25 and 54 years old (mean: 45 years old). 75 (54%) respondents declared themselves to be non-white. 73 (52%) were migrants (from other states of Brazil) but living in the city of São Paulo for a

mean of 27 years (median= 30 years). 72 (51%) were married and 35 (25%) divorced or widowed. 112 (80%) had at least one child (mean number of children was 2.1).

Educational attainment for the sample was low: 67 respondents (48%) did not complete elementary education[1] and only 7 (5%) had a university degree. Reported family income was also low. Mean income per capita using power purchasing parity exchange rates[2] was 304 dollars/month (372.65 Brazilian reais/month) (International Monetary Fund, 2006). 97 respondents (69%) were living on less than one minimum wage per capita (293 dollars/month or 360 reais/month). 25 respondents (18%) were eligible for the poverty eradication programme from the Brazilian Federal government, which complements revenues of all families living below the poverty line, i.e. less than 98 dollars (or 120 reais) per month per capita.

124 respondents (88.5%) considered themselves religious, with 60 (48%) of those attending services at least once a week. 70 respondents were Catholics (50%) but there was a significant number of Protestants (38/140 or 27%), mainly neo-Pentecostals.

Table 2- Socio-demographic data of respondents at baseline

Variable	Baseline (n=140)	95% CI
Gender		
female	113 (81%)	74-88%
male	27 (19%)	12-26%
Age[1] (years)		
mean (SE)	*45 (1.3)*	*42-48*
18-24	7 (5%)	1-9%
25-34	29 (21%)	15-26%
35-44	38 (27%)	18-37%
45-54	30 (22%)	12-31%
55-64	17 (12%)	4-21%
64+	18 (13%)	5-20%
Ethnicity		
white	65 (46%)	38-55%
mixed black-white	50 (36%)	25-46%
black	22 (16%)	9-22%
indian/asiatic	3 (2%)	0-4%
Marital status		
married	72 (51%)	44-59%
divorced	24 (17%)	9-25%
widowed	11 (8%)	3-13%

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[1] Elementary education in Brazil comprises the period from 6 to 14 years old.
[2] 1 dollar= 1.226 reais

never married	33 (24%)	18-29%
Schooling (years)		
mean (SE)	*7.19 (0.33)*	*6.5-7.9*
Main occupation		
employed	54 (39%)	28-49%
housewife	49 (35%)	25-45%
unemployed	16 (11.4%)	6-17%
retired	15 (10.6%)	3-19%
other	6 (4%)	1-7%
Income (US dollars/month) [2]		
mean (SE)	*304 (45)*	*204-403*
Religion		
catholic	70 (50%)	41-59%
protestant	38 (27%)	21-33%
other	16 (11.5%)	6-17%
none	16 (11.5%)	6-17%

[1]n=139 at baseline [2] Using Power Purchasing Parity exchange rates: 1 US dollar= 1.226 reais

4.2.2 USE OF HEALTH CARE

Only 36 respondents (26%) did not have any contact with a health professional (including visits from health visitors) in the month before their assessment (Table 3). Additionally, 35 respondents (25%; 95%CI: 15-35%) reported to have attended an emergency service in the month before the interview.

Table 3- Number of contacts with health professionals (one-month period)

Contacts with health professionals	Frequency	% (95% CI)
0	36	26 (16-36)
1	39	28 (22-34)
2+	65	46 (38-55)
TOTAL	140	100

90 (64%) respondents reported using prescribed drugs regularly. 41 respondents (29%) reported use of prescription-only antidepressants, anxiolytics or hypnotics; 7 (5%) reported the use of mood stabilizers or antipsychotics.

4.2.3 REFERRAL ORIGIN

Research respondents were asked how they learned about the CT group they were attending. 45 respondents (32%) did not rely on any professional referral and attended the CT group having been advised by friends and relatives or after reading signs advertising CT group sessions in primary care clinics or in the community (Table 4). Distribution of referrals by professional categories varied according to the availability of these professionals in the clinics studied (some did not have psychologists or health visitors) and the routines established for first-contact users. For example, some clinics instructed receptionists to refer users looking for psychological support directly to CT groups. These CT groups were used as a triage for mental health services.

Table 4- "How did you learn about this CT group?"

Answer	Frequency	% (95% CI)
Self-referred		
Friend or relative	37	26% (16-37)
Sign	8	6% (1-10)
Sub-total	45	
Referred by health professional		
Doctor	35	25% (17-33)
Psychologist or social worker	25	18% (8-28)
Receptionist	16	11% (2-21)
Health visitor	14	10% (2-18)
Nurse	5	4% (0-7)
Sub-total	95	
Total	140	100%

4.2.4 HEALTH AND SOCIAL VARIABLES: MENTAL HEALTH, QUALITY OF LIFE, PERCEIVED SOCIAL SUPPORT AND SOCIAL CAPITAL

Four validated questionnaires were used to investigate the mental health (SRQ), quality of life (WHOQoL-bref), perceived social support (MOS-social support scale) and social capital (SASCAT) of the respondents. All results were analyzed primarily as continuous variables (Table 5).

4.2.4.1 Mental health

The distribution of mental health scores was fairly homogenous across the SRQ range (Figure 2). The overall mean score (9.93) was high, denoting poor mental health, as would be expected for a population recruited from a mental health treatment group. According to the cut-off point established in the literature for the Brazilian population (>7), probable common mental disorders cases were present in 61% (95% CI: 55-68 %) of this sample (Mari and Williams, 1986).

Figure 2- Histogram of SRQ scores with normal distribution plot
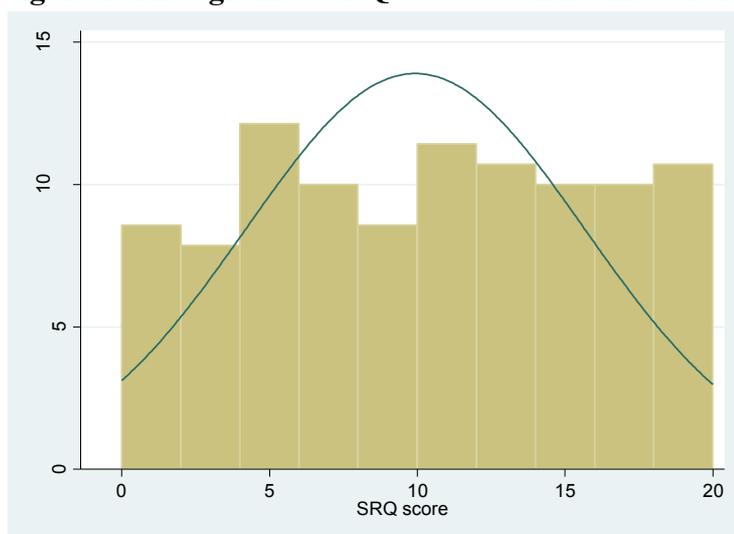
4.2.4.2 Quality of life

Quality of life scores, as measured by the WHOQoL-bref, followed a normal distribution in this sample. All four subcomponents of quality of life followed a normal distribution with minor variation between their distribution pattern and the total score distribution.

4.2.4.3 Perceived Social Support

The distribution of total perceived social support (MOS) scores was skewed to the left, indicating high perceived social support for most of the sample. In 13 of the 19 items of the questionnaire, the proportion of respondents scoring five (in a one to five scale) exceeded 40%. The distribution of the five dimensions of perceived social support followed the same skewed pattern with minor variation in relation to the total score distribution.

4.2.4.4 Social capital

Distribution of social capital scores was skewed to the right, indicating low social capital for most of the sample. Mean SASCAT scores for the sample were low not only for total social capital scores but for all its three sub-components: group membership/social support, cognitive social capital and, particularly, citizenship participation.

Table 5- Summary statistics of baseline scores for health and social variables and sub-components

Instruments	n	Min	Max	Median	Mean	95%CI	
SRQ	140	0	20	11	9.93	8.97	10.89
WHOQoL-bref	140	45	120	80	79.74	77.10	82.39
physical	140	4.6	20.0	12.9	13.0	12.3	13.7
psychological	140	4.7	18.7	12.7	12.3	11.6	13.0
social relations	140	4.0	20.0	13.3	13.1	12.4	13.8
environment	140	5.0	17.5	11.5	11.5	11.2	11.9
MOS-S.Support	138	19.0	95.0	73.0	68.97	65.63	72.30
affective support	140	4.0	20.0	17.3	16.3	15.6	17.0
emotional support	140	4.0	20.0	15	14.1	12.8	15.4
informational support	140	4.0	20.0	14	14.1	13.0	15.1

positive interactions	138	4.0	20.0	14	13.8	12.9	14.7
tangible support	140	4.0	20.0	16	14.8	13.7	15.9
SASCAT	**139**	**1.0**	**21.0**	**5.0**	**5.86**	**5.25**	**6.48**
group membership & support	140	0	16.0	3.0	3.8	2.8	4.8
citizenship activities	140	0	2.0	0	0.3	0.2	0.5
cognitive social capital	139	0	4.0	2.0	1.7	1.5	2.0

SRQ: mental health WHOQoL-bref: quality of life MOS-S.Support: perceived social support SASCAT: social capital

4.2.5 SUB-GROUP ANALYSIS: GROUP LOCATION AND REFERRAL ORIGIN

4.2.5.1 Group location: community or primary care clinic

There were no statistically significant differences in terms of socio-demographic characteristics between respondents attending CT groups inside clinics or in the community. Proportions of respondents referred by health professionals in community groups were similar to the proportion of respondents referred by health professionals in clinic based groups: 61/88 (69%; 95% CI: 60-79%) and 34/52 (65%; 95% CI: 52-79%) respectively. Mean scores of the four health and social measures were also similar between the two sub-groups.

Table 6- Baseline characteristics of respondents by group location

Variable	Community (n=88)	Clinic (n=52)	P value
Gender			
female	70 (80%)	43 (83%)	0.648
male	18 (20%)	9 (17%)	
Age (years)			
mean (SE)	44.12 (1.55) [1]	46.39 (2.18)	0.387
Ethnicity			
white	45 (51%)	20 (38%)	0.146
non-white	43 (49%)	32 (62%)	
Marital status			
married	49 (55%)	20 (38%)	0.190
not married	39 (45%)	32 (62%)	
Schooling (years)			
mean (SE)	7.57 (0.41)	6.56 (0.62)	0.160
Income (US dollars/month) [2]			
mean (SE)	330.98 (38.10)	258.22 (37.90)	0.208
Religious			

yes	76 (86%)	48 (92%)	0.286
no	12 (14%)	4 (8%)	
Contacts with health			
professional (last 30 days)　0	21 (24%)	15 (29%)	
1	23 (26%)	16 (31%)	0.541[6]
2+	44 (50%)	21 (40%)	
Referral to CT group			
Health professional	61 (69%)	34 (65%)	0.630
Self-referral	27 (31%)	18 (35%)	
SRQ			
mean (SE)	9.70 (0.59)	10.31 (0.85)	0.550
WHOQoL-bref			
mean (SE)	79.83 (1.59)	79.60 (2.43)	0.933
MOS-Social support			
mean (SE)	71.02 (1.95)[3]	65.47 (3.08)[4]	0.112
SASCAT			
mean (SE)	5.74 (0.36)	6.08 (0.59)[5]	0.600

[1]n=87　　[2] Using Power Purchasing Parity exchange rates: 1 US Dollar= 1.226 Reais
[3]n=87　　[4]n=51　[5]n=51　　[6]Pearson chi-square test

4.2.5.2 Referral origin: referred by health professionals or self-referred

In terms of referral origin, the only significant difference in socio-demographic characteristics between respondents who were referred to CT groups by health professionals and those who were self-referred was a higher proportion of males amongst the latter group: 13/95 compared to 14/45 (p= 0.015) (Table 7). Because of the small number of males in this sample, results from sub-group analysis including gender must be interpreted with caution.

There was not a significant difference in the number of contacts with health services amongst self versus professionally referred groups, although it might have been expected that self-referred respondents would have had less recent contacts with health professionals.

Table 7- Baseline characteristics of respondents by referral origin

Variable	Professional (n=95)	Self-referred (n=45)	p-value
Gender			
female	82 (86%)	31 (69%)	**0.015**
male	13 (14%)	14 (31%)	
Age (years)			
mean (SE)	44.58 (1.44)	45.81 (2.52)[1]	0.654
Ethnicity			

white	44 (46%)	21 (46%)	0.969
non-white	51 (54%)	24 (54%)	
Marital status			
married	51 (54%)	21 (46%)	0.438
not married	44 (46%)	24(54%)	
Schooling (years)			
mean (SE)	7.32 (0.42)	6.93 (0.61)	0.608
Income (US dollars/month) [2]			
mean (SE)	305.20 (34.15)	301.33 (48.61)	0.949
Religious			
yes	85 (89%)	39 (86%)	0.626
no	10 (11%)	6 (14%)	
Contacts with health professional (last 30 days) 0	23 (24%)	13 (29%)	
1	26 (27%)	13 (29%)	0.764[5]
2+	46 (49%)	19 (42%)	
Group location			
Community	61 (64%)	27(60%)	0.630
Clinic	34 (36%)	18 (40%)	
SRQ			
mean (SE)	10.4 (0.60)	8.93 (0.80)	0.159
WHOQoL-bref			
mean (SE)	77.93 (1.59)	83.58 (2.37)	**0.048**
MOS-Social support			
mean (SE)	68.98 (2.14) [3]	68.95 (2.70)	0.995
SASCAT			
mean (SE)	5.66 (0.32) [4]	6.29 (0.70)	0.345

[1] n=44   [2] Using Power Purchasing Parity exchange rates: 1 US Dollar= 1.226 Reais   [3] n=93   [4] n=94
[5] Pearson chi-square test

Both self and professionally referred groups had high mean SRQ scores with no statistically significant difference between them. A small and marginally significant difference in quality of life was found between these groups, with self-referred respondents reporting better quality of life compared with professionally referred respondents (p =0.048).

4.2.6 RISK FACTORS ASSOCIATED WITH MENTAL ILL-HEALTH

4.2.6.1 Univariate analysis

Higher baseline SRQ scores (i.e. worse mental health) were associated with female gender (p=0.016) and fewer years of schooling (p=0.016) (Table 8). The remaining socio-demographic variables (income, marital status, employment status, ethnicity and migration) were not associated with mental health scores. High scores of total perceived social support were associated (p=0.000) with low scores in the SRQ, i.e.

better mental health. There was no significant association of total social capital scores or its sub-components with mental health status.

4.2.6.2 Multivariate analyses

When gender, schooling and perceived social support were combined in the same regression model, only perceived social support maintained its association with mental health (p=0.002) (Table 8).

Table 8- Coefficients and P values for the regression of risk factors associated with mental ill-health

Independent variables	Univariate			All 3 variables combined		
	Coeff (CI)	β	p	Coeff (CI)	β	p
Gender *(female)*	2.94 (0.55 to 5.33)	-	0.016	2.10 (-0.22 to 4.42)	-	0.076
Schooling	-0.27 (-0.48 to -0.05)	-0.19	0.016	-0.15 (-0.37 to 0.07)	-0.11	0.175
Social support	-0.09 (-0.13 to -0.04)	-0.29	0.000	-0.07 (-0.12 to -0.03)	-0.26	0.002

β– standardized regression coefficient (a one standard deviation in the independent variable leads to a β standard deviation in the predicted values of the dependent variable).

All but one of the dimensions of the perceived social support scale (affective support) was associated with baseline mental health scores, having adjusted for gender and schooling (Table 9)

Table 9- Coefficients and P values for the regression of perceived social support with mental health

Independent variables	Univariate			Adjusted for gender and schooling		
	Coeff (CI)	β	p	Coeff (CI)	β	p
Total social support	-0.09 (-0.13 to -0.04)	-0.29	<0.000	-0.07 (-0.12 to -0.03)	-0.26	0.002
Affective support	-0.05 (-0.09 to -0.01)	-0.18	0.023	-0.04 (-0.08 to 0.002)	-0.15	*0.061*
Emotional support	-0.05 (-0.09 to -0.02)	-0.23	0.005	-0.04 (-0.08 to -0.01)	-0.19	0.026
Informational support	-0.05 (-0.09 to -0.01)	-0.21	0.010	-0.04 (-0.08 to -0.001)	-0.17	0.044
Positive interactions	-0.07 (-0.11 to -0.04)	-0.34	<0.000	-0.06 (-0.10 to -0.03)	-0.30	<0.000
Tangible support	-0.05 (-0.08 to -0.01)	-0.21	0.007	-0.04 (-0.08 to -0.01)	-0.18	0.022

β– standardized regression coefficient (a one standard deviation variation in the independent variable leads to a β standard deviation in the predicted values of the dependent variable).

4.3 FOLLOW-UP

4.3.1 COMPARISON OF BASELINE CHARACTERISTICS OF RESPONDENTS ACCORDING TO COMPLETION OF FOLLOW-UP

128 (91%) of the 140 respondents at baseline could be contacted at follow-up. 115 (82%) responded the entire questionnaire and 13 (9%) gave information only on the number of sessions they attended during the follow-up period.

The 115 respondents who completed the entire follow-up assessment had similar socio-demographic characteristics and baseline measures of mental health, quality of life and social capital to the 25 who did not complete the follow-up assessment. The only two statistically significant differences were lower perceived social support (p=0.020) and a lower proportion of people declaring to be religious among those not completing follow-up (p=0.029) (Table 10).

Table 10- Baseline characteristics of respondents according to completion of follow-up

Variable	Completed (n=115)	Not completed (n=25)	p-value
Gender			
female	93 (81%)	19 (76%)	0.510
male	22 (19%)	6 (24%)	
Age (years)			
mean (SE)	45.8 (1.6)	40.8 (3.0)[1]	0.137
Ethnicity			
white	62 (54%)	13 (52%)	0.862
non-white	53 (46%)	12 (48%)	
Marital status			
married	63 (55%)	9 (36%)	0.089
not married	52 (45%)	16 (64%)	
Schooling (years)			
mean (SE)	7.3 (0.5)	6.7 (0.8)	0.493

Income (US dollars/month) [2]			
mean (SE)	309.5 (31.2)	278.5 (59.1)	0.671
Religious			
yes	105 (91%)	19 (76%)	**0.029**
no	10 (9%)	6 (24%)	
Group Location			
community	76 (66%)	12 (48%)	0.090
clinic	39 (34%)	13 (52%)	
Referral to CT group			
Health professional	80 (70%)	14 (56%)	0.161
Self-referral	35 (30%)	11 (44%)	
SRQ			
mean (SE)	9.97 (0.55)	9.72 (1.06)	0.842
WHOQoL-bref			
mean (SE)	79.41 (1.50)	81.28 (3.03)	0.594
MOS-Social support			
mean (SE)	70.81 (1.74) [3]	60.68 (4.69)	**0.020**
SASCAT			
mean (SE)	5.89 (0.35) [4]	5.76 (0.64)	0.877

[1] n=24   [2] Using Power Purchasing Parity exchange rates: 1 US Dollar= 1.226 Reais   [3] n=113   [4] n=114

4.3.2 ATTENDANCE AND PARTICIPATION IN CT SESSIONS

128 (91%) respondents gave information on the number of sessions they had attended since baseline assessment (Table 11). Mean attendance during the 12 weeks follow-up period was 3.6 sessions per respondent (95% CI: 2.5 – 4.7), with a median of 2 sessions. 53 (41%) respondents did not return to another CT session after their initial contact with the group. However, 15 respondents (12%) attended sessions almost every week during a 12-week period.

Table 11- Attendance to CT sessions during follow-up (including first session)

Number of sessions	Frequency	Proportion	95% CI
1	53	41%	30-53%
2 to 3	35	27%	18-37%
4 to 9	25	20%	14-24%
10 to 13	15	12%	1-23%
TOTAL	128	100%	-

There was a trend indicating that respondents with worse baseline mental health attended more sessions during the follow-up period (z= 2.42; p= 0.016) (table 12). Mean baseline SRQ score amongst those who attended 4 or more sessions was 35%

higher than mean SRQ score of respondents attending only one session. In spite of this, 32 (36%; 95% CI: 25-46%) of the CMD cases (SRQ>7) at baseline attended only one session.

Table 12- Attendance to sessions and baseline mental health

Sessions attended	Frequency	CMD cases (SE)	Mean SRQ	95% CI
1	53	55% (2)	8.5	7.6 - 9.5
2 to 3	25	57% (8)	9.9	8-12
4+	46	80% (7)	11.5	10.1 – 12.8
TOTAL	128	63% (4)	9.8	8.8 -10.8

CMD: common mental disorders

There were no significant differences in terms of attendance to sessions either by origin of referral or by group setting.

Respondents' active participation during CT was investigated by asking how many times they had actually spoken about their problems during sessions (Table 13). 85 (74%) respondents had spoken at least once about their problems. Only one respondent declared to have spoken more than three times.

Table 13- "How many times have you spoken about your problems during CT sessions?"

Answer	Frequency	Proportion	95% CI
Never	30	26%	14-38%
Once	50	44%	34-53%
Twice	12	10%	3-18%
Three times or more	23	20%	8-32%
TOTAL	115	100%	-

4.3.3 CHANGES IN HEALTH AND SOCIAL VARIABLES: MENTAL HEALTH, QUALITY OF LIFE, PERCEIVED SOCIAL SUPPORT AND SOCIAL CAPITAL

Respondents' mental health significantly improved during follow-up (Table 14). The two-point decrease in mean SRQ scores corresponds to a 20% fall in the initial score.

Proportion of probable CMD cases according to the 7/8 cut-off point among respondents completing follow-up had a significant decrease (z=2.38; p= 0.017) from 62% (95% CI: 53-71 %) to 46% (95% CI: 32-60%).

Table 14- Changes in health and social scores from baseline to follow-up

Variable			Mean	95% CI		Significance test
Mental health (SRQ)	n=115	Baseline	9.97	8.86	11.09	Wilcoxon Signed rank z= 4.544 p=0.000
		Follow-up	7.96	6.90	9.59	
		Difference	**-2.01**	**1.04**	**3.00**	
Quality of life (WHOQOL-bref)	n= 113	Baseline	78.97	75.94	82.00	Paired t-test t= -3.938 p= 0.000
		Follow-up	83.43	78.71	88.14	
		Difference	**4.46**	**2.29**	**6.63**	
Perceived social support (MOS-S.support)	n= 112	Baseline	71.14	67.70	74.58	Wilcoxon Signed rank z= -1.601 p=0.109
		Follow-up	73.26	69.61	76.91	
		Difference	2.12	- 1.08	5.31	
Social capital (SASCAT)	n= 114	Baseline	5.89	4.79	6.99	Wilcoxon Signed rank z= 0.154 p=0.878
		Follow-up	5.75	4.88	6.63	
		Difference	-0.14	-0.85	0.58	

When the analysis of change in SRQ was performed including all 140 respondents inputting the baseline SRQ values at follow-up for the 25 who were lost to follow-up (last-observation carried forward) the results did not change significantly (Table 15). Indeed, the improvement in SRQ score fell from 20% to 16.7% of the initial mean score.

Table 15- Change in SRQ score from baseline to follow-up including respondents lost to follow-up (last observation carried forward)

Variable			Mean	95% CI		Significance test
Mental health (SRQ)	n=140	Baseline	9.93	8.97	10.89	Wilcoxon Signed rank z= 4.534 p=0.000
		Follow-up	8.27	6.83	9.71	
		Difference	**-1.66**	**0.88**	**2.43**	

Figure 3 shows the change in SRQ across time dividing the sample in three groups of approximate equal size defined by their baseline SRQ scores. It can be seen that the

group with lower scores (covering the range from 0 to 6) had a very small change in its mean SRQ (0.2 point decrease, or 5% over baseline score). Those with higher baseline scores had greater average decreases in their final scores, both in absolute and proportional terms. Respondents with baseline SRQ from 7 to 12 had a mean one point decrease (10%) and those with 13 to 20 scores had a mean 4.5 decrease (28%). In spite of the decrease, mean SRQ scores for these two groups remained high and above the threshold for probable CMD diagnosis at follow-up.

Figure 3- Evolution of SRQ scores amongst three groups defined by baseline SRQ
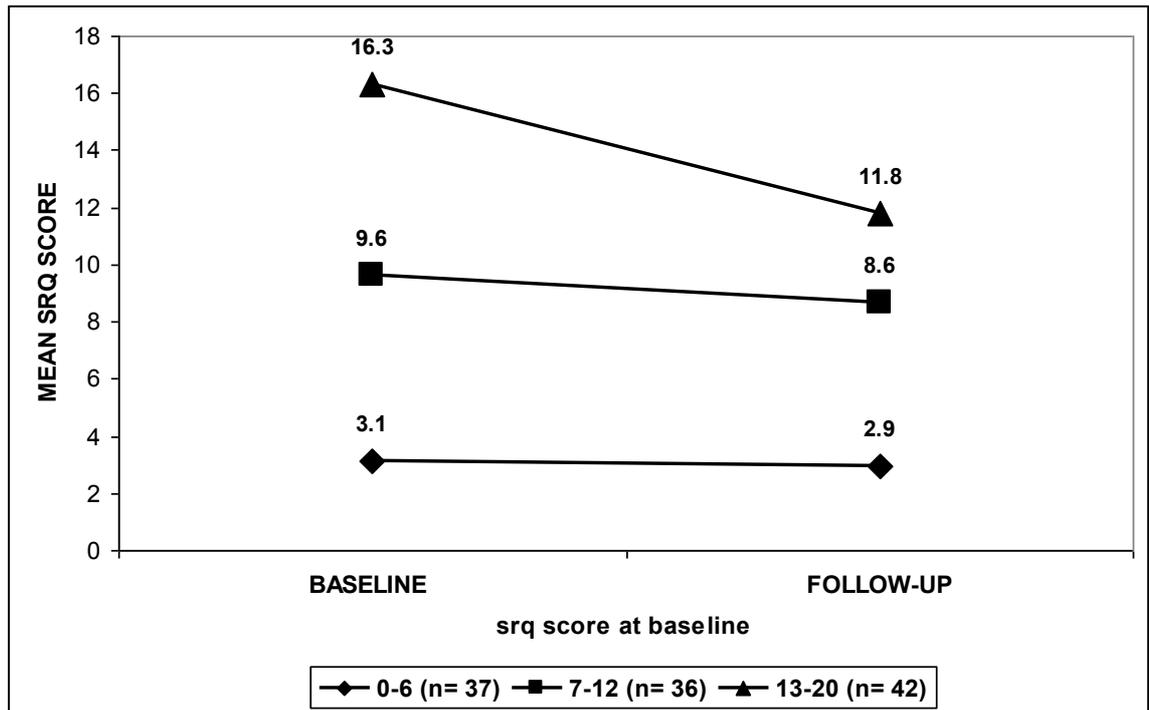
Respondents reported a statistically significant improvement in their quality of life scores at 12 weeks follow-up. However, this improvement was small (5.6%) and is likely to have little clinical and social meaning. Changes in respondents' perceived social support and social capital scores were minimal and not statistically significant over time.

4.3.4 ASSOCIATION OF MENTAL HEALTH CHANGE WITH OTHER VARIABLES

Univariate linear regression models were used to examine factors associated with change in mental health (Table 16). A decrease in SRQ score (indicating mental health improvement) was associated with a higher SRQ score (worse mental health) at baseline. Mental health improvement was also positively associated with quality of life improvement. However, no association was found between change in mental health scores and change in perceived social support or social capital.

Table 16- Regression of variables possibly associated with mental health improvement

Independent variables	Regression results		
	Coef (CI)	β	p
Baseline SRQ score	0.33 (0.21 to 0.44)	0.41	**0.000**
Group location	0.47 (-1.37 to 2.32)	-	0.609
Referral origin (self/professional)	-0.51 (-2.35 to 1.32)	-	0.578
Number of sessions attended	0.14 (-0.08 to 0.36)	0.10	0.210
Number of times spoke during sessions	0.20 (-0.36 to 0.76)	0.05	0.488
Use of psychotropic drugs	0.64 (-1.24 to 2.52)	-	0.501
Quality of life change	0.20 (0.13 to 0.27)	0.52	**0.000**
Perceived social support change	0.05 (-0.01 to 0.10)	0.17	0.073
Social capital change	-0.17 (-0.47 to 0.12)	-0.12	0.249

There was no association between variables related to the use of CT sessions (group location, origin of referral, frequency of attendance and number of times respondents spoke during sessions) and change in mental health status. Use of antidepressants or anxiolytics at baseline and/or follow-up also did not have an effect on SRQ change.

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CHAPTER FIVE

DISCUSSION OF QUANTITATIVE RESULTS

This chapter discusses the findings from the quantitative data collection phase. First, I present a summary of my main quantitative findings. Then, I discuss the methodological strengths and limitations of my study and how they affect the conclusions that can be drawn from the analysis. Finally, I interpret my findings comparing them with census data and the scientific literature.

5.1 SUMMARY OF FINDINGS

5.1.1 PROFILE OF CT USERS

The CT users in the city of São Paulo who were examined in this study were mainly women (80%), aged between 25 and 54 years old (70%), with children (80%), low schooling, low income, and poor mental health. Most respondents (68%) were referred to CT groups by primary care health professionals but 32% were self-referred. Nearly three quarters of CT users, including those who were self-referred, had at least one recent contact with a health professional. Continued attendance to CT sessions was generally low; 41% of respondents attended one session only. The characteristics of respondents (and their changes in outcome during follow-up) did not differ significantly according to referral origin or clinic versus community location of CT groups.

5.1.2 CHANGES DURING FOLLOW-UP

There was a 20% improvement in the mental health of respondents (p= 0.000) and a 5.6% increase in quality of life (p= 0.000) during the 12 weeks follow-up period. The

improvement in mental health was not accompanied by statistically significant changes in perceived social support and social capital.

5.2. METHODOLOGICAL ISSUES

5.2.1 STRENGTHS

5.2.1.1 Representativeness of the sample

A strength of this research was that it used an observational study design and therefore reflected the situation found in the routine of primary care clinics and CT groups in São Paulo. Thus, it describes CT users and provides an estimate of the impact of CT in a real world-setting, approximating an effectiveness evaluation. All twelve groups included in this research were already established for over one year, which means that facilitators had already completed their training in CT and had enough time to adapt the functioning of their groups to the local setting. No additional resources were directed to groups or clinics being researched. Furthermore CT groups in this sample were chosen to reflect the characteristics of the 59 CT groups in the public health system of São Paulo in terms of the socio-economic features of the areas in which they were located and the proportion of in-clinic and community groups (1:1).

5.2.1.2 Attrition

The proportion of respondents lost to follow-up in this study was relatively low (17.8%, or 25/140) and was similar to other studies of depressed patients in primary care (Patel, Chisholm et al., 2003; Gunn, Diggens et al., 2006). The only significant difference in the baseline characteristics of those respondents who were lost to follow-up was that they reported worse perceived social support compared to those completing the follow-up. Low perceived social support is associated with a worse prognosis for depression (Brugha, 1995). It is therefore plausible to assume that those respondents who were lost to follow-up may have had less mental health improvement compared to the respondents who did complete follow-up. Thus, the mean improvement in mental health for the whole sample would be expected to decrease. However, when respondents lost to follow-up were included in the analysis

by repeating their baseline SRQ score at follow-up (last observation carried forward) the improvement in mental health was not significantly changed.

5.2.1.3 Assessment

Three of the four instruments used in this study were previously validated in Brazil (SRQ, WHOQoL-bref and MOS-social support). Two of them, the SRQ and the WHOQOL-bref, were also reported to have good responsiveness to change (Mari and Williams, 1986; Da Silva Lima and de Almeida Fleck, 2007). The SASCAT questionnaire was the only instrument in this study which had not been validated in Brazil. Although no psychometric validation of the SASCAT was conducted for this study, I performed a careful adaptation of questions and terminology following the same methods described in another study using the SASCAT in different settings (De Silva, Harpham et al., 2006).

I was careful to minimise assessment bias by training all three interviewers and doing quality control. All instruments were structured and comprised closed questions requiring no interpretation of answers. I observed two complete interviews conducted by each of the other three interviewers and discussed interviewing techniques and questions on the marking of responses with each interviewer. The interviews I observed were conducted before the recruiting phase and just before the follow-up phase. Data from these interviews was not included for analysis. I checked all questionnaires for inconsistencies. Any conflicts that remained having discussed inconsistencies with the interviewers were clarified by contacting respondents when necessary.

5.2.2 LIMITATIONS

A number of methodological limitations must be taken into account when interpreting the results.

5.2.2.1 Lack of a control group

The main limitation of this study was the absence of a control group. Therefore the improvement in mental health, and in quality of life, observed in this study cannot necessarily be attributed to CT. Other explanations for these significant improvements must be considered

First, the respondents may have been receiving other interventions, which may account for the observed improvements in mental health and quality of life. This is unlikely to be a major explanatory factor because only 29% (41/140) of respondents reported using antidepressants or anxiolytics and none reported using other psychotherapeutic interventions. In addition, univariate analysis suggested that use of these prescribed drugs was not associated with mental health change (Table 16, Chapter Four).

Second, the improvement might be explained by the phenomenon known as regression to the mean (RTM). RTM is a statistical phenomenon occurring in longitudinal studies with variables that fluctuate within an individual or within a population due to physiological variation and/or non-systematic measurement error (Tu and Gilthorpe, 2007). Physiological variation (i.e. spontaneous recovery) and non-systematic measurement error cause random variations in the values of a variable across time. As a consequence of random variation, any extreme value (far from the centre of the distribution) of one measure tends to be followed by a less extreme value (closer to the centre of the distribution) in the same subject or population (Bland and Altman, 1994). Thus, when studies recruit subjects with extreme baseline values of an outcome variable, a regression towards mean population values at follow-up is to be expected independently of any treatment effect.

The sample recruited for this study was expected to have a mean mental health score distant from the general population mean, as they were using a mental health intervention. Thus, the improvement in mental health seen in this sample may be due to physiological variation of symptoms. The twelve week follow-up period represents a sufficient time interval for individuals who were at the peak of their distress when they sought treatment to return spontaneously to a low level of symptomatology (Posternak and Miller, 2001; Posternak, Solomon et al., 2006).

In my secondary analysis, which examined the improvement in mental health amongst those with the highest (worst) scores at baseline (Figure 3, Chapter Four), the magnitude of the RTM effect would be expected to be greater. This is because, in addition to the expected physiological improvement in mental health, random

measurement error also contributes to increasing the mental health change amongst those selected by their high SRQ scores at baseline. It is not possible to conclude, however, if a stronger RTM effect is the sole explanation for the larger improvement in mental health observed amongst those with the highest baseline SRQ scores.

It is possible to estimate the magnitude of the RTM effect using formulae that require an independent (external) estimate of the error variance of the outcome variable or its mean and standard deviation in the general population (Bland and Altman, 1995; Yudkin and Straton, 1996). Unfortunately, no such figures were found because researchers using the SRQ in populational studies in the region do not report continuous data from their samples.

5.2.2.2 Sampling: representativeness of CT groups chosen and clustering

This study employed an opportunistic sampling design. This sample was not representative of the majority of CT groups in São Paulo in terms of number of attenders and newcomers per group at each session. CT Groups that tended to have more newcomers and regular attenders at every session were targeted for recruitment to ensure that the required sample size was achieved. Therefore this sample reflected the characteristics of groups that tended to attract more users (and possibly more adherent users) than the majority of groups in São Paulo. It is possible that high attendance to groups was a consequence of better performance by facilitators, both in attracting new users and in managing existing ones. The perception by users and professionals that CT is beneficial may promote them to encourage other users to attend the group in their area. Thus, this sample may not reflect the average standard of care by all groups in the city. It is also possible that where CT was better integrated with routine mental health care in primary care clinics, more users were referred by professionals to CT groups. If this was the case, then the groups sampled did not reflect the pattern of integration of CT within primary care. It is necessary to point out that even in this sample of "high attendance" CT groups, most of them had in fact a much smaller number of newcomers than that which could be expected from facilitators' reports. The reasons for this will be discussed in Chapter Six.

Respondents recruited for this study were clustered by group facilitators (12 CT groups) and by group location (clinic group or community group). In terms of their

baseline characteristics and outcomes, attenders from the same group or same group location tend to be more similar to each other than to attenders in different groups or group location. This is due to the fact that people who attend the same primary care clinic or community venue where CT is delivered are more similar to each other than to people attending different clinics or community venues. Additionally, the effects of CT on the outcomes of attenders from the same group tend to be more similar to each other than to the effects on the outcomes of people attending different groups. This is explained by a "facilitator effect" (or, similarly, a "location effect") on the impact of CT on attenders. The similarity of outcomes within clusters decreases standard errors and lead to confidence intervals that are too narrow and p-values that are too small. To correct for this, I used robust standard errors in all calculations made in this study. But this meant loosing power to detect true differences between sub-groups (between clinic and community groups, for example) and changes from baseline to follow up.

Another issue was the size of clusters. The fact that the size of clusters was not uniform gave bigger clusters more weight on determining the results of the study. Therefore, my results are not equally representative of all CT groups sampled. They are more representative of those groups that contributed with larger numbers of research subjects.

5.2.2.3 Timing of baseline assessment
The baseline measures of mental health, perceived social support, quality of life and social capital were obtained **after** the first session attended by respondents. Unfortunately, the decision to include self-referrers in this study meant that respondents could only be recruited when they first attended a CT session. There was not enough time before the beginning of sessions to make the baseline assessment without disrupting the functioning of the whole group. Although questions did not refer to their thoughts and feelings at the time of the interview, it is possible that respondents gave a more positive assessment of their status after participating in the session. This could be due to an immediate cathartic effect of ventilating one's problems. If this occurred, then baseline measures would have underestimated the degree of distress with which people initially attended CT sessions. Consequently, mean changes in these outcomes at follow-up would have also been underestimated, particularly considering that 41% (53/128) of respondents attended only one session

of CT (i.e. these respondents were not exposed to any intervention between the baseline and outcome assessments). It is not possible to estimate what was the immediate impact of the first session of CT on the mental health of respondents. If CT had a strong immediate effect, then the underestimation of CT's impact in this study was large. But this is an unlikely hypothesis, since psychotherapeutic interventions usually rely on a number of sessions to make an impact.

5.2.2.4 Assessment bias

Both interviewers and CT research subjects were not blind to the intervention and objectives of the study. I decided that interviewers who performed the baseline assessment of one CT attender would also perform the follow up assessment of that same attender. The advantage of doing this was that attenders who already knew the interviewer from the baseline assessment would be more likely to complete the follow up, thus minimizing attrition. However, when performing the follow up assessment interviewers are likely to be biased by their knowledge of attenders characteristics at baseline. Their (positive) expectations regarding CT could influence them to seek for evidence of improvement, irrespective of the true evolution of outcomes. To minimize this assessment bias, I used structured instruments with closed answers.

Social desirability bias at follow-up may have contributed to increasing the magnitude of the mental health improvement. Interviewers reported that many respondents felt pleased and even surprised to be visited in their homes to answer the follow-up and might have felt obliged to be more positive about their situation.

5.2.2.5 Assessment instruments

The responsiveness of the MOS questionnaire in this study was affected by the high baseline scores of respondents in this sample. The instrument is less sensitive to detecting increases in perceived social support in a sample if many respondents receive the maximum possible score at baseline (ceiling effect). This is reported to be a frequent problem with perceived social support instruments because people usually perceive they have high levels of social support (Wills, Shinar et al., 2000). I did not find data on responsiveness of the MOS questionnaire specifically (Sherbourne and Stewart, 1991; Chor, Griep et al., 2001). Thus, the increase in perceived social

support scores detected by the MOS questionnaire might have underestimated the true improvement perceived by respondents.

As expected from other studies, low perceived social support was associated with worse mental health at baseline. What was not expected was that when the other two risk factors for mental ill health in this sample, gender and schooling, were added to perceived social support in a multivariate analysis of association with mental health, only perceived social support remained significant. Gender and schooling have been consistently associated with CMD in Brazilian epidemiologic studies. It is possible that the strength of the association between mental health and perceived social support was due to poor mental health having a negative impact upon the perception of support in addition to the traditionally accepted effect of low support worsening mental health. Indeed, the MOS questions investigating its "positive interactions" sub-component were very similar to an investigation of anhedonia, one of the core features of depression. The "positive interactions" was the sub-component of social support most strongly associated with mental health. There seems to be some degree of overlap between the dimensions measured by both instruments. This overlap and the relative homogeneity of the sample in terms of gender and schooling may explain why the two most consistent predictors of mental ill-health in Brazil lost significance when perceived social support was included in the model (for a review on risk factors for mental ill-health in Brazil, see Chapter One, section 1.3.1).

5.2.2.6 Power

Underpowered studies may lead to type two errors, i.e. declaring that a difference does not exist when in fact it does (Last, 2001). This study was powered to test its primary hypothesis, i.e. that the mental health of CT users improved during follow up compared to baseline. This study was not specifically powered to test explanatory factors for change in mental health or differences amongst sub-groups of CT attenders. For example, I did not find any statistically significant associations between respondents' socio economic characteristics, previous use of health care, change in health and social outcomes, and pattern of attendance to CT groups in relation to group location (clinic versus community) and referral origin (self-referred versus referred by professionals). However, I did not design and power this study to demonstrate such differences. Although group location differences did not reach

statistical significance, users of clinic groups were poorer, less educated, less likely to be of white ethnic background and to have a partner, compared with users of community groups. They also had worse mental health and lower perceived social support than users of community groups. Thus, a larger sample may have demonstrated a significant pattern of higher vulnerability amongst clinic CT group users compared to those attending community CT groups. If this is the case then it was not what was envisaged when community groups were established. By deploying CT groups in community settings, it was hoped that these groups would reach a population who were more deprived and in greater need of care than those attending in-clinic CT groups. In order to establish a more accurate picture of the differences between community and clinic groups it would have been necessary to analyse data at the group level, which would have required a greater number of groups to have been sampled.

Similarly, this study was not specifically powered to detect changes in perceived social support and social capital. In the case of perceived social support, there was an improvement in scores from baseline compared to follow up. However, this improvement did not reach statistical significance. A larger sample could have demonstrated a significant change in social support.

Additionally, the sample size calculation did not take into account the presence of clusters. Therefore, the use of robust standard errors to account for the clustering effect during the analysis indeed reduced the expected power of the study.

5.3 COMPARISON WITH OTHER STUDIES AND INTERPRETATION OF RESULTS

Building on the methodological considerations I have discussed above, in this section I interpret my findings in comparison with the research literature.

5.3.1 CHARACTERISTICS OF THE CT USERS

5.3.1.1 Socio-demographic characteristics of the sample

Examination of official data from the year 2007 for the greater São Paulo, suggests that the CT users in this study were more socially disadvantaged than São Paulo residents as a whole (Instituto Brasileiro de Geografia e Estatistica, 2008). 52% (73/140) of respondents defined themselves as black or mixed black-white compared to 36.5% in São Paulo. Black and mixed black-white people are consistently disadvantaged in relation to white people in terms of education, income, life expectancy and access to health services in Brazil (Programa das Nacoes Unidas para o Desenvolvimento, 2004; Instituto Brasileiro de Geografia e Estatistica, 2008). Educational attainment was lower amongst respondents than for São Paulo residents as a whole. Official data report that São Paulo residents had a mean of 8.7 years of schooling for those aged above 15 years, compared with a mean of 7.2 years in this sample. As respondents in this sample were above 17 years old, mean years of schooling were expected to be higher in the sample than in those above 15 years age in the city of São Paulo. As many as 18% (25/140) of respondents in this study were below the poverty line, as defined by a Federal Government index based on income per capita, compared with an official estimate of only 2.5% for the city of São Paulo in 2004 (Ministerio do Desenvolvimento Social do Brasil, 2008). Although these findings suggest that CT is indeed reaching the poor, they did not confirm the assumption made by managers and professionals in São Paulo that users of CT groups located in community settings and self-referrers would be more socially deprived than those attending CT in primary care clinics and those referred by health professionals.

My findings indicate that leaving CT open to self-referrers might be an effective way of attracting men with mental ill health who usually are less likely to look for help than women (Travassos, udia et al., 2002; Rhodes, Liisa Jaakkimainen et al., 2006). The female/male ratio amongst self-referrers was 2:1, similar to that found amongst people with CMD in Brazilian community studies (Ludermir and Melo Filho, 2002; Maragno, Goldbaum et al., 2006). In contrast, the female/male ratio amongst CT users referred by primary care professionals was 6:1. These figures did not change when the analysis was restricted to respondents with a probable CMD diagnosis at baseline. However, the small number of males in my sample limits the strength of this conclusion.

5.3.1.2 Mental health

As implemented in São Paulo, CT was successful in attracting a population in need of mental health care. The proportion of CT users with probable CMD was high and comparable to that reported by other SRQ studies sampling consecutive primary care clinic attenders in São Paulo. Probable CMD cases were 62% (87/140) among CT users (53% amongst self-referrers) versus 47-56% among primary care attenders in São Paulo (Mari, 1987; Iacoponi, 1990). As discussed earlier (see 2.2.3) our figures are likely to have underestimated the severity of the mental ill health of CT attenders. A high proportion of CMD cases amongst CT users referred by health professionals was expected since their referral was the result of an evaluation of their mental health. But the similarly high proportion of CMD amongst self-referrers justifies the decision to leave CT groups open to self-referrers too.

5.3.1.3 Use of health care

A recent study in a community sample in São Paulo reported that only 45% of those with a psychiatric diagnostic had contact with health services in the month before their assessment (Andrade, Viana et al., 2007). Because the area researched by Andrade et al was mostly middle-class (36% of those contacting health services had private health insurance), an even worse scenario (in terms of access to health care) could be expected in the poorer areas of São Paulo where people rely exclusively on the national heath system. In this context, when CT was implemented in these poorer areas, managers hoped that by promoting self-referral and abolishing waiting lists, the scheme could reach those in need of mental health care who were not accessing health services. However, 71% (13/45) of self-referrers and 76% (23/95) of respondents referred to CT by health professionals in my study had at least one contact with health services in the month before they attended their first CT session. Similarly, managers expected that by locating some CT groups in community settings a population with less access to health services could be reached. My findings did not show a significant difference in terms of previous access to health care between users of community or in-clinic CT groups. Excluding routine home visits by health visitors from the count of health contacts did not change these proportions.

Thus, whilst CT was being used by people in need of mental health care, attenders comprised those who were mostly already accessing primary care services, with the possible exception of a higher than expected proportion of men amongst self-referrers.

5.3.2 STUDY HYPOTHESES:

The absence of a control group meant that I could not exclude the possibility that my results may be explained by spontaneous improvements or even by the effect of other therapeutic resources used by respondents. In order to contextualise my results, it is therefore useful to compare the changes in mental health and quality of life that I reported with those found in similar longitudinal studies.

5.3.2.1 Main hypothesis: the mental health of CT attenders improves after 12 weeks of follow-up

The 20% decrease in mental health scores found in this sample (or 23% if we consider only respondents with a probable CMD diagnosis at baseline) is comparable in magnitude to the decrease seen in two observational studies evaluating undetected patients of CMD during similar periods (Coyne, Klinkman et al., 1997; Simon, Goldberg et al., 1999). In both studies, authors assumed that undetected patients did not receive any specific mental health treatment. A meta-analysis of control groups (waiting-list patients) in psychotherapy studies found 10-15% decreases in depression scores over periods ranging from 2-20 weeks (Posternak and Miller, 2001). If we compare my study with the studies by Araya et al, Bolton et al and Rojas et al reviewed in the Chapter One, we see that the change in mean mental health scores of CT users is more similar to that of the control groups than to the changes in the intervention groups of the three studies (Araya, Rojas et al., 2003; Bolton, Bass et al., 2003; Rojas, Fritsch et al., 2007). The improvement in mental health in the studies mentioned above should be attributed to non-specific treatment effects and/or spontaneous remission. Differences amongst the samples examined prevent a direct comparison of my findings with studies mentioned above. However, there is an indication that the improvement in mental health in my sample was similar to that observed in CMD patients receiving non-specific treatment in primary care.

Because of its observational design and the absence of a control group, my study does not allow a definite conclusion regarding the relation between attendance to CT and improvement in mental health observed in the sample. It is possible that CT has a small effect on mental health, one comparable to non-specific treatments. But it is also possible that it has no effect at all, in which case the improvement observed in my sample would be explained by spontaneous remission or by the use of other therapeutic resources.

Low attendance rates of users to CT sessions may have impaired its potential effect on mental health. The frequency of attendance of CT users was comparable with the attendance rates to the psychoeducational groups in Rojas et al Chilean primary care study with depressed mothers (Rojas, Fritsch et al., 2007) and was significantly lower than attendance rates in the other two studies reviewed in the Chapter One (Araya, Rojas et al., 2003; Bolton, Bass et al., 2003). In Rojas et al study, low attendance was attributed to the competing demands of mothers of babies. This explanation is not applicable to my study, which had a more varied sample. The absence of a long-term multi-component treatment programme in my study may explain the low attendance rates observed. Presenting to patients at the first treatment session a schedule of a pre-determined number of future meetings they are expected to attend (as Araya, Bolton and Rojas studies did) may increase their commitment to the treatment. Araya et al and Rojas et al studies also included individualized monitoring of clinical status, which allowed to escalating the intensity of treatment according to the needs of patients. All this was absent in CT groups I studied.

5.3.3 SECONDARY HYPOTHESIS:
5.3.2.1 The quality of life of CT attenders improves after 12 weeks of follow-up

The improvement in quality of life reported amongst respondents in this study, although statistically significant, was small (5% increase over baseline scores). It was much smaller than that found in a Brazilian longitudinal study which measured quality of life in psychiatric patients receiving antidepressants with the same instrument I used (Berlim, Pargendler et al., 2007). Berlim et al's study reported a 20% increase in WHOQoL-bref scores after 12 weeks. In common with my research, there was no control group to which my results could be compared. A larger increase in quality of life in Berlim et al's sample compared to mine could be expected since

their patients were more severely affected than the respondents in my study. Even so, it seems unlikely that CT had a clinically significant effect on the quality of life of respondents in my study.

5.3.3.2 Improvement in mental health among CT attenders is associated with improvement in social support

The lack of a significant improvement in perceived social support or of an association between the change in mental health and change in perceived social support in this study may have been due to the ceiling effect discussed above. Alternatively, it is possible that CT, even if contributing to improve mental health, does not have a significant effect on perceived social support. The paucity of evaluative research measuring both perceived social support and mental health outcomes makes it more difficult to draw conclusions about the validity of my findings. A systematic review by Hogan et al highlighted the fact that most evaluations of support interventions did not include a specific social support measure in their outcomes (Hogan, Linden et al., 2002). When they did, the variety of measures used (many of them non-validated) made it difficult to compare results.

In addition, very few investigations of social support interventions have specifically targeted mental disorders. Harris et al reported a positive impact of an individual social support intervention ("befriending") on the mental health of depressed patients, but they did not report if there was change in social support measures (Harris, Brown et al., 1999). Ogrodniczuk et al evaluated a professional-led group intervention to enhance social support in patients with complicated grief, most of whom were clinically depressed (Ogrodniczuk, Joyce et al., 2003). Interestingly, they found that at the first three-month follow-up assessment, while depressive symptoms had a significant improvement, perceived social support had a minor, non-significant, decrease. It was only at the nine-month assessment that a significant increase in perceived social support was detected and related to the mental health improvement. Based on the fact that the improvement in mental health preceded the one in perceived social support, the explanations raised by the authors favoured the hypothesis that it was mental health improvement that enabled patients to build up more support from their social systems, or at least to perceive they were doing so. This hypothesis presupposes that depressed people are less able to ask for and elicit support from close

contacts either because they lack the initiative or because they may be seen as too demanding. Alternatively, the improvement in perceived social support may be explained by the more positive view that patients recovering from depression have of their close relations.

It is necessary to clarify the objectives of different support interventions to better understand how they may affect social support[1] and mental health. The intervention described by Harris et al aimed to directly provide a long-term close supportive relation, one that could fill the gap in support from significant others for people vulnerable to mental disorders. Other support interventions aim to train vulnerable individuals in acquiring social skills to enhance the support they can elicit from existing significant others. For these two types of intervention, it is appropriate to use instruments measuring support from close significant relations to assess the success of the intervention. Finally, there are those interventions which aim to provide support from peers (usually sharing the same health condition), assuming that this kind of support has a positive effect on mental health similar to that provided by significant others. For this type of intervention, instruments measuring support from close relations will not be assessing the direct effects of treatment. This was the case with CT and the intervention evaluated by Ogrodniczuk et al. Although the MOS questionnaire I used does not explicitly restrict its assessment of support to that coming from close significant others, it is possible that the questions it asks refer mostly to the kind of support that only close relations can provide. In the interviews I performed respondents would systematically mention the person from whom they received or expected to receive support, although this was not required by the instrument. It was clear from those additional comments that they only had in mind their closest relations. This could explain why social support improvement, as defined by the MOS, did not occur in concomitance with mental health improvement in my study and in the one by Ogrodniczuk et al, which used an instrument similar to the MOS. Interventions like CT may not improve the support received from close relations but may, if successful, reproduce the effects expected from this kind of support. The effects of social support that are hypothesized to improve mental health are: helping the individual to reinterpret more positively situational demands,

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[1] The definition I am using refers to social support as "the functions performed for the individual by *significant others, such as family members, friends and co-workers*" (Thoits, 1995) (p.64).

bolstering self-esteem by reassurance, and sustaining the individual's sense of control with feedback and encouragement (Thoits, 1995).

In conclusion, although CT does not seem to increase social support defined as support from significant others, there is the possibility that the social interactions it promotes have supportive effects for its users.

5.3.3.3 Improvement in mental health among CT attenders is associated with improvement in social capital

This study did not show any significant relationship between social capital and any of its components with mental health. I was unable to identify any other studies documenting longitudinal changes in social capital and their possible influence on mental health in the literature review that I undertook. Cross sectional analyses report conflicting results and their findings about the association of social capital with common mental ill health are difficult to interpret (De Silva, McKenzie et al., 2005). The reliability and validity of available instruments is one problem, because there is no gold standard measure against which instruments can be compared. The sensitivity of the concept of social capital to social, political and cultural contexts also make it difficult to be sure that the same dimensions are being assessed in different settings (De Silva, Harpham et al., 2006). Even when the same instrument was used in a four-site study, the association of the different dimensions of social capital followed divergent directions and was inconsistent across sites, with higher cognitive social capital associated with better mental health but higher structural social capital associated with poorer mental health (De Silva, Huttly et al., 2007). De Silva et al used the same instruments to assess both social capital and mental health as those used in my study. The difficulty in interpreting these results suggests that the concept of social capital lacks a clear definition or encompasses components that are difficult to reconcile within a single entity. Thus, the utility of social capital for the understanding of mental ill health remains to be demonstrated.

5.4 CONCLUSION

As it is routinely delivered in São Paulo, CT is reaching a socially deprived population in need of mental health care. This population was mostly already in contact with health services but receiving no specific treatment. According to our results, however, CT has low adherence and its impact on mental health is likely to be null or, at best, comparable to that of unspecific treatments of CMD.

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CHAPTER SIX

QUALITATIVE DATA

This chapter examines the qualitative data collected in my research. First I describe the methods used in the collection and analysis of data. Second I present the results according to each source of data. Third I consider the methodological issues related to data collection and analysis and discuss my findings in light of the literature I previously reviewed in Chapters One and Two. Finally, I draw conclusions from this discussion.

6.1 METHODS

6.1.1 DATA COLLECTION

I collected qualitative data from three sources (i) semi-structured interviews with CT attenders; (ii) semi-structured interviews with facilitators, and (iii) non-participant observation of CT sessions. Most qualitative data were collected from CT groups included in the quantitative data collection. The only exceptions were two interviews with facilitators whose CT groups were excluded from the quantitative data collection (see reasons below).

6.1.1.1 Semi-structured interviews

I undertook all interviews with CT facilitators and some of the interviews with CT attenders. The remainder of these interviews were conducted by a research assistant (a trained psychologist). The interviews took place during the last two months of the fieldwork (November and December 2006), when most quantitative assessments had been completed. This was done to avoid the possibility that participation in interviews about CT would lead facilitators to alter their subsequent behaviour. Two interviews

with facilitators were conducted before the quantitative component of the research began. I realized that after the interviews, these two facilitators changed the way in which they publicized their CT groups. Because this could interfere with the validity of the quantitative findings I excluded these two groups from quantitative assessments.

I prepared topic guides for the interviews with attenders and facilitators. These contained the key points to be explored and examples of how to phrase the questions (see Table 1). I described the research objectives and interview techniques to the research assistant. She recorded a pilot interview which we then discussed. For example, I emphasised the importance of avoiding the use of leading phrases to minimize social desirability bias. I oriented her to begin interviews by allowing attenders to speak freely about CT and to ask open questions when trying to clarify their ideas. She was instructed to explore emerging themes with neutral remarks ("Tell me more about this", "Why is this so?") and topics that were not initiated by attenders were brought up by the interviewer towards the end of the interview. All interviews were tape-recorded. I also took filed notes of my immediate impressions directly after each interview ended.

Table 1- Topic guide for semi-structured interviews with CT attenders and facilitators

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ATTENDERS
Reasons for attending first CT session
Why did you go to CT sessions in the first place? How did you learn about CT? What were you expecting?

Reasons for not returning to sessions and possible effects of CT (if attended 1-2 sessions)
Why did you not return to sessions? Do you think attending CT sessions had any negative or beneficial effects on you (explain)? What could be done to improve CT?

Reasons for continuing to attend sessions and possible effects of CT (if attended 4+ sessions)
What made you keep going to sessions? Do you think attending CT sessions had any effect on you (explain)? Tell me about the negative aspects of CT? What could be done to improve CT?

Perception of CT
How would you explain what is CT to a friend? Who do you think can benefit from CT?

Mental health background
Have you ever received psychological or psychiatric treatment (explain)?

FACILITATORS
Background
How did you get interested in CT? How was your training? Did you have any previous experience facilitating groups (professional or non-professional)? Did you have any previous experience with mental health patients?

Working with CT
How did you start your first CT group? How do you publicize your CT group? How do attenders learn about your CT group: referrals (from whom?)/ other? How do other professionals in your clinic view CT? Do you refer CT attenders to other professionals? Do you speak with other professionals about patients in common? What are the barriers to your work with CT (explain)?

Effects of CT
What kind of effects do you think CT has on attenders (explain)? How does CT works? What could be improved to enhance the effects of CT?

6.1.1.1.1 Attenders

All attenders interviewed had completed the structured follow-up assessment. In order to obtain a diverse range of responses, I recruited approximately equal numbers of low frequency attenders (one or two CT sessions) and high frequency attenders (four or more CT sessions). I maintained the same gender balance as the quantitative sample (four to five women for each man). The total number of interviews was limited by the time available and the concordance of attenders.

Semi-structured interviews with attenders were performed between 1-30 days after the quantitative follow-up assessment by the same researcher who had conducted the quantitative assessments. The interviews were arranged during the quantitative follow-up assessment or by contacting attenders by telephone. All interviews took place in the homes of attenders after they had provided written informed consent.

All attenders were asked about negative effects of CT and possible problems related to it. Attenders who attended only one or two sessions were also asked why they did not return to groups, even if they did not refer any negative aspect of CT.

In addition to transcribed semi-structured interviews, I also included in the analysis of attenders views on CT short conversations I had with attenders who I assessed for the quantitative data collection. During the structured quantitative assessments, while answering my questionnaire attenders usually made many additional comments about a number of subjects, including CT. At follow-up quantitative assessments I also asked those who had attended few CT sessions their motives. I took notes during ten of these short conversations. I used these notes as complementary information to the semi-structured interviews.

6.1.1.1.2 Facilitators

At least one facilitator from each of the five groups observed was recruited for interview. I purposively sampled facilitators with extensive experience with CT and, to obtain a diverse range of perspectives, I sampled facilitators with a variety of professional backgrounds with respect to university training and mental health specialization.

6.1.1.2 Observation of sessions

In addition to collecting data from attenders and facilitators, I also undertook non-participant observation of five CT groups during the months of November and December 2006. I observed sessions from all three groups from which I had recruited attenders myself for the quantitative assessments. I chose these groups for observation because I was already familiar with facilitators. The fourth group I chose was one that used CT as a triage mechanism for all mental health referrals of the clinic to which it

was linked. The fifth group I chose to observe was identified by a research assistant as a very successful group in terms of adherence of users. The observations took place when most of the attenders recruited for the quantitative assessments had completed their follow-up assessment.

Before each session began, facilitators introduced me as a researcher interested in learning about CT. They asked attenders if they agreed with me being present and stressed that I would not register their names in my notes. Attenders always agreed with my presence. Wherever possible I sat apart from the group, however there were occasions when I was asked to sit in the circle formed by attenders and to stand or hold hands with attenders. However this was the limit of my participation. I did not speak during the sessions.

I made hand written notes during each session and immediately afterwards. My main focus of observation was the extent to which interactions amongst attenders exemplified the features of supportive peer behaviours described in Chapter Two.

I also observed a number of fragments of sessions during the recruitment period to the quantitative component of the study. I arrived before the end of sessions to ensure that I was present to recruit eligible respondents before they left the session. Two of the three groups from which I was recruiting attenders were located in large rooms in community settings. There was no waiting room in those settings so I had to enter the room where the groups took place. The facilitators and attenders then tended to ask me to join the group. In these circumstances, facilitators did not introduce me to attenders nor could I ask for their permission to observe the session. I realised that it was less disturbing for the session for me to join the group and that a refusal to join the group could be interpreted as a desire to distance myself from them which may be perceived negatively by the attenders. I also took into consideration that it was usual for people to come and go during sessions without asking for permission. At the end of every session I identified myself as a researcher and explained the purpose of my presence. I asked if I could take notes of the sessions I had observed to use in my research, preserving the anonymity of participants. I did not receive any negative feedback from attenders for not having identified myself earlier. On the contrary, some people approached me to give opinions about CT and health care matters.

6.1.2 DATA ANALYSIS

A professional transcriber typed all tape-recorded interviews verbatim. I transcribed my field notes from observation of groups and from short conversations with CT attenders during quantitative assessments. I then created individual files for each of the interviews and for each of the groups I observed. I coded and analyzed transcripts using NVIVO 7, a specialized qualitative analysis software (QSR, 2006).

I first coded transcripts of interviews with attenders and facilitators using in vivo codes, i.e. codes that summarized the information contained in one fragment with as little interpretation as possible. I then refined these codes and gradually grouped them into more general ones by re-reading transcripts horizontally (all fragments with the same code) (Lofland, Snow et al., 2006). To avoid the de-contextualisation of speakers' words I also re-read fragments vertically (long sections of the same interview). This allows the analysis of talk in the broader context of the surrounding utterances to ensure a fair representation of the meaning of the fragments reproduced below.

The main focus of my analysis were the themes arising from attenders' interviews related to the effects of CT. I analyzed these interviews first and defined at that stage the salient themes. I analyzed interviews with facilitators and my own observations at a later stage and used them to triangulate with the findings from attenders' interviews. When analyzing themes related to the integration of CT within primary care, I prioritized data from facilitators' interviews.

I sought for deviant cases to assure that all observations could be accounted for and that analytic claims were not prematurely generated. During the coding process I was blind to the quantitative data I had on the mental health, perceived social support and other outcomes of attenders. I examined these data afterwards to put in context the interview extracts to be reported.

6.2 RESULTS

There was considerable overlap in the themes identified by attenders, facilitators and my observation of sessions. However I have reported results separately for clarity.

6.2.1 INTERVIEWS WITH ATTENDERS

18 semi-structured interviews with CT attenders were conducted. I conducted three of these interviews and a research assistant undertook the other fifteen. Ten out of the 18 attenders attended one or two sessions of CT only. The other eight attenders attended between four and 11 sessions each. Table 2 compares the characteristics of the qualitative and quantitative samples. It can be seen that both samples have broadly similar characteristics, except that respondents in the qualitative component had on average more previous contacts with health services and attended community rather than clinic CT groups. The reason for the higher number of community groups attenders was that the research assistant and I interviewed the attenders who we had previously interviewed for the quantitative component and, in the main they attended community groups.

Table 2- Characteristics of qualitative and quantitative samples

Variable		Qualitative (n=18)	Quantitative (n=115)
Gender			
	female	14 (78%)	93 (81%)
	male	4 (22%)	22 (19%)
Age (years)			
	mean	44.3	45.8
Ethnicity			
	white	9 (50%)	62 (54%)
	non-white	9 (50%)	53 (46%)
Marital status			
	married	14 (78%)	63 (55%)
	not married	4 (22%)	52 (45%)
Schooling (years)			
	mean	8.2	7.3
Income (US dollars/month) [1]			
	mean	289.09	309.5
Contacts with health services (previous month)			
	mean	2.38	1.73
Group Location			
	community	17 (94%)	76 (66%)
	clinic	1 (6%)	39 (34%)
Referral to CT group			
	Health professional	13 (72%)	80 (70%)
	Self-referral	5 (28%)	35 (30%)
Mental Health	baseline	10.33	9.97
	follow-up	8.83	7.96
Quality of life	baseline	79.28	79.41
	follow-up	83.61	83.43
Social support	baseline	75.12[2]	70.81 [3]
	follow-up	74.89	73.26
Social capital	baseline	6.11	5.89 [4]
	follow-up	6.16	5.75

[1] Using Power Purchasing Parity exchange rates: 1 US Dollar= 1.226 Reais
[2] n=17   [3] n=113   [4] n=114

The main themes that were discussed concerned the reasons for attending CT, perceived beneficial effects and the negative aspects of CT. Each of these themes are discussed below (see Table 3 for the key to abbreviations from the citations).

Table 3- Key for the citations

R: respondent	F: facilitator
♀: female	♂: male

6.2.1.1 Attender's reasons for initial attendance at CT

Most attenders reported they first went to CT groups because of psychological problems. They were mainly referred by health professionals but a few were advised to come by friends and neighbours:

"She (the neighbour) *said it was good… When she was depressed, because she had lost her husband, people from the (primary care) clinic told her to go. She did and she liked it. Then, because I had lost my son a few months before, she said: "M., let's go there together, it's nice. They talk." Then I went."* (R1,♀, 57 yrs old)

A minority of attenders did not mention any psychological complaint to explain why they came to CT sessions. Instead, they attended out of *"curiosity… to see what it was like"* (R2, ♂, 24 yrs old) or to provide support to relatives who were attending the sessions: *"I went to collect my wife"* (R3, ♂, 49 yrs old). All these attenders had a good mental health according to their SRQ scores.

6.2.1.2 Beneficial effects of CT

The majority of attenders reported that CT made them feel better for the reasons described below and listed in Table 4. These categories are not exclusive, as attenders often reported more than one feature of CT as making them feel better. There was also some degree of overlap and interaction between categories. For example, the feeling of support from being with others was not dissociated from learning that these "others" shared some of the same stories one had been through. The cathartic effect of speaking out one's problems was perceived to be increased by the effects of singing together with others a song related to one's distress.

Attenders who attended more sessions tended to report a higher number of positive effects than those attending fewer sessions.

Table 4- Beneficial effects of CT

1. Learn about other people's stories
- Contextualisation
- Inspiration by others
- Relief of guilt

2. Being with other people
- Enjoyable environment
- Supportive atmosphere

3. Catharsis

4. Helping others

6.2.1.2.1 Learn about other people's stories

Most attenders mentioned some positive effect related to learning about other people's stories during CT sessions.

The most cited mechanism by which learning about other people's problems improved distress was the contextualisation of one's own problems. Learning that the situation which caused them distress was not unique to themselves helped to relieve their suffering by reducing their sense of isolation:

"When I started telling the problem about my son (who died) *everybody was looking at me. Then I started to cry, then there was this lady who cried too, seems she had lost a son. There was also a gentleman who had lost a son. You know, after seeing that, I started to feel better, more at ease."* (R1,♀, 57 yrs old)

Some attenders reported they were inspired by people with problems worse than their own but who appeared to be coping. For example, R5**,** a 42-year-old housewife and mother who also took care of her mother-in-law who had Alzheimer's disease, explained how she managed to overcome her agoraphobia symptoms:

*"My situation was nothing compared to **X**'s. Can you imagine someone not leaving her room for ten years? So, I* (pause) *I tried to follow her example, you know, why would I do this to myself? I was hurting myself, isn't it? Be afraid of what? If anything was to happen, it would happen anywhere! I could die anytime. So I began*

to put this out of my mind, you see? Looking at those people, I saw my problem was nothing. I also thought a lot about that other woman whose mother has Alzheimer, and other people who have problems."

However limitations of comparing ones own situation to others were also pointed out:

"I guess it (listening other people's stories) *kind of makes you wake up, as I told you: "I'm not the only one going through this". Something like: "If those people managed to get over that situation, I can learn how to get over my problems too". It's more or less like that, though it can also be difficult, because at the same time you think: "No, I'm not like them, I won't manage to do the same. They did but I can't". So I got this conflict on my mind".* (R4, ♀, 27 yrs old)

In this example, low self-esteem appeared to undermine the positive effect of learning one is not alone in a situation. Low self-esteem is associated with poor mental health. R4 had a very poor mental health, according to her baseline SRQ score. She attended seven CT sessions but took no psychotropic medication during follow-up. Her poor mental health remained unchanged.

A few attenders alluded to a reappraisal of the guilt that they had felt before attending CT. R6 was a 49-year-old housewife who had been taking care of her ill mother at home. Referring to stories similar to hers she heard during sessions, she concluded:

"Well, the group helped me to grow, I guess. To accept things as they are, and understand reality, not everything in life is as we want. We got to accept things as they are. And nobody asks to get ill, one gets ill because it had to be like that. These are things we can't explain, you're gonna die when it's time for it. Just as my mother, I guess I done what I could do, you know?"

The same relief from guilt is apparent in the words of another respondent who was on long-term medical leave with a record of epilepsy and alcohol abuse. He was severely depressed when I (LG) interviewed him. This is what he said about listening to someone else's difficulties:

"(LG) ...but is it good to learn that others have similar problems? Or not?

(R3) Of course it is, because I can see I'm not the only one in the wrong.

(LG) Not the only one?

(R3) Of course, no doubt. I think I'm doing wrong, but there is one, two, three or four others doing the same in the meeting. Then I think to myself: I'm not the only one making mistakes. There's another two or three too." (R16, ♂44 yrs old)

6.2.1.2.2 Being with other people

Many attenders mentioned a beneficial effect simply from getting together with people at CT sessions. This was not particularly related to learning about other people's stories or speaking about one's problems. It seemed to relate to the positive atmosphere created within a group environment.

Some attenders explained that because they had enjoyed sessions they were able to temporarily enjoy themselves, even though they were aware that this alone would not resolve their distress:

(Referring to a conversation R7 had with a friend who did not want to go to CT anymore)

(Friend said) *"When I go there* (CT session) *I add the problems of other people to the problems I already have on my mind. Then I get worse. So for me it's not worth going"*

Then I said: it's no use thinking they will make your problems disappear (at CT)*. They won't. You go to CT because there you can talk, smile, sing, play, things you won't do at home. So that's what we are looking for going to CT. We don't go there to extirpate our problems, we go to be ourselves (...) So if you can see this side of CT, your problems will fade. I'm not saying it will cure you. Because I think lots of people are looking for a cure. I don't think CT is a cure."* (R7, ♀, 44 yrs old)

Attenders also used terms as *"warmth"*, *"affection"* (R4, ♀, 42 yrs old)), *"support"* (R8, ♀, 44 yrs old) and *"feeling welcome"* (R2, ♂, 24 yrs old) to describe what they felt from group peers. R9 stressed how the *"warmth"* she found in groups she could not find anymore from her family:

"It was there (at CT) *that I found the warmth I needed. Because at home, everybody's got to work so they don't have time for me. So it was just me and my mother. She did what she could. But she was actually more crying than helping me. She couldn't stand the situation I was in anymore. And I needed to get out of it."* (R9, ♀, 40 yrs old)

R9 was also one of the many users to mention the supportive effect of songs sung during sessions:

"In the end of the session there is even a song, you know, they sing music to lift you up. To lift you from the situation you are. And they sang a song which related to my situation, and that's what helped me even more, because in the situation I was, it had to be something strong to lift me up."

6.2.1.2.3 Catharsis

For many of the attenders, their positive experience of CT involved being able to speak about their problems. They all used the Portuguese word "*desabafar*", which can translate as "let it out". They described a feeling of "relief…you feel lighter, you feel better" (R10, ♀, 38 yrs old) after speaking. Here is how R8 defined "*desabafar*":

"Desabafar is when… you have something inside and have to speak about it with someone else, you have to open up, to let it out. If you just bottle up, bottle up, bottle up, it gets worse"

6.2.1.2.4 Helping others

A few attenders reported that during CT groups they had the chance to help other attenders and that helping had a positive effect for them. Most of these attenders had attended CT frequently. For example, the following quote is from R10, a 38-year-old divorced woman with a history of suicide attempt:

(R10)"When I show up at the sessions, sometimes people say: X, where have you been? When you are here you cheer people up.
(LG) How did you feel when they said this to you?
(R10) It made me feel good. I felt they valued me. You think: Gee, I can be useful, I can do things."

6.2.1.3 Negative effects and problems related to CT

The ten attenders who went to one or two sessions only were asked about their reasons for not returning. Some of them said they did not have enough time to go to sessions or had to take care of children at home. A few were evasive and said that one or two sessions was enough for them. There were also a few attenders who explained they had only attended sessions to accompany a relative.

A few attenders were concerned by a negative impact upon their own mood, the large size of the groups and the lack of privacy. These themes are described below.

6.2.1.3.1 Downbeat mood

Most attenders who had a negative impression of CT gave the same explanation. They said that learning about other people's problems during sessions only increased their distress. They attended one or two CT sessions. R11 (♀, 31 yrs old) said she was only accompanying her mother to CT and thought that she left sessions even more worried than she was before them. R11 thought that individual therapy would have been more appropriate for her mother. She did not make any suggestions to improve CT.

R12, a 74 year old housewife reporting more than 30 years of psychiatric treatment, had a similar view:

"I went just twice, because it was too much crying during sessions, I got upset, it made me really nervous. Then I left (...) I don't like to be where there's too much people talking (...) Then, you know, I don't want to tell the story of my life anymore. I put it in Jesus hands and now he settles things for me."

Other CT attenders with whom I spoke during quantitative assessments mentioned the same reason for not returning to sessions: *"If I returned, I would speak about problems and feel sad again"* (R13, ♀, 59 yrs old).

6.2.1.3.2 Size of CT groups

A few attenders pointed to the fact that the group they attended (the same one) was too large. One of them pointed to the fact that the facilitator could not give attention to all: *"I didn't like it (CT). She didn't give attention to all. She only gave attention to one person."* (R14, ♀, 42 yrs old). This was the group that generated most of the

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recruitments for this research. The two sessions of this group I observed had 24 and 26 attenders each.

6.2.1.3.3 Privacy

Privacy was another issue mentioned by attenders. A minority of attenders said they did not feel comfortable to speak about intimate subjects with so many people or with people from their own community. One man, who had previously done individual psychotherapy, said: *"there are subjects that cannot be spoken in a group, it's got to be in individual therapy"* (R15, ♂, 45 yrs old).

6.2.2 INTERVIEWS WITH FACILITATORS

I undertook nine interviews with facilitators from eight different CT groups. The main subjects of these interviews were the possible effects of CT for attenders and the integration of CT within primary care. In addition to one facilitator from each of the five groups I observed and the two facilitators I had interviewed before the beginning of my fieldwork, I chose to interview two other facilitators. One of them was chosen because she had very long experience with CT and was a supervisor of other facilitators. The other was chosen because she had been a family doctor working with the Brazilian Family Health Programme since its inception. Some aspects of the professional background of facilitators are described in Table 5. Notably, all facilitators had some kind of previous experience working with groups, either professionally or in the course of doing voluntary work.

Table 5- Characteristics of CT facilitators

Facilitator	Professional background	Mental health background	Professional experience with groups	Non-professional experience with groups	Voluntary work (political, religious)	Number of weekly CT groups
1	Psychologist	Yes	Yes	No	No	1
2	Social worker	No	Yes	No	Yes	3
3	Pharmacy clerk	No	No	Yes	Yes	1
4	Psychologist	Yes	Yes	No	Yes	1
5	Social worker	Yes	Yes	No	Yes	3
6	Family doctor	No	Yes	No	Yes	1
7	Health visitor	No	No	Yes	Yes	1
8	Health visitor	No	No	Yes	Yes	1
9	Nurse	Yes	Yes	No	No	1

6.2.2.1 Effects of CT

In common with attenders, the facilitators reported that the main positive effects of CT were related to the beneficial consequences of hearing other people's stories and to helping others. The facilitators rarely reported any negative effects, though the lack of confidentiality was acknowledged by some. These themes are described below.

6.2.2.1.1 Learning about other people's problems

For the facilitators, as for attenders, contextualisation of attenders own problems was the most cited beneficial feature of CT:

"When they meet other people with problems, they reappraise their own problem. It ends up increasing their self-esteem." (F6) [1]

"I lost count of how many (CT) *sessions I did. But in every session there is someone, usually a newcomer, who spontaneously say: "my problems...I'm not the only one*

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[1] See Table 5 for details on facilitators' background.

with problems. Indeed, I realized there are bigger problems than mine. Therefore I leave this meeting feeling stronger, relieved." (F1)

For some facilitators, this relief was chiefly related to attenders feeling less guilty for their situation and their symptoms:

"First of all, I think people feel the support from others (...) We all make an effort to welcome that person, show her we accept her the ways she is (...) because it's all (the distress) *very much related to feeling guilty, isn't it?"* (F5)

"I think there's a tendency to look too much to our problems, to think "I wasn't lucky, I did something wrong". There's guilt...People ask: Why me? As if no one else had the same problem. I think CT alleviates that". (F1)

Facilitators also mentioned that attenders could be inspired by the example from other attenders:

"They think: I feel I'm so fragile. But there's this other person who is fragile too. And mine (problem) *is tiny compared to his. I'll get over it. How did he, who is also fragile, get over a much bigger problem?"* (F2)

6.2.2.1.2 Being with other people

Facilitators confirmed the reports by attenders that CT groups offered them a welcoming and supportive environment. One of the aspects in which this was evident was that many facilitators asked which people had their birthdays in the days surrounding sessions. They then asked the group to sing a birthday song. F5 recalled the reaction of one attender to this. It concurs with the idea mentioned above (see R9 in 2.1.2.2) that groups might sometimes substitute the support families do not give.

"We sung happy birthday. She (attender) *was touched. She said: nobody remembered my birthday at home, but here you did"*

6.2.2.1.2 Helping others

The facilitators explained that an objective of CT was to stimulate attenders to assume within the group roles and responsibilities other than the sick one:

"People can express themselves in many ways during sessions, not only speaking about their problems but singing, telling jokes or a story (...) I think of Mr. Y, he used to play the guitar alone in his room. His daughters didn't like it, his wife didn't like it, nobody was interested in his music. Now he plays for the group, and they like it. So this is the way of expressing his healthy side, not the distress. It's his healthy side. It makes him feel stronger (...) He's not just the person who suffers, not just the person who needs help, but also someone who can help others, despite his distress" (F4).

Regular attenders ended up helping facilitators with the sessions:

"Attenders themselves chose to perform some tasks related to CT. It was spontaneous. For example, tide up the room, arrange chairs. It's X who does that, he arrives earlier and does that (...) Another one plays the guitar. I got a notebook with songs to give him, to stimulate him. We had others before. Before him there was a woman who used to sing (...) There's another attender who studied gymnastics, she used to lead the warm-up (at the beginning of sessions*)"* (F4)

6.2.2.2 Confidentiality

One facilitator reported noticing that for some attenders the lack of confidentiality was a problem: *"The group from clinic Z is now a community of neighbours. So one of the attenders said she was ashamed of having spoken so much (...) She did not return"* (F5)

6.2.2.3 Integration of CT within primary care

The facilitators reported a wide variation in the way CT groups were integrated within the primary care clinics to which they were attached. This related both to referral pathways and to follow up of CT attenders.

6.2.2.3.1 Referral to CT

In some cases CT had been integrated within primary care in that groups acted as a triage for anyone presenting with a psychological complaint to the clinic (F1 and F4)[2]. In these cases, the facilitators were experienced psychologists who were also supervisors of other CT facilitators. The other example of good integration was one group whose facilitator in addition to leading CT sessions participated in the triage of patients with psychological complaints in her/his clinic. Therefore, she/he could refer patients to the CT group. This professional was also highly experienced and had previously occupied managing positions in her/his region (F2).

In all other groups there was no explicit pathway for patient referral to CT. According to facilitators from these groups, only a few professionals from their clinics regularly referred patients to CT. With the exception of one family doctor (who referred many of her/his own patients to CT) all these facilitators had less senior positions than the other three mentioned above and complained about lower than expected attendance to their groups. Facilitators believed that low attendance rates were driven by reluctance on the part of their professional colleagues to refer people:

*"**(LG)** Now tell me about the difficulties regarding CT?*

* **(F7)** It's the resistance, resistance against CT. And what's worse is that it comes mostly from other professionals, not from the users of our clinic."*

They believed that this was because their colleagues did not take CT seriously and that this was secondary to a lack of opportunity to inform the primary care team about CT.

"(CT) was not seen as a new resource to be offered to patients. It was as if someone said: "X is now doing community therapy. If I like her I will refer patients to CT, if I don't like her I won't refer any patients! (...) Psychologists from my clinic didn't like

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[2] Primary care clinics in Sao Paulo usually have a triage to which all patients presenting with psychological complaints to the clinic's reception or referred to psychotherapy or psychological/psychiatric assessment by generalists are scheduled. Psychologists, sometimes with the help of social workers with mental health training, undertake these triages individually or, less frequently, with groups of patients. Based on this, they decide whom to refer to psychotherapy or psychiatric assessment.

CT. But the truth is they didn't know anything about it. I understand that people may not like it but there was no opportunity to present CT to them (...) There's no team meeting (at the clinic)" (F5)

The same facilitator felt that the resistance against CT lessened when she asked one of the psychologists if she could refer to psychotherapy a patient she had seen at CT, thus demonstrating her psychological credentials:

"Guess what helped to brake this reluctance (from professionals*)? There was a person in my group… I asked to speak with the psychologist about her. I said: CT won't be enough for this person, I would like to refer her to psychotherapy. I felt something changed (...) Then she* (the psychologist) *said: I will refer to CT some people"* (F5)

6.2.2.3.2 Clinical follow-up of CT attenders

Most facilitators reported that they did not routinely assess the mental health status of newcomers. I confirmed this during my observation of sessions. The exceptions were the groups that were also used as a triage mechanism. In one of these, the facilitator talked individually with every newcomer at the end of sessions. She referred some of them to individual psychotherapy (which she undertook herself); sometimes she combined brief individual psychotherapy with CT. On other occasions she referred attenders to psychiatrists.

"Those cases I perceive to be more severe I refer to individual care (...) usually one or two per session, sometimes none…" (F1)

 In the other group which was used as triage mechanism, newcomers were invited to come for individual evaluation only if *"**they** felt necessary"* (F4) after the session. In some cases, this facilitator took the initiative to assess attenders individually if she suspected that they might need additional help.

In all other groups, facilitators said that they occasionally approached attenders to discuss the need of additional treatment: *"It is rare to refer someone to another professional"* (F3).

6.2.3 OBSERVATION OF SESSIONS

I directly observed 14 complete sessions (each lasting 90-120 minutes) and 20 partial sessions (each lasting 30-60 minutes) of five different CT groups (four community groups and one clinic group). In the following paragraphs I describe situations I observed which relate to the themes raised by attenders and facilitators above.

6.2.3.1 Learn about other people's problems

There was plenty of opportunity during CT sessions for people to exchange experiences about life difficulties and stressful events. Most of the duration of sessions was reserved to people speaking about their problems. In the majority of sessions, many attenders participated telling their experiences. Attenders shared many experiences and were willing to disclose them even when they involved sensitive issues as domestic violence, having relatives involved with crime, or drug and alcohol abuse. However, I noticed that when sessions had less than 5-7 people (which happened twice in one of the groups I observed) the exchange of experiences between attenders were less significant and facilitators had to play a more active role. In another group I observed, some sessions were less focused on the exchange of experiences and more directed towards recreational aspects of CT (singing, telling jokes). This happened when the majority of the attenders were frequent ones who already knew each other well and usually did not seem to feel a necessity to speak about their distress.

6.2.3.2 Being with other people

In all groups I observed, recreational activities took place at the beginning and end of the sessions. These activities were led by facilitators and frequent attenders. Some of these "regulars", as facilitators called them, intervened frequently, making uplifting and humorous comments, telling jokes, singing, reading poetry or playing instruments. They also organized and catered for the frequent parties celebrating birthdays or religious holydays after sessions. Others almost never intervened but still came regularly. This was a common feature of the groups I observed.

The supportive atmosphere of CT groups was reflected in their effort to integrate people with disruptive behaviours. A few psychotic patients regularly attended some

groups I observed. There was a clear and apparently effective effort from attenders and facilitators to make them participate as normally as possible in sessions.

Physical contact was also a strategy used by facilitators to create this supportive atmosphere. All sessions ended with a routine that made attenders dance and hug each other. In one of the groups I observed, one health community agent offered short massages after sessions for those who were feeling more "stressed". There were always three or four people who asked for the massage.

6.2.3.3 Catharsis

It was a regular feature of the sessions I observed that facilitators introduced CT mainly as an opportunity people have to *"let it out"* and stop *"bottling up"* problems. Many facilitators used the same popular saying mentioned by Barreto in the session I described in Chapter Two: "when we are silent our body speaks, when we speak our body heals".

Some facilitators suggested that CT could be a more appropriate means to "let it out" compared with talking with close relations. One facilitator (F3) used the expression *"delivering the right letter to the wrong address"* during sessions to illustrate this. This concurs with the attender who said that she received support from CT that her family could not give her (R9; see section 2.1.2.2).

It was very frequent for people to cry when telling their stories during sessions. Facilitators expected and valued these moments. They spoke positively about displaying one's emotion to the group. In almost every occasion I witnessed such moments, someone would start singing a very well known Brazilian song which says: *"lean your head on my shoulder and cry, tell me what's hurting you…"*. Facilitators usually asked people to hold hands when singing this.

6.2.3.4 Helping others

Many of the regular attenders valued the opportunity to help others. In addition to the examples provided above, regular attenders often helped to explain the aims and rules of CT at the beginning of sessions and occasionally brought other attenders from their homes to the sessions.

All facilitators demonstrated the value they placed on the participation of attenders. They emphasized the importance it could have for other attenders; they thanked attenders for speaking, and they always mentioned some positive lesson they had learned from the stories told by attenders during the session.

6.2.3.5 Session's mood

I noticed differences in the mood of the five groups I observed. The use of music and humor made by facilitators and regular attenders helped to define the mood of a session. Two of the five groups I observed had a very active and upbeat group of regular users. The following example illustrates how these attenders helped to keep the session with a good mood. During one session a middle-aged woman was complaining about the difficulties of her marriage and her feeling of entrapment because she did not have the necessary material resources to leave her husband. An 80-year-old lady who had been coming to the group for more than a year told the woman: *"I had the same problem with my husband, but it eventually resolved. He died!"* The group laughed, including the woman who was complaining about her husband.

In one group I observed, attendance to sessions decreased significantly to the point when only a small number of regulars were present. In that particular case, these regulars were usually quiet (at least two of them had chronic severe mental disorders) and sometimes slept during sessions. The atmosphere was gloomy and newcomers, when present, seemed more uneasy to speak than in other groups.

6.3. DISCUSSION

6.3.1 SUMMARY OF RESULTS

Most CT attenders in this sample first attended sessions because of psychological complaints but a few were simply accompanying relatives. The majority of attenders reported positive effects from attending CT. Regular attenders reported more positive effects than those attending fewer sessions. Attenders and facilitators agreed that the main effect of CT was to allow a positive reappraisal of one's situation by learning

that other people had similar problems. Some attenders also mentioned the supportive effect of enjoying the company of people and the cathartic effect of speaking about one's problems. For a few attenders, particularly those who regularly attended sessions, the opportunity to help others was also believed to be beneficial. Negative effects of CT were mostly related to the perception that the mood of sessions was too gloomy and increased the distress of those attending. Very large groups were also criticized for not giving attenders enough opportunity to speak.

The integration of CT groups within primary care occurred where CT sessions were used as a triage mechanism for mental health attenders to clinics. Otherwise, facilitators reported that their colleagues did not recognize CT as an effective intervention for common mental disorders and this resulted in few referrals to groups. Most CT facilitators did not systematically assess the mental health of attenders and did not have opportunities to liaise with other professionals involved in their treatment.

6.3.2 METHODOLOGICAL ISSUES

The characteristics of CT attenders recruited to the qualitative component of the study were broadly similar to those of the larger quantitative sample. The difference in the proportion of community group attenders was not likely to compromise the generalizability of qualitative findings. The analysis of quantitative data did not reveal significant differences between attenders of community groups and clinic-based groups in terms of their socio-demographic characteristics and their outcomes. The qualitative sample also purposefully included around 50% of attenders who attended only one or two sessions to explore the views of those not willing to return to CT sessions as well as regular attenders.

I adopted a number of procedures to increase the validity of findings. During interviews, attenders were prompted to explore both positive and negative aspects of CT. For the analysis, I used in vivo codes to allow for the emergence of concepts not included in pre-conceived theoretical frameworks (Green, 1998). I also actively sought for and examined responses that countered my previous hypothesis about the effects of CT (Green and Britten, 1998). Furthermore I undertook data-source triangulation, comparing data from attenders and facilitators' interviews and from

observation, to provide a validity check and to increase the depth of analysis (Hammersley and Atkinson, 2007).

However, I was the only one to code and to analyse data. The triangulation of the coding and analysis with another researcher would have contributed to check the accuracy of hypothesis and raise issues I might have missed (Hammersley and Atkinson, 2007).

6.3.2.1 Interviews with attenders

The main methodological concern regarding the accounts of attenders (and facilitators) was the extent to which they reflected their experiences accurately. An interview can be considered as a social phenomenon in itself and the accounts given as constructions of one's experiences mediated by the desire to convey a particular message to the interviewer. Thus, interviews have been defined as "occasions for impression management on which both interviewers and informants seek to present themselves as competent and sane members of their community" (Murphy, 2001). The research assistant who undertook the interviews and I were both identified by attenders as people with a special interest on CT. It is therefore prudent to assume that CT attenders may have exaggerated the positive effects of CT and minimized its negative ones to convey an impression of competence in benefiting from the treatment that was offered to them. However, the focus in the analysis of these interviews was not the magnitude of CT's effects but their quality, i.e. what kind of effect was reported. Attenders may have exaggerated the intensity of effects but there is little reason to doubt the validity of their qualitative description. It can also be argued that the only way of exploring how CT is perceived to impact upon attenders' mental health is by asking them. Finally, the triangulation with facilitators' views and my observations of sessions, together with the theoretical discussion of CT and social support (see below) contributed to establish the plausibility of attenders' accounts.

6.3.2.2 Interviews with facilitators

The same issue concerned the validity of the accounts of CT facilitators and their performance during sessions I observed. They seemed particularly evasive when asked about negative aspects of CT, hence the limitation of my findings to this regard. I had previously met most of the facilitators before this research began when I was

coordinating the implementation of CT in Sao Paulo. On the one hand this was extremely helpful to gain access to the research sites but it could also influence them to give me a positive picture of the project I had initiated. I met facilitators frequently during the quantitative data collection and I systematically avoided conversations on the everyday politics of the Health Secretariat. By the time the interviews and observations took place I felt facilitators had got more used to my new outsider status. Still, in one of the five groups I observed, on two different occasions I perceived the facilitator was asking questions to attenders which were clearly motivated by me being there.

6.3.2.3 Observation of sessions

I believe my presence did not interfere significantly with the behaviour of attenders during the sessions I observed. Attenders did not seem to take much notice of me. This may have been because the groups were usually quite large (at least ten people). Some people approached me after the session asking about my work but no one expressed concern about the use I could make of my notes. In fact, they usually took the chance to express their opinions about the sessions, health care and other subjects.

6.3.3 COMPARISON WITH THE LITERATURE

6.3.3.1 Social support and the contextualization of distress

In the next paragraphs I discuss the views of attenders and facilitators on the effects of CT in relation with the hypothesis I made in Chapter Two of how CT can improve social support.

The most consistently reported effect of CT was the potential to reappraise one's problems more positively by learning that others have similar problems. Reappraising stressful life situations positively is one of the mechanisms by which social support is thought to improve mental health (Thoits, 1995). CT groups create the conditions for this by bringing together people with similar backgrounds and stimulating the exchange of experiences between them. There were indeed numerous examples of identification between attenders and some of them clearly reported how this made them reconsider their condition, particularly by alleviating feelings of guilt. It is possible, however, that for the more severely ill and/or for those with lower self-esteem, this effect was not sufficient to improve their mental health.

The opportunity of being with other people was another positive effect reported by attenders. The use of music and other "recreational" aspects of sessions and the physical interaction between attenders were a significant part of sessions and attenders frequently referred positively to them. Thus, CT groups seemed to be effective in creating a welcoming and supportive atmosphere that reassured and encouraged attenders. This is another feature of social support hypothesized to improve mental health.

Another aspect that is highlighted by the social support literature is the fact that "voluntary ties", such as those linking attenders during CT sessions, can be more supportive than obligatory ones (partner, relatives) (Helgeson, Gottlieb et al., 2000). A few attenders indeed mentioned how they found in groups a supportive atmosphere they could not find in their homes.

Finally, the possibility of giving support to peers is also hypothesized to have a positive effect on mental health (Gottlieb, Cohen et al., 2000). For some CT attenders, particularly those who had been attending sessions for many months, groups offered an opportunity to help others by their participation during sessions or by contributing more actively to the organization of groups itself.

Considering the three dimensions of social support mentioned in Chapter Two, the features of CT discussed above seem to have an effect on the emotional one (the other two being instrumental and informational support). The perceptions of attenders, corroborated by facilitators and my observation, were tightly related to the feelings of acceptance and esteem from others who define this emotional dimension of social support.

6.3.2.2 Catharsis

Catharsis is an element of many psychotherapies and has been defined as " a process that relieves tension and anxiety by expressing emotions" (Nichols and Zax, 1977). Nichols and Zax make the point that, although most psychotherapies regard the expression of emotions by patients to be a positive phenomenon, some psychotherapies might be more effective in inducing catharsis than others. They consider group therapy as a particularly powerful inducer of catharsis:

" A group member may learn that his feelings are acceptable not only to the therapist, but also to the whole group. He may learn that others in the groups may have had comparable experiences, and that they maintain similar reservoirs of suppressed feelings. Through identifying with other members, guilt over revealing certain emotional responses can be lessened. Groups also foster a certain amount of social pressure and provide modelling, which can facilitate catharsis, particularly if the leader so directs" (p. 66)

The features of group interactions described by Nichols and Zax as those that facilitate catharsis approximate the positive effects of CT as described by attenders. The supportive environment of CT groups and the opportunity to put one's problems and emotions in context (by expressing oneself and listening to others) create the conditions for the expression of emotions and the relief of anxiety and tension. In that sense, social support can be viewed as creating the conditions for catharsis. In addition, the emphasis given to speaking by facilitators and regular attenders and the frequent use of music also create a "social pressure" to induce the expression of emotions.

It is difficult to reliably quantify the impact of catharsis (or emotional disclosure, as some authors refer to). The literature pointing to potential benefits of emotional disclosure used mostly healthy subjects and measured proxies for physical health and psychological attitudes as outcomes. Its positive results did not extend to clinical populations (Littrell, 1998). A recent meta-analysis cast doubt on the strength of evidence for the beneficial effects of emotional disclosure. According to its authors, methodological difficulties in studies precluded concluding that emotional disclosure improved mental health (Meads and Nouwen, 2005). There are difficulties in defining when catharsis does occur and in how to disentangle the effects of catharsis from other elements of psychotherapy. Case-studies and clinical experience, on the other hand, seem to favour the hypothesis that emotional disclosure has beneficial effects for mental health (Nichols and Zax, 1977). Our data only allow the conclusion that CT was effective in promoting catharsis and that attenders perceived this as positive.

6.3.2.3 Social Capital

There was no evidence that CT increased trust within communities, civic participation, or the bonds between communities and health services (bonding social capital) as hypothesized in Chapter Two. I believe that differences between the context in which CT was originally developed by Barreto and the way it was used in Sao Paulo explain why such broader effects were not found. Barreto's work with CT groups in the community of Pirambu (Fortaleza) was inserted into a network of other community work initiatives. He acted as the organiser of many small projects that received the support of the NGO with which he was linked with. CT groups may have served as a hub where opportunities for community development were detected and stimulated, but other structures and many years were necessary to transform ideas into projects. In Sao Paulo, CT groups were linked to statutory health services rather than to organizations undertaking a broad spectrum of community work. Facilitators did not have the means to develop other projects. Thus, the hypothesis made by Barreto that CT might contribute to empower communities does not seem to be realistic where CT is used mostly as a mental health intervention linked to primary health care.

6.3.2.4 Integration of CT within primary care

A report prepared by the Health Secretariat of Sao Paulo in mid 2005 already mentioned that integration of CT within clinics was poor in many regions of the city (SMS-SP, 2005). I confirmed this assessment in two meetings held in 2006 bringing together most facilitators from the North and East regions of the city, where most CT groups were located. The main complaint at those meetings was on how the poor integration with other primary care professionals was compromising referrals to CT and thus the attendance of newcomers. Interviews with facilitators revealed that the integration of CT groups within primary care only occurred where CT was used as triage/waiting-list group as well as a therapeutic intervention or when the facilitator participated in the triage of mental health patients. The professional position and prestige of facilitators also seemed to play a role on how good they managed to integrate CT within their clinics. An additional aspect brought by the interviews, but ignored in reports and meetings discussing CT, was that very few facilitators systematically assessed the mental health of CT attenders. Most of them also had no opportunities to liaise with other professionals to discuss about patients in common.

In this sense, CT differed from studies on group interventions in primary care I reviewed in Chapter One. Two of the three group interventions I examined therein included group therapy in a multi-component package comprising individual clinical assessments, medication and systematic follow-up of patient's progress (Araya, Rojas et al., 2003; Rojas, Fritsch et al., 2007). Nothing of the kind was offered for attenders of CT. The study by Bolton et al did not offer any other treatment besides group therapy (Bolton, Bass et al., 2003). However, the main reason was that no other resources were available in the setting of that study, which is not true for Sao Paulo. The lack of integration of CT was due to fact that it was being used as a stand-alone intervention, disconnected from other therapeutic resources and apparently not trusted by many primary care professionals.

6.4 CONCLUSIONS

CT's effects correspond to the features of social support hypothesized to improve mental health. The supportive environment of CT groups and the opportunity to put one's problems and emotions in context (by expressing oneself and listening to others) also create the conditions for catharsis, a more unspecific feature of talk therapies. However, there was evidence that even attenders that appreciated the results of CT were conscious of its limitations. And the effects of catharsis on clinical populations are questionable.

This study also seems to concur with the reports that many CT groups have difficulties in integrating themselves within primary care.

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CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

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7.1 CONCLUSIONS

7.1.1 CT 'S EFFECT ON MENTAL HEALTH IN THIS STUDY WAS LIKELY TO BE NULL OR COMPARABLE TO NON SPECIFIC TREATMENTS

A single small observational study as this thesis cannot provide a definite conclusion on the effectiveness of CT for the methodological reasons already discussed. However, it is possible to conclude that the effect of CT on mental health of attenders followed in this study was likely to be null or comparable to that of unspecific treatments of CMD.

Although most attenders reported a positive experience of CT, which shows it is a generally acceptable intervention in the Brazilian context, a few also emphasized the limitation of its impact. CT groups I followed had low-adherence and this might have contributed to limit their effectiveness. A small proportion of attenders expressed criticisms commonly related to group interventions, including lack of confidentiality and limited opportunities to speak, which could also limit the acceptability and effectiveness of CT for a small group of patients.

7.1.2 CT HAS THE FEATURES OF A SUPPORT GROUP

The core features of CT valued by attenders consistently coincided with the theoretical mechanisms hypothesized to link social support to better mental health.

These are: contextualization of distress (allowing the reappraisal of difficulties) and a supportive environment (providing positive feedback and reassurance). This study contributes to understanding the mechanism through which this is achieved, from the perspectives of patients. Thus patients reported that CT promotes the exchange of life experiences, creates a welcoming environment where positive and uplifting activities are valued and stimulated, and involves patients actively in these activities. In addition, the supportive environment of CT groups probably facilitates catharsis, which attenders also mentioned as an effect of CT.

The fact that quantitative measures of perceived social support did not show significant change or an association with mental health change may be attributed to deficiencies in the measurement of the former. The MOS social support scale seems to be more adequate to measure support from close relations than the support provided by peers in a CT group (see discussion in Chapter Five, pg 146-148). Additionally, a "ceiling effect" of the scale in this sample possibly contributed to decreasing the magnitude of the change observed. Furthermore the study was not specifically powered to detect change in perceived social support and its association with mental health change.

Finally, both quantitative and qualitative data demonstrated that in our sample, CT, as delivered in the context of primary health care, was not capable of enhancing trust and civic participation (social capital) amongst its attenders.

7.1.3 MOST CT GROUPS HAD A LOW ATTENDANCE OF NEWCOMERS

Out of 59 CT groups I identified in Sao Paulo to select my research sample, most were excluded because they were unlikely to have a minimum of one newcomer per session. During the recruitment phase of my research I observed that only three of the twelve groups sampled had a minimum of one newcomer per session. In my interviews with facilitators and in CT-related meetings I attended, many facilitators reported difficulties in attracting newcomers to CT groups. Considering the high proportion of people with CMD attending primary care clinics in São Paulo (Mari, 1987; Iacoponi, 1990) three complementary hypotheses can be raised to explain the low attendance of CT groups. First, people with CMD attending clinics were not

detected, and thus did not receive any specific treatment for their mental health needs, including referral to CT groups. Studies done in Sao Paulo and other settings support this low-detection hypothesis (Iacoponi, 1990; Goldberg, Lecrubier et al., 1995; Menezes, Garcia et al., 2004). Second, people with CMD were detected but not referred to CT groups by professionals. This hypothesis has not been empirically verified, but my interviews revealed that many facilitators thought that the widespread discredit of CT by other primary care professionals prevented CT referrals. Third, people referred to CT groups did not attend sessions (although CT groups did not have waiting lists), either because they did not want to or because they could not do so. A few CT attenders, particularly those coming to few sessions, declared they did not want to discuss their problems in public and would prefer individual treatments. As CT sessions took place only once a week and during working hours, it is also possible that some individuals were unable to attend because of other activities.

7.1.4 MOST CT ATTENDERS WERE ALREADY ACCESSING HEALTH SERVICES

As it was routinely delivered in São Paulo, CT was reaching a socially deprived population in need of mental health care. However, 76% of CT users were already in contact with health services and the location of sessions, in-clinic or in the community, did not change significantly this proportion. CT facilitators and managers believed that allowing people to bypass primary care and attend CT sessions without referral would attract a **majority** of people previously not accessing health services. In addition, they believed that locating groups in community settings would further increase access to CT by marginalized groups or those who want to avoid the stigma of attending a mental health group in a health clinic.

There are two possible ways to explain why these expectations were not confirmed. The first one is that most people in need of mental health care were already accessing health services. A recent population study in Sao Paulo does not favour this hypothesis (Andrade, Viana et al., 2007). The second one is that CT is no better than traditional primary care interventions in reaching those unable or unwilling to access health care. Thus, the open access policy and locating CT groups in community settings did not increase access as much as facilitators and managers expected.

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A population study would be necessary to ascertain how effective CT is in reaching people unable or unwilling to access traditional primary care services. Although no such data are available, my research allows the conclusion that people benefiting from CT were mostly those already accessing health services and that locating groups in community settings does not increase *per se* the access of those unable or unwilling to attend traditional primary care services.

7.1.5 MOST CT GROUPS LACK INTEGRATION WITHIN PRIMARY CARE CLINICS

Most CT facilitators did not systematically liaise with other primary care professionals to coordinate the mental health care of CT attenders. Although CT facilitators and primary care professionals were oriented by managers to do so, no particular scheme (i.e. regular meetings, protocols) was devised to promote this liaison. Indeed most facilitators did not systematically assess the mental health of attenders. Considering that one in three CT attenders came to sessions without a referral (i.e. their mental health status was unknown) attenders who could benefit from medication or other interventions went unrecognized. Managers and most facilitators overlooked the necessity to assess the mental health of self-referred CT attenders.

7.1.6 GENERALIZABILITY OF CONCLUSIONS

I believe conclusions related to the effects of CT can be reasonably extended to other groups in São Paulo, and possibly in other settings where CT is delivered within primary health care. It is likely, however, that negative aspects of CT were underestimated because I selected the most successful CT groups in terms of attracting attenders in Sao Paulo.

Conclusions concerning the attendance of newcomers, their profile in terms of previous heath contacts and the integration of CT within primary care are more sensitive to the specific context of each local health system and primary care clinic. This sample had itself a significant variation amongst CT groups in terms of attendance of newcomers and integration within primary care clinics.

7.2 RECOMMENDATIONS

CT groups are now established in the Brazilian National Health System and the Department of Primary Care from the Ministry of Health is investing in the training of more facilitators. CT's appeal to primary care managers has helped to attract political support and funding to mental health initiatives in primary care.

Furthermore, at the end of 2008, the Ministry of Health devised a scheme to finance multi-professional teams to give support to Family Health Teams in areas such as mental health. This scheme is being rolled out nationally and in the city of Sao Paulo alone one thousand professionals have already been hired. However, priorities and programmes to be performed by these teams are yet to be developed. Similarly. the cost-effectiveness of this "enhanced primary care" has not been tested.

It is within this context that recommendations for research and policy are discussed below.

7.2.1 RESEARCH

7.2.1.1 Evaluate CT in a randomized clinical trial

As already mentioned, one small observational research project such as this does not provide sufficient evidence of effectiveness, not least because observational analyses are limited in their ability to draw causal inferences. Despite the support for CT amongst policy makers and health professionals in Brazil, a randomized controlled study design is ideally required to evaluate CT's effectiveness.

The time is ripe to evaluate novel mental health interventions for CMD. In the UK, NICE 2009 update of its guidance on depression points to the importance of evaluating psychotherapeutic interventions. According to NICE, cognitive behavioural therapies (CBT) have the largest evidence base amongst psychotherapies, but they are not effective for everyone. Based on this fact, NICE recommended the

evaluation of psychotherapeutic techniques coming from theoretical models distinct from CBT. In the British context, NICE advocated for the evaluation of brief individual psychotherapy based on psychodynamic principles, because of its historical importance in the NHS and the lack of a solid evidence base (National Institute for Health and Clinical Excellence, 2009).

Psychodynamic therapies are not relevant in the context of the Brazilian National Health System. But community therapy is increasingly gaining support amongst policy makers in Brazil, not least because it can be scaled up even where specialized mental health professionals are lacking. Thus, it is important to establish whether CT is effective and should continue to be rolled out in Brazil.

NICE research recommendations could help to guide the design of such a study. Because CBT is a well-established effective treatment for depression, NICE recommends that RCTs of novel treatments should use CBT as a control group. Thus, one option would be to conduct a randomized controlled trial of CT versus group CBT for depressed patients. The trial should include a cost-effectiveness evaluation and have a minimum 6-months follow up period (ideally 12-18 months) (Araya, Flynn et al., 2006; National Institute for Health and Clinical Excellence, 2009). Even if blinding of research subjects is not possible in psychotherapeutic trials, blinding of researchers should be assured (Tansella, Thornicroft et al., 2006). The study should be powered to determine the presence or absence of a clinically significant response.

Research subjects should be recruited by screening people attending a primary care clinic for depression and randomising them to a CT or CBT group. Subjects in both groups would also receive the usual individual clinical care offered in the clinic by family doctors. Self-referrals of subjects to CT or CBT groups would not be allowed.

A particular concern of the study should be to standardize the training and supervision of facilitators and therapists. This is necessary to ensure that the interventions are both robust and generalizable (Tansella, Thornicroft et al., 2006; National Institute for Health and Clinical Excellence, 2009). Fidelity measures, as recording treatment sessions to be examined by intervention experts, could also be used to increase the generalizability of the study conclusions.

Another concern should be to address the low adherence to CT revealed by this thesis. To enhance adherence, attenders should be strongly advised to participate in a minimum number of sessions. No such minimum number has ever been determined for CT. Bolton et al's study using group interpersonal therapy fixed a minimum of 16 weekly sessions for their intervention (Bolton, Bass et al., 2003). In the absence of better evidence, 16 sessions could be used as a reference number for CT. In Brazil, health visitors from the Family Health Programme routinely visit all homes belonging to their micro-area every month. These visits could be used for the outreach of those abandoning treatment in order to increase adherence. The attendance of patients would be monitored and the association between attendance and the mental health outcome would be examined in the analysis. Attendance to CT sessions should remain unlimited (i.e. patients can still attend when they recover), following the conclusions of Bass et al discussed in the First Chapter (Bass, Neugebauer et al., 2006).

7.2.1.2 Evaluate social support interventions measuring both social support and mental health

Observational studies and theoretical papers have hypothesized that social support can be a mediator of mental health[1]. This hypothesis has not yet been confirmed by experimental studies. In order to test that hypothesis, future RCTs evaluating social support interventions for mental health should measure **both** perceived social support and mental health with validated instruments. By measuring both outcomes it would be possible to determine: (1) if these interventions can improve perceived social support, (2) if change in perceived social support is associated with mental health change. Such studies should, therefore, be adequately powered to show a possible association between mental health and perceived social support outcomes.

Particularly regarding group social support interventions, there is a need to develop and validate instruments capable of assessing the kind of support likely to be provided by these groups, i. e.: support from co-attenders of self-help/peer-support groups.

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[1] i.e.: Social support could be in a causal pathway from independent variables (gender, social determinants, genetics, stressful life events) to a dependent variable (mental health).

Such instruments would have to include questions explicitly probing peer support and not only close family support.

7.2.2 POLICY AND PRACTICE

The expansion of CT in the National Health Service in Brazil continues despite the fact that there is no evidence of its effectiveness in terms of mental health improvement. The conclusions of my study are unlikely to radically change this situation, i.e.: established CT groups and on-going training programmes are unlikely to be suspended. As previously mentioned, the support given to CT by policy makers is indeed an opportunity to advance mental health policies in primary care. In this sense, a suspension of further expansions and an improvement for the existing programme could be suggested.

Although established schemes are unlikely to be suspended, it should be suggested to policy makers that continuing the expansion of CT training programmes could expose this policy to strong criticism due to the opportunity costs of investing in an intervention which lacks effectiveness evidence. The only evidence available until now comes from this thesis and is not favourable to CT. Furthermore, there is also the risk that the spreading of CT in the National Health Service may itself have a negative impact on the ability to gather research evidence in the future because of the difficulty in avoiding contamination of control groups (Sowden and Raine, 2008).

Policy makers should therefore be advised to suspend further expansions of CT training programmes. Investment should be directed to a limited pilot programme to be evaluated according to the RCT design discussed above.

Furthermore, considering the significant number of people already attending CT groups throughout the Brazilian National Health Service, a few initiatives could contribute to immediately improve one negative aspect of CT unveiled by this study. Self-attenders to CT groups do not have their mental health routinely assessed during or after CT sessions. Most of them are not referred to medical care for further assessments. Missing out severe and life-threatening cases of mental disorders

because CT self-referrers do not have their mental health systematically assessed is unacceptable, particularly if we consider that these users might not look for additional care if they believe they are already being treated.

One solution that could be immediately implemented is to combine CT sessions with the existing triage sessions for people presenting with mental health complaints to primary care clinics. Triage could be performed just after CT sessions and in the same location. All first-time CT self-referrers would go through triage. This would ensure that all self-referrers would have their mental health evaluated and would be referred to specialist care when needed. Similarly, all those referred to mental health triage by family health teams would be able to experiment participating in one CT session just before triage. Thus they would have immediate access to a support group while waiting for an appointment with a mental health specialist.

Clinics' managers could be made responsible for coordinating the work of CT facilitators and mental health professionals (often the same person) to arrange for these triage-CT meetings. This strategy would not require additional resources, only the coordination of existing ones.

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ANNEX I

SEARCH STRATEGIES FOR THE SYSTEMATIC REVIEW OF CHAPTER ONE

DATABASE: MEDLINE (1966-2005)

Terms in #1 were taken from the CCDAN list of terms excluding diagnosis not considered as common mental disorders (eating disorders, psychotic depression etc) (CCDAN 2005).

#	Search History	Results
1	exp adjustment disorders/ or anxiety disorders/ or agoraphobia/ or neurocirculatory asthenia/ or panic disorder/ or phobic disorders/ or stress disorders, traumatic/ or dissociative disorders/ or depressive disorder/ or neurotic disorders/ or somatoform disorders/	73049
2	affective symptoms/ or stress, psychological/	54860
3	counseling/ or directive counseling/	17920
4	psychotherapy/ or behavior therapy/ or crisis intervention/ or nondirective therapy/ or psychoanalytic therapy/ or psychotherapeutic processes/ or psychotherapy, brief/ or psychotherapy, multiple/ or psychotherapy, rational-emotive/ or reality therapy/ or socioenvironmental therapy/	57650
5	psychotherapy, group/ or psychodrama/ or sensitivity training groups/	8929
6	1 or 2	124459
7	3 or 4 or 5	80224
8	6 and 7	10774
9	Developing Countries/	43455
10	exp africa/ or exp caribbean region/ or exp central america/ or exp latin america/ or mexico/ or exp south america/ or exp asia/ or exp atlantic islands/ or exp europe, eastern/ or exp indian ocean islands/ or exp pacific islands/	546957
11	9 or 10	561721
12	8 and 11	256
13	limit 12 to "all adult (19 plus years)"	**140**

DATABASE: EMBASE (1980-2005)

For terms in #1 and #2 we have expanded on what was found in Bowers et al 2002 (Bower, Rowland et al. 2002). Terms in #4 were taken from the CCDAN list of terms excluding diagnosis not considered as common mental disorders (eating disorders, psychotic depression etc).

#	Search History	Results
1	counseling/ or directive counseling/ or patient counseling/ or patient guidance/	20461
2	psychotherapy/ or art therapy/ or assertive training/ or autogenic training/ or aversion therapy/ or balint group/ or behavior modification/ or behavior therapy/ or cognitive therapy/ or gestalt therapy/ or group therapy/ or milieu therapy/ or music therapy/ or play therapy/ or psychodrama/ or relaxation training/ or role playing/ or sociotherapy/ or therapeutic community/	51821
3	1 or 2	69909
4	adjustment disorder/ or emotional disorder/ or psychotrauma/ or anxiety disorder/ or dissociative disorder/ or affective neurosis/ or major affective disorder/ or minor affective disorder/ or depression/ or neurosis/ or psychosomatic disorder/	108486
5	3 and 4	10473
6	limit 5 to (human and adult <18 to 64 years>)	3483
7	exp africa/ or exp asia/ or exp eastern europe/ or exp oceanic regions/ or mexico/ or exp "south and central america"/	207818
8	developing country/	15083
9	7 or 8	217604
10	6 and 9	**98**

DATABASE: PSYCINFO (1872-2005)

1= exp anxiety disorders or exp affective disturbances/ or exp major depression/ or exp neurosis/ or exp neurasthenic neurosis/ or exp neurotic depressive reaction/ or exp traumatic neurosis/ or exp "depression (emotion)"/ or exp dysthymic disorder/ or exp anaclitic depression/ or exp endogenous depression/ or exp involutional depression/ or exp postpartum depression/ or exp reactive depression/ or exp recurrent depression/ or exp adjustment disorders/ or exp coping behavior/ or exp emotional adjustment/ or exp emotional trauma/ or exp occupational adjustment/ or exp posttraumatic stress disorder/ or exp social adjustment/ or exp stress/ or exp stress reactions/ or exp panic disorder/ or exp phobias/ or exp separation anxiety/ or exp anxiety/ or exp performance or exp social anxiety/ or exp panic/ or exp agoraphobia/ or exp social phobia/ or exp conversion neurosis/ or exp hypochondriasis/ or exp psychosomatic disorders/ or exp somatoform pain disorder/ or exp somatization/ or exp hysteria/ or exp hysterical paralysis/ or exp hysterical personality/ or exp chronic fatigue syndrome/ or exp psychological stress/

2=(explode "Consciousness-Raising-Groups" in MJ,MN) or (explode "Group-Counseling" in MJ,MN) or (explode "Group-Discussion" in MJ,MN) or (explode "Group-Problem-Solving" in MJ,MN) or (explode "Group-Psychotherapy" in MJ,MN) or (explode "Social-Groups" in MJ,MN)) or ((explode "Social-Capital" in MJ,MN) or (explode "Social-Networks" in MJ,MN) or (explode "Social-Support" in MJ,MN) or (explode "Support-Groups-+" in MJ,MN)

3= (LO:PSYI = AFRICA) or (LO:PSYI = HAITI) or (LO:PSYI = HONDURAS) or (LO:PSYI = HONG-KONG) or (LO:PSYI = HUNGARY) or (LO:PSYI = INDIA) or (LO:PSYI = INDONESIA) or (LO:PSYI = IRAN) or (LO:PSYI = IRAQ) or (LO:PSYI = ISRAEL) or (LO:PSYI = IVORY-COAST) or (LO:PSYI = JAMAICA) or (LO:PSYI = JORDAN) or (LO:PSYI = KAZAKHSTAN) or (LO:PSYI = KENYA) or (LO:PSYI = KIRIBATI) or (LO:PSYI = KOREA) or (LO:PSYI = KUWAIT) or (LO:PSYI = KYRGYSTAN) or (LO:PSYI = LAOS) or (LO:PSYI = LATVIA) or (LO:PSYI = LEBANON) or (LO:PSYI = LESOTHO) or (LO:PSYI = LIBERIA) or (LO:PSYI = LIBYA) or (LO:PSYI = LITHUANIA) or (LO:PSYI = MACAO) or (LO:PSYI = MACAU) or (LO:PSYI = MACEDONIA) or (LO:PSYI = MACEDONIA-FORMER-YUGOSLAV-REP-OF) or (LO:PSYI = MADAGASCAR) or (LO:PSYI = MALAWI) or (LO:PSYI = MALAYSIA) or (LO:PSYI = MALDIVES) or (LO:PSYI = MALI) or (LO:PSYI = MAURITANIA) or (LO:PSYI = MAURITIUS) or (LO:PSYI = MAYOTTE) or (LO:PSYI = MEXICO) or (LO:PSYI = MIDDLE-EAST) or (LO:PSYI = MOLDOVA) or (LO:PSYI = MONGOLIA) or (LO:PSYI = MONTSERRAT) or (LO:PSYI = MOROCCO) or (LO:PSYI = MOZAMBIQUE) or (LO:PSYI = MYANMAR) or (LO:PSYI = NAMIBIA) or (LO:PSYI = NEPAL) or (LO:PSYI = NICARAGUA) or (LO:PSYI = NIGER) or (LO:PSYI = NIGERIA) or (LO:PSYI = NORTH-KOREA) or (LO:PSYI = NORTH-VIETNAM) or (LO:PSYI = OMAN) or (LO:PSYI = PAKISTAN) or (LO:PSYI = PALAU) or (LO:PSYI = PALESTINE) or (LO:PSYI = PANAMA) or (LO:PSYI = PAPUA-NEW-GUINEA) or (LO:PSYI = PARAGUAY) or (LO:PSYI = PERU) or (LO:PSYI = PHILIPPINES) or (LO:PSYI = POLAND) or (LO:PSYI = PUERTO-RICO) or (LO:PSYI = QATAR) or (LO:PSYI = REPUBLIC-OF-CONGO) or (LO:PSYI = REUNION) or (LO:PSYI = ROMANIA) or (LO:PSYI = RUSSIA) or (LO:PSYI = RWANDA) or (LO:PSYI = SAMOA) or (LO:PSYI = SAO-TOME-AND-PRINCIPE) or (LO:PSYI = SAUDI-ARABIA) or (LO:PSYI = SENEGAL) or (LO:PSYI = SERBIA-AND-MONTENEGRO) or (LO:PSYI = SERBIA-MONTENEGRO) or (LO:PSYI = SEYCHELLES) or (LO:PSYI = SIERRA-LEONE) or (LO:PSYI = SINGAPORE) or (LO:PSYI = SLOVAK-REPUBLIC) or (LO:PSYI = SLOVAKIA) or (LO:PSYI = SLOVENIA) or (LO:PSYI = SOMALIA) or (LO:PSYI = SOUTH-AFRICA) or (LO:PSYI = SOUTH-AMERICA) or (LO:PSYI = SOUTH-KOREA) or (LO:PSYI = SRI-LANKA) or (LO:PSYI = SUDAN) or (LO:PSYI = SURINAM) or (LO:PSYI = SURINAME) or (LO:PSYI = SWAZILAND) or (LO:PSYI = SYRIA) or (LO:PSYI = TAIWAN) or (LO:PSYI = TAJIKISTAN) or (LO:PSYI = TANZANIA) or (LO:PSYI = THAILAND) or (LO:PSYI = TIBET) or (LO:PSYI = TOGO) or (LO:PSYI = TOKELAU) or (LO:PSYI = TONGA) or (LO:PSYI = TRINIDAD-AND-TOBAGO) or (LO:PSYI = TUNISIA) or (LO:PSYI = TURKEY) or (LO:PSYI = TURKMENISTAN) or (LO:PSYI = TURKS-AND-CAICOS-ISLANDS) or (LO:PSYI = TUVALU) or (LO:PSYI = UGANDA) or (LO:PSYI = UKRAINE) or (LO:PSYI = UNITED-ARAB-EMIRATES) or (LO:PSYI = URUGUAY) or (LO:PSYI = USSR) or (LO:PSYI = UZBEKISTAN) or (LO:PSYI = VANUATU) or (LO:PSYI = VENEZUELA) or (LO:PSYI = VIETNAM) or (LO:PSYI = WEST-BANK) or (LO:PSYI = WEST-INDIES) or (LO:PSYI = YEMEN) or (LO:PSYI = YUGOSLAVIA) or (LO:PSYI = ZAMBIA) or (LO:PSYI = ZIMBABWE)

4= ((PO:PSYI = HUMAN) and (PO:PSYI = OUTPATIENT)) and (AG:PSYI = ADULTHOOD)

5= 1 and 2 and 3 and 4

RESULTS= 113

DATABASE: WEB OF KNOWLEDGE (1981-2005)

Because of the limitations of the searching software, the search had to use textual words. I thought that restricting by country name could in this case be inappropriate, as those are not always mentioned in the titles or abstracts of articles. On the other hand, without this restriction, the number of results was too high. I chose to limit the number of results by including a restriction of setting (primary care) and of group therapy, which I had not done for the other databases. Still, the number of results was bigger than for the other databases.

#	Search History	Results
1	TS=(depress* OR anxi* OR psychoso* OR psychosso* OR somat*)	>100,000
2	TS=(therap* OR psychotherap* OR psychol OR counsel*)	>100,000
3	TS=(primary care OR primary health care OR primary-health-care OR family practice OR general practice)	44,592
4	TS=(therap* OR psychotherap* OR psychol OR counsel*) AND TS=(primary care OR primary health care OR primary-health-care OR family practice OR general practice) AND TS=(depress* OR anxi* OR psychoso* OR psychosso* OR somat*)	1575
5	TS=(group)AND TS=(therap* OR psychotherap* OR psychol OR counsel*) AND TS=(primary care OR primary health care OR primary-health-care OR family practice OR general practice)	1482
6	TS=(group)AND TS=(therap* OR psychotherap* OR psychol OR counsel* OR psychosocial) AND TS=(primary care OR primary health care OR primary-health-care OR family practice OR general practice) AND TS=(depress* OR anxi* OR psychoso* OR psychosso* OR somat* OR emotional OR distress)	**528**

DocType=All document types; Language=All languages; Database(s)=SCI-EXPANDED, SSCI, A&HCI; Timespan=1981-2005
TS=Topic

DATABASE: COCHRANE

The Cochrane Database was searched using a list of MeSH terms for diagnosis or symptoms of mental ill-health or common mental disorders. Those were combined with MeSH terms "psychotherapy", "counseling" and "social support" yielding 1385 hits. Those were them combined with a list of countries in the MeSH terms that excluded western Europe, the US, Australia and New Zealand. There were no results matching this strategy. I then decided to check for the possibility of missed information by viewing all the results of the country search alone, without any other restriction. Out of 292 results, only 39 were from the Cochrane Central Register of Controlled Trials. Most results (218) were Cochrane reviews that included one or more of these countries. But none of them met the inclusion criteria.

#	Search History	Results
1	**MeSH descriptor** Psychotherapy **explode all trees in** MeSH products	6291
2	**MeSH descriptor** Adjustment Disorders**, this term only in** MeSH products	163
3	**MeSH descriptor** Dissociative Disorders**, this term only in** MeSH products	25
4	**MeSH descriptor** Anxiety Disorders**, this term only in** MeSH products	980
5	**MeSH descriptor** Depressive Disorder**, this term only in** MeSH products	3144
6	**MeSH descriptor** Neurotic Disorders**, this term only in** MeSH products	270
7	**MeSH descriptor** Somatoform Disorders**, this term only in** MeSH products	134
8	**MeSH descriptor** Social Support**, this term only in** MeSH products	835
9	**((#1 OR #8 OR #27) AND (#2 OR #3 OR #4 OR #5 OR #6 OR #7 OR 8# OR #10 OR #11 OR #12 OR 13#))**	1385
10	**MeSH descriptor** Stress, Psychological**, this term only in** MeSH products	1436
11	**MeSH descriptor** Affective Symptoms**, this term only in** MeSH products	201
12	**MeSH descriptor** Depression**, this term only in** MeSH products	2396
13	**MeSH descriptor** Anxiety**, this term only in** MeSH products	2309
15	**((#1 OR #8) AND (#2 OR #3 OR #4 OR (#5 AND or#6) OR #7))**	240
16	**MeSH descriptor** Caribbean Region**, this term only in** MeSH products	15
17	**MeSH descriptor** Central America**, this term only in** MeSH products	5
18	**MeSH descriptor** Latin America**, this term only in** MeSH products	37
19	**MeSH descriptor** Mexico**, this term only in** MeSH products	199
20	**MeSH descriptor** South America**, this term only in** MeSH products	17
21	**MeSH descriptor** Africa**, this term only in** MeSH products	49
22	**MeSH descriptor** Asia**, this term only in** MeSH products	58
23	**MeSH descriptor** Europe, Eastern**, this term only in** MeSH products	7
24	**MeSH descriptor** Indian Ocean Islands**, this term only in** MeSH products	1
25	**(#16 OR #17 OR #18 OR 19# OR 20# OR 21# OR 22# OR 23# OR 24#)**	**292**
26	**(#9 AND 25#)**	0

DATABASE: LILACS

The searching software of this database allowed the combination of a maximum of 3 terms per search. Also, individual searches cannot be combined. For this reason I used a completely different search strategy. An initial search for "primary care" yielded 2650 results. The inclusion of "primary health care" or "primary health-care" did not change the result. I then decided to combine "primary care" with different terms related to common mental disorders and psychotherapy, as shown in the table below. I manually searched all results from the eight searches performed.

#	Search history	Results
1	Primary care and mental	182
2	Primary care and depressive or depression	31
3	Primary care and anxious or anxiety	12
4	Primary care and somatoform or somatization	2
5	Primary care and neurosis or neurotic	21
6	Primary care and psychiatry or psychiatric	37
7	Primary care and psychology	50
8	Primary care and psychotherapy	14

DATABASE: ELDIS

As the initial search using "mental health" as a topic term resulted in only 100 results, all the results were examined.

ADDITIONAL SEARCH

An additional search for the textual terms "common mental disorder*" or "minor psychiatric morbidity" or "mental ill*health" was performed for the principal databases. Although the results were very relevant to the general subject of mental health in primary care, the majority of studies were epidemiological ones, including a sizeable number of studies from developing countries. Those evaluating interventions were mainly focused on individual treatments. It is interesting to notice that the only articles selected for reading with this strategy were the two most relevant ones for the

analysis (Araya et al 2003; Bolton et al 2003). The results for each database are presented below:

Database	Results
Medline	138
Embase	130
Psycinfo	138
Web of Knowledge	414
ELDIS	17
Sub-total	837
Duplicates	288
Total	**549**

ANNEX II

QUALITY ASSESSMENT OF STUDIES SELECTED BY THE SYSTEMATIC REVIEW OF CHAPTER ONE

The methodological quality of the three selected articles was assessed with the help of an instrument developed by the CCDAN and adapted by Bower et al (Bower, Rowland et al. 2002) for the specificities of studies evaluating psychotherapeutic interventions in PC (see below for details).

Quality assessment- CCDAN quality rating scale

Items	Araya	Bolton	Rojas
1. Objectives			
0= objectives unclear	2	2	2
1= objectives clear but main outcome not a priori			
2= objectives clear and main outcome a priori			
2. Sample size			
0= >50 per group	2	2	2
1= 51-100 per group			
2= <100 per group			
3. Duration of trial and follow-up			
0= <3 months	1	2	1
1= >3 months and <6 months			
2= >6 months			
4. Power			
0= not reported	2	2	2
1= mentioned without details			
2= details of calculation provided			
5. Method of allocation			
0= unrandomised and likely to be biased	2	2	2
1= partial or quasi-randomised with bias possible			
2= randomised allocation			
6. Concealment			
0= not done or not reported	2	2	2
1= partial concealment reported			
2= done adequately			
7. Description of treatment			
0= main treatments not clearly described	2	2	2
1= inadequate details of main or adjunctive treat.			
2= full details of main or adjunctive treatments			
8. Blinding of subjects **(NA)**			
0 = not done	----	----	----
1 = done, but no test of blind			
2 = done and integrity of blind tested			
9. Source of subjects, representativeness of sample			
0= source of subjects not described	2	2	2
1= source of subjects but unrepresentative			
2= source of subjects plus representative sample			
10. Diagnostic/inclusion criteria			
0= none	2	2	2
1= diagnostic criteria or clear inclusion criteria			
2= diagnostic crit. and specification of severity			

Items	Araya	Bolton/Bass	Rojas

11. Record of exclusion criteria, exclusions, refusals
    0= criteria and number not reported
    1= criteria or number not reported
    2= criteria and number reported
	2	2	2

12. Description of sample demographics
    0= little/no info (only age/sex)
    1= basic details (marital status/ethnicity)
    2= full description (socio-economic status/clinical history)
	2	2	2

13. Blinding of assessor
    0 = not done
    1 = done but no test of blind
    2 = done and integrity of blind tested
	1	1	1

14. Compliance /attendance for therapy
    0= not assessed
    1= assessed for some experimental treatments
    2= assessed for all experimental treatments
	2	2	2

15. Details on side effects (NA)
    0 = inadequate details
    1 = recorded by group but details inadequate
    2 = full side effect profiles by group
	----	----	----

16. Record of number/reasons for withdrawal by group
    0= no info on withdrawals by group
    1= withdrawals by group without reason
    2= withdrawals and reason by group
	1	1	1

17. Outcome measures/use of validated instruments
    0= outcomes not described clearly
    1= some outcomes not clearly described
    2= outcomes described and valid/reliable
	2	2	2

18. Group comparability and adjustment in analysis
    0= no information on comparability
    1= some information with adjustment
    2= sufficient information with adjustment
	2	2	2

19. Inclusion of withdrawals in analysis (ITT)
    0= not included or reported
    1= withdrawals included by estimation of outcome
    2= withdr. followed up and included in analysis
	1	1	1

20. Results presented with data for re-analysis
    0= inadequate presentation
    1= adequate
    2= comprehensive
	2	2	2

21. Appropriate statistical analysis
    0= inappropriate
    1= mainly appropriate
    2= appropriate and comprehensive
	2	2	2

22. Conclusions justified
    0= no
    1= partially
    2= yes
	2	2	2

23. Declaration of interests
    0= No
    2= Yes
	2	2	2

TOTAL SCORE	**38**	**39**	**38**

ANNEX III

LITERATURE SEARCHES FOR SOCIAL SUPPORT AND SOCIAL CAPITAL INSTRUMENTS VALIDATED IN BRAZIL

Social support

- Search strategy: textual words "social support" AND "Brazil" (title, abstract, keywords). I restricted the search to the term "social support" and not included similar terms because being this a search for instruments, only those explicitly measuring the mainstream concept of social support interested me.

- Results: 64 hits from PubMed and 28 from Web of Knowledge (20 duplicates). After reading abstracts, four papers were retrieved for full text-examination, all of them mentioning instruments for social support measurement used in Brazil.

Social capital

- Search strategy: textual words "social capital" AND "Brazil" (title, abstract, keywords). I have restricted the search to the term "social capital" and not included similar terms because being this a search for instruments, only those explicitly measuring the mainstream concept of social capital interested me.

- Results: eight hits from Web of Knowledge and four from PubMed (three duplicates). None of the abstracts indicated a possible use of measurement instruments for social capital.

ADAPTATION OF THE SOCIAL CAPITAL INSTRUMENT (SASCAT)

1. METHODS

I have translated the original English version of SASCAT to Portuguese. It was then back translated by a bilingual social scientist (native English speaker) and both versions were compared for congruence. I have then followed the methods proposed by Bowden et al and used by De Silva et al for the validation of SASCAT in Vietnam and Peru (Bowden, Fox-Rushby et al. 2002; De Silva, Harpham et al. 2006).

Bowden et al have proposed a four-steps pre-testing process involving: first, establishing the intended meaning of each question (elaborate a small text explaining what each question aims to elicit); second, setting criteria to judge the appropriateness of questions; third, selecting methods to judge appropriateness and undertaking research; fourth, reviewing questions. The first step was already undertaken by De Silva who interviewed the author of the SASCAT and synthesized the meanings of each question. For the second step, I have adapted a list of criteria suggested by Bowden et al (see table 1 below).

Table 1- Criteria for judging the appropriateness of SASCAT questions

No negative questions, therefore no double negative answers
Level of language is not too high/old-fashioned/unusual
The question is simple and grammatically correct
The question is free from jargon
The same idea is not contained in another question
Captures current views
Reflects local issues
Meaning and interpretation of question is clear
The question makes sense to everyone
A "yes" is clear and unambiguous in meaning
A "no" is clear and unambiguous in meaning
Time period is clear
Conception of community/neighbourhood, active membership, community leaders, governmental organisation, support and trust is specified

Adapted from Bowden et al, 2002

The next step was to pilot the instrument in the field. I recruited a successive sample of 11 primary health care users in the waiting room of one clinic. I have asked them each of the questions of the SASCAT followed by a number of additional probes to clarify their understanding of these questions and the impression they caused (see table 2). The duration of the interviews was of 15 to 30 minutes. They were all recorded and transcribed verbatim.

Table 2- Examples of probe questions

Does this question make sense to you? (after asking one of SASCAT's questions)
  If yes,
    Could you explain what the question mean?
  If no,
    Could you explain what you thought of when you heard the question?
    Which word made it difficult to give an answer?
    When you heard that word, what did you think of?
    How should the question be in order to enable you to answer more easily?
    Or, is the question embarrassing? Why?

What do you understand by active membership of associations/ support/ trust? (give examples related to your neighbourhood)

How do you define your community/neighbourhood? What are its boundaries? Does it have a name? Which?

Which are the associations or groups of your community/neighbourhood?

Which governmental organisations you know of in your community/neighbourhood?

Who do you receive support from (individuals and organizations)?

Who would you identify as a leader in your community/neighbourhood? What is his/her role? Which organisation he/she belongs to?

Adapted from Tuan et al 2005 and Bowden et al, 2002

Answers concerning each of the questions from the SASCAT were grouped and analyzed. Meanings understood by respondents were compared to those established by the author of the questionnaire (De Silva, 2006). Below is a discussion of the main adaptations that were made to the original instrument for its use in the Brazilian context.

2. RESULTS

2.1 COMMUNITY AND NEIGHBOURHOOD

One of the questions asked was what word respondents used to describe the place or the area where they lived. The word *neighbourhood* (*bairro* in Portuguese) was clearly preferred to *community (comunidade*) for this purpose. One respondent said she would use *community* to refer to people going to the same church she attended.

Although the use of *community* referring to neighbourhood is widespread among people involved with social work and social movements, it did not seem to be part of the everyday talk in this sample. Interestingly, in Brazil the same people that use *community* to refer to deprived areas will prefer *neighbourhood* when referring to middle or upper class ones. I decided to keep the word meaning neighbourhood (*bairro*) in the final questionnaire

The geographical boundaries for neighbourhood varied from the respondents' street to block and administrative district. The exact geographical extension of the word was left to the respondents' discretion. As this study did not attempt to aggregate results at the community level the uncertainty on the geographical definitions had no implications for the analysis.

2.2 LIST OF LOCALLY RELEVANT GROUPS

People were asked to list groups in which they had an active participation in the 12 previous months. Following that they were shown a list of communitarian group activities based on the original SASCAT. They were stimulated to add any unmentioned groups they thought relevant. Participation in religious groups was by far the most common (a finding confirmed in the bigger sample). For that reason, and in order to make the understanding of the question easier by attaching it to an experience close to their lives, I put the religious groups as the first option listed. Some common religious groups' names were added in brackets to help their recalling. I have also substituted SASCAT's mention to credit cooperative, uncommon in Sao Paulo, for voluntary groups formed to build houses or small urbanization work (*mutirão*).

Some respondents mentioned incidentally during the interview their participation in groups they would not cite when directly asked. I assumed this was due to the difficulty of the question, one not being used to count the number of groups he or she takes part in. In the final questionnaire, I decided to produce a card with the names of all chosen groups and show it to respondents. The names of the groups were read aloud one by one by the interviewers.

2.3 EMOTIONAL SUPPORT

Similarly to the findings of De Silva et al (De Silva, 2006) I found respondents did not naturally consider emotional support as part of receiving support. It was decided that this question would also be printed in cards and forms of emotional support would be emphasized to interviewees.

2.4 TRUST AND SENSE OF FAIRNESS

The remaining questions on cognitive social capital, as well as civic participation, did not present difficulties in understanding.

Nevertheless, I observed some hesitation from interviewees to respond to the question on trust and sense of fairness (respectively: In general, can the majority of people in this community be trusted? Do you think the majority of people in this community would try to take advantage of you if they got the chance?). Some people would give very emphatic responses but others appeared uncomfortable to express a negative judgement about their neighbours. They would first try evasive answers like "I cannot speak for every one" and would only answer after some insistence. I found it was useful to emphasize that they were being asked about the majority and not the totality of people in their neighbourhood.

Finally, some wording changes were added to make the questions clearer and more fluent.

REFERENCE LIST

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