



Socio-economic impact of couple therapy
Tavistock Centre for Couple Relationships
(TCCR)
2012

Title	Socio-economic impact of couple therapy
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Contents

1. Executive Summary	4
2. Introduction	5
3. Couple therapy at TCCR	7
4. Evidence of socio-economic impact	13
4.1 The Labour Market	13
4.2 Physical and Mental Health	17
4.3 Criminal Justice Costs	22
4.4 Outcomes for Children	23
4.5 Value for money	27
5. Conclusion	30
References	32
Appendix 1: Approach	36
Appendix 2: Modelling assumptions	39
Appendix 3: Financial calculations	42

1. Executive Summary

TCCR's couple therapy services are cost-effective.

Over £4.50 of value is created for every £1 invested.

Government investment contributes one third to TCCR's total budget.

There is a considerable value for money for Government investment.

This assessment focused on the economic impact of two services offered at TCCR: couple psychotherapy and couple counselling services (collectively referred to as couple therapy). Our research is based on a statistical analysis of baseline and end of session service user data from 2009/2010, secondary research and a selection of interviews with TCCR staff to understand the socio-economic impact of the services. More specialist relationship therapies, such as psychosexual counselling, do not form part of the assessment.

There is a very small, but ever-widening, body of literature that attempts to define the economics of psychological treatment. Clearly, delivering economic savings is not the prime motivation for couple therapy, but in light of major health and social care reform, alongside wider reductions in public expenditure, this is an important and only partially evidenced question to consider.

TCCR's couple therapy services are cost-effective. We estimate that they **deliver benefits to the State of around £1,900,400** over a five to ten year period. Based on the total cost of delivering the services, this represents a **value of nearly four and a half times the initial investment** of £415,100 or **£4.58 for every £1 invested**. Furthermore, it should be noted that, of the £415,100 investment figure **only £134,000 of this figure came directly from Government sources**, demonstrating considerable value for money for Government investment (a return of £14.18 for every £1 invested)

The source of this impact is predominantly in avoided labour market costs and savings and from a reduction in healthcare service usage. Potential savings to the criminal justice system have also been identified, as well as future potential impact on children of couples and their life chances. It should be noted that there are a number of additional potential ripple effects from couple therapy that were beyond the scope of this study, and the existing literature, to capture.

There is a sector-wide challenge for TCCR to demonstrate its impact because family treatment research studies rarely include evaluation of economic impacts. To further demonstrate the socio-economic, unintended outcomes of its work, TCCR could consider recording economic outcomes systematically and longitudinally.

Importantly, the clinical evidence and secondary literature suggests that TCCR's work has a significant impact on the individual wellbeing of couples: improving resilience, co-operation, self-esteem and acceptance. To fully demonstrate its social and economic impact, TCCR may consider adopting a full social value analysis which would place a value on these improvements, bringing this core social value onto the balance sheet alongside its economic role.

2. Introduction

nef consulting (the consultancy arm of think tank new economics foundation) was appointed in November 2011 to prepare a socio-economic assessment for the Tavistock Centre for Couple Relationships (TCCR). The assessment focuses on the economic impact of two services offered at TCCR: couple psychotherapy and couple counselling services (collectively referred to as couple therapy). These services are charged for on a sliding scale, based on income levels. More specialist relationship therapies, such as psychosexual counselling, do not form part of the assessment.

TCCR was founded in 1948 and aims to ‘develop knowledge and understanding about the nature of adult partnerships and provide and develop services which support couples’ (The Tavistock Centre for Couple Relationships, 2011). Much of this work is driven by a fundamental belief in the value of the therapeutic relationship and its ability to improve the lives of both adults and children. TCCR has an internationally recognised reputation and is funded by research grants, training receipts, publications and clinical fees for its couple therapy services. In terms of the latter, in 2010, there were nearly 1,000 new registrations and some 750 distinct cases seen. Around 50% of cases involved families with children under 18 years of age (The Tavistock Centre for Couple Relationships, 2011).

Report Structure

Following this introduction we:

- Provide a brief explanation of the nature of couple psychotherapy and couple counselling services and how they are delivered. This describes the characteristics of those that use the service, how it is delivered, the problems users may be faced with and the change that occurs in the service users over the course of their treatment. This draws on interviews with TCCR staff.
- Chapter four sets out the socio-economic impact of the services, under four broad public policy areas: the labour market, the usage of physical and mental health services, criminal justice costs and outcomes for children. In each case, we quantify the impact of the couple psychotherapy and couple counselling services. They draw on analysis of TCCR’s own service user data, interviews with a small number of senior TCCR staff alongside a review of the research literature. Although prepared using SROI principles, the analysis focuses only on the economic return on investment, of interest to commissioners and government, although clearly achieving these outcomes is not the primary purpose of treatment.

The economic modelling approach used is consistent with HM Treasury's Green Book (2003).

- Chapter five presents our conclusions. Appendix 1 summarises our approach whilst Appendix 2 contains notes on the basis for our economic impact judgements and Appendices 3 present the assumptions and calculations used in the economic analysis.

3. Couple therapy at TCCR

Delivering economic savings is not the prime motivation for couple therapy...this is an important and only partially evidenced question to consider.

Introduction

This assessment focuses on the economic impact of two services offered at TCCR: couple psychotherapy and couple counselling services. This section provides an overview of the rationale and objectives for support of this nature, the challenges typically faced by those that access the services and a description of how the services are delivered. We then identify the outcomes the therapy delivers with individual service users, within a relationship and within a family. Based on consultation with TCCR, the analysis does not distinguish between the two services offered: both deliver comparable outcomes and economic impact.

An ever-widening body of research exists that analyses the psychological issues involved in treatment of this kind. There is a very small, but expanding, literature which attempts to define the economics of this type of support. Clearly, delivering economic savings is not the prime motivation for couple therapy, but in light of major health and social care reform, alongside wider reductions in public expenditure, this is an important and only partially evidenced question to consider.

This research is intended to progress that question, with specific reference to TCCR, but the messages clearly apply more generally. Couples' motivations for seeking support of this kind, their experiences of it, the nature, type and extent of problems they face and ultimately what changes as a consequence are diverse. So too are how these problems manifest themselves in day to day life, at what point, with what cost and for what duration. On this basis, we do not attempt to draw sweeping conclusions about the sector, but rather more specific observations of how this support delivers savings and avoids costs, across a range of public policy areas, highlighting areas of fruitful future research.

Couple characteristics and challenges

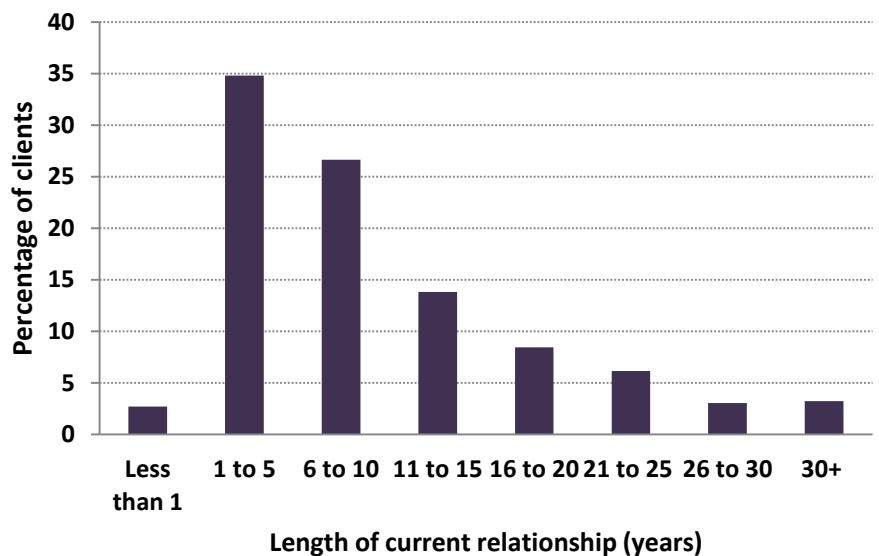
Couple therapy aims to reduce conflict between couples. It enables them to prioritise or reflect upon others, particularly each other and children, which ultimately reduces anger, tension and stress. TCCR's data demonstrates that married couples comprise around half of all clients (47%), co-habiting unmarried couples a further 30% and non-cohabiting or separated partners around 18%. Single individuals and those that are already divorced comprise around 3% of clients seen by TCCR staff.

Couple therapy does not necessarily prevent, nor does it advocate, divorce as an outcome of the therapy. Each couple will be supported

to identify the most appropriate outcome for them. Many couples may be seeking a divorce, but are unable to go through with it, for a range of reasons. Their problems may mean they are unable to reach agreement on even basic issues, be in protracted, open conflict – and hence be referred to TCCR by family courts or a solicitor, a GP or social worker, or via other therapists. It is reasonably common that they have accessed some form of other treatment before TCCR. However, many couples seek treatment of their own volition.

The most common age range of couples is between 36 and 45 years of age (37%); with a similar proportion aged between 26 and 35. Those over 46 form 24% of those seen. A small proportion of clients (around 4%) were aged between 18-25 years old. Around a third of couples seeking support had been together for between one and five years, but a substantial number had been together for longer. A similar proportion (35%) had been together for over ten years, (see for example figure 3.1).

Figure 3.1. Length of current relationship*



*Source: TCCR service user data

The issues may reflect general clinical problems: for example, an individual's inability to form and maintain relationships, depend on or be dependent on others; or guilt arising from an inability to commit. These problems are reflected in frequent breakdown or conflict. Many couples present 'adjustment difficulties'. Often these are motivated, at least partially, by standard life events that everyone finds stressful or challenging in some way but these combine with an existing insecurity or psychological issue. These underlying issues include, for example, a recent engagement, marriage (particularly early marriages: 'childhood sweethearts' who have only experienced a long term relationship with one person, from childhood), the birth of a baby (either the first one or the last one); children leaving home or going to school; moving house; divorce or the recent death of a parent or loved one.

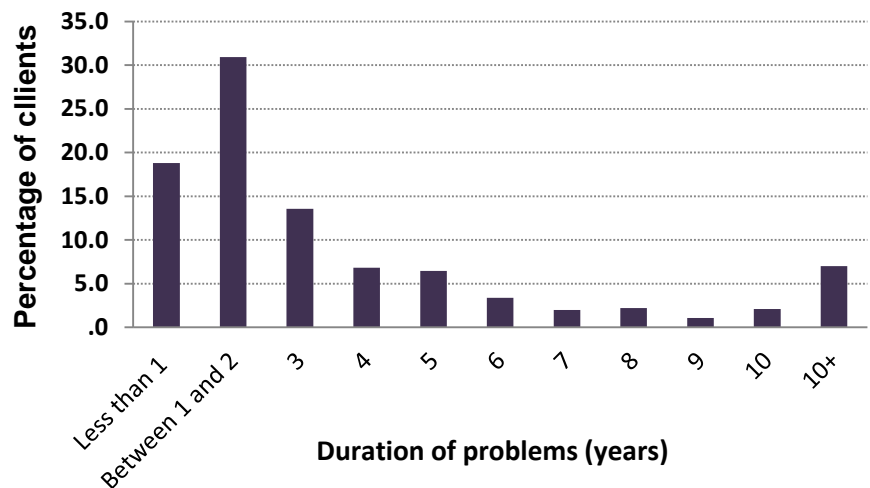
More generally, the following issues are relatively common 'triggers' for seeking couple therapy:

- Extra-marital affairs (although clinically these are not always destructive; they can serve to strengthen a relationship in the longer term).
- Unemployment, where the loss of a job impacts on identity, the role played by respective partners, status and self-image/self-esteem.
- (Early) Retirement, which many cause many of the problems noted above and is triggered by a change of routine.

- Sexual problems, which may psychologically triggered or worsened.
- Reconstituted families, where therapy supports the couples to manage their relationships with each other and between them and their children.

Reflecting this, despite the length of relationship, in general, couples had not been experiencing problems for long periods – around half of clients for two years or less (figure 3.2).

Figure 3.2. Duration of problems*



*Source: TCCR service user data

TCCR Services

Therapy is delivered through a number of talking sessions - the average is between 20 and 40 although some couples have over 100. In a small proportion of cases (16%) therapy will take place with one person but in the vast majority of cases (84% of all cases since 2004) both partners would be present.

Couples are allocated to a counsellor or a therapist, sometimes two depending on the needs of the couple. These may include trainees (although, in this case, the term is quite misleading since trainees will be experienced practitioners, continuing their training or completing specific research with the wider TCCR research organisation). The services are charged on a broad sliding scale, based on what clients can afford to pay. The allocation of staff to client is judged on clinical

need and the suitability of staff, which often means that the most senior/experienced (hence expensive) TCCR staff sees those that may well be paying the least.

It is fairly common that the nature of the difficulties the couple are facing will 'play out' during the session relatively quickly, which the counsellor or therapist must begin to unpick. The aim is to support the couple get to a situation where they are aware of their actions and the motivation for them, ultimately understanding the problems – rather than acting them out. The process needs to be carried out robustly and assertively, reflecting the degree of conflict in the relationship.

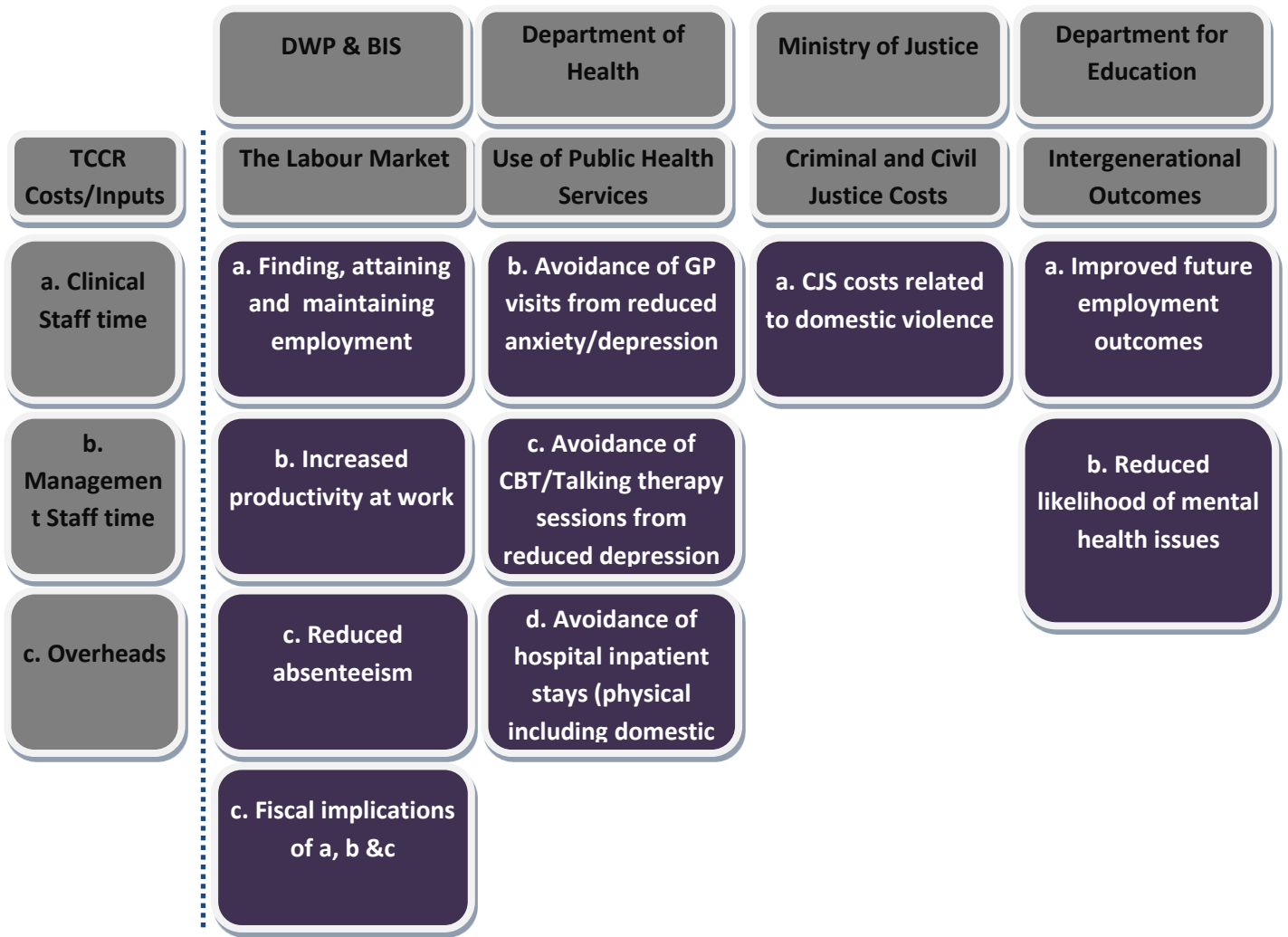
Outcomes

The service users are not simply quarrelling: many have been referred to TCCR from statutory agencies, such as the courts, a GP or other therapists. The challenges they have/are facing typically interact with pre-existing problems anxieties and/or insecurities, often dating from childhood. They are typically unable to manage their behaviour or have serious concerns about what the implications of it may be or have been (e.g. violence or impact on children). Service users have highly diverse levels of self-functioning and socio-economic characteristics. The challenges they face may not be evident at presentation but may have to be 'worked through' over several sessions. But the problems manifest themselves in a number of different ways, many of which directly or indirectly have an economic impact or state cost, which is reduced, better managed or avoided as a result of treatment. Empirical evidence suggests that couple therapy works. For example, 17 studies reviewed by Baucom et al (1998) demonstrated overall that couple therapy was an effective treatment for relationship difficulties and mental health issues and the National Institute for Clinical Excellence (NICE) guideline on The Treatment and Management of Depression in Adults (NICE, 2009) recommends couple therapy for depression as a treatment option..

The CORE is the primary data collection method used by TCCR to ascertain the mental health of its clients. Analysis of the CORE data has demonstrated a decrease of 29% in clinically significant mental ill health of TCCR's clients between beginning and end of session. A range of scales and questions are used to identify needs and capture change and we have drawn on this range in this analysis. Specific scales are referred to in Section 4.

We have identified the following outcomes of TCCR's work under four broad public policy areas (figure 3.4 overleaf). We explore each in turn, and judge the impact that TCCRs work has on these, in the chapters that follow.

Figure 3.4: State outcomes for TCCR core couple therapy services*



*Source: TCCR and nef consulting

4. Evidence of socio-economic impact

This section presents our analysis of TCCR's service user data and our estimation of socio-economic impact based on the data and secondary research. Each 'area' of state outcomes is presented in turn. TCCR service user data was analysed to understand socio-economic impact by comparing end of session data with baseline data. Points to note:

- The analysis is based on actual distance-travelled i.e. the clients that have complete data at beginning and end of session for the data analysed.
- The data indicates that there may be a causal relationship between couple therapy and socio-economic impact, although it was not expected to reveal full evidence for the reasons cited earlier in this report. Secondary research presented in this section provides further evidence of a potential relationship that is used for this analysis.
- Whilst a causal relationship is inferred through this analysis we have been conservative and applied the impact considerations of deadweight (what would have happened anyway), displacement (movement of a benefit) and attribution (amount of credit TCCR can take) for each outcome. The judgements presented in this section contain these assumptions and details can be found in Appendix 2.
- Service users are supported by TCCR over time but this varies according to the need. In order to analyse the data we have calculated an average length of therapy at 7.6 months and use this as a basis for the total number of service users in 2009/2010 (see Appendix 2).
- Impact has been modelled into the future over a one to ten year period, depending on the outcome and all numbers have been rounded to the nearest 100. Appendix 2 explains these assumptions in detail.
- The sections on TCCR's contribution are summaries of interviews and the theory of change prepared by TCCR and is not based on empirical literature.

4.1 The Labour Market

TCCR's Contribution

Conflict in a relationship often manifests itself at work. Symptoms, such as anxiety and difficulties relating to others, can be present to

the extent that individuals feel that they cannot work. For other individuals, problems prevent or delay a return to work after maternity/paternity leave, or a separation, for example. Once in work, if untreated, problems can accumulate, meaning that periods of employment may not last and result in long(er) term absence or even cessation of employment. Couple therapy supports individuals to find work, return to work faster and stay in work. For those that are in work, couple therapy improves productivity as basic functioning, resilience and their ability to relate to colleagues improves, and it can support a reduction in presenteeism (i.e. reduced productivity and performance at work due to illness). It also reduces absenteeism as problems do not build up to such an extent that they become unmanageable and result in (longer) periods of sick leave.

This has fiscal implications for the state – in saved benefit payments, particularly Job Seekers Allowance (JSA), and statutory sick pay. It also supports increased consumer spending from people in paid employment. This spending generates indirect supply chain impacts and also supports further induced consumer spending. More generally, it prevents lost productivity (economic output or gross value added (GVA)) from those that are either in work, or could otherwise be in work. It is not the case that currently weak labour market conditions (the fact there are large numbers of people seeking work and relatively few jobs for them) negate this area of impact. The nature of people seeking support is highly diverse, from chief executives to those who have rarely or never worked.

The Evidence

There can be little doubt that life stressors that exist outside the work environment can impact on job-related performance. Edwards, Guppy and Cockerton (2007) reported on a study investigating the influence of work and non-work based stressors on perceived job performance. While the finding that stressors within the workplace can have a detrimental effect on performance was a highly expected finding, Edwards et al. also found that pressures outside the workplace can have a detrimental impact on success in the workplace. The scales used to measure non-work stressors in the study included items measuring interpersonal conflict, which is significant given the focus of TCCR's work.

- Absence from work due to illness has a major detrimental effect on the UK economy. Factors that relate to relationship difficulties are frequently listed amongst the most common causes for both short- and long-term staff absenteeism. Notable short-term factors that may relate to difficulties in personal relationships include stress, home/family responsibilities and mental ill health. Similar

factors are found to be common causes of long-term work leave (CIPD, 2011a).

However, presenteeism exists at a greater cost to the UK than absence from work due to illness. The Centre for Mental Health (2011) recently stated that absenteeism costs at £8.4 billion per year, while presenteeism costs £15.1 billion per year. This is particularly relevant when considering the economic impact of TCCR given the research of Hansen and Anderson (2008): difficulties with family life was found to significantly predict presenteeism.

Further evidence of how poor interpersonal relationships may impact on work productivity and attendance is cited in an extensive report investigating family breakdown by the Social Policy Justice Group (Callan et al., 2006). Although highly polemic, the report contains robust data on the value of relationships to wider society. Married individuals in healthy relationships have been demonstrated to have better physical health than those who do not marry, indicative of fewer days sick leave.

Finally, if a couple cannot save their relationship and their family includes children, it is possible that one of the couple could consequently head a single parent family. Households of this nature are more likely to exist at financial cost to the State: Government data suggests that while only 5.4% of couple-headed households do not have any working family members, worklessness in lone parent-headed household is at 39.7% (Office for National Statistics, 2010).

Judgement of Impact

Analysis of TCCR service user data demonstrated a change in the number of service users in full time employment, in part time employment and in receipt of benefits between baseline and end of session. In addition to these outcomes the fiscal implications have also been calculated in the form of multiplier effects from employment and impacts on absenteeism and presenteeism. According to this analysis TCCR's couple therapy services contribute in excess of £1.4m of avoided costs to the labour market. Table 4.1 presents the amount of change calculated from TCCR's data and the socio-economic impact. See Appendix 3 for unit cost calculations.

It is worth highlighting the small numbers of people experiencing change in this outcome. Whilst this does not deter from the fact that change has been created for these couples, it is not sufficient for significance tests to be valid.

Table 4.1: Labour market outcomes and impact

Outcome	Outcome incidence per annum	Socio-economic impact
<p>Income tax from additional clients moving from unemployment to full time employment (Income Tax)</p>	<p>Total number of service users per annum * 2.5% increase: 12 clients</p> <p>The 2.5% percentage figure is movement of individuals responding to the question outlined below with “currently unemployed/full time student/retired/full-time homemaker or carer” at baseline to “full-time employment” at end of service. Taken directly from TCCR’s primary data, asking clients: “How would you best describe your employment status?”</p> <ul style="list-style-type: none"> Full time (30 hours or more per week) Employed part-time Currently unemployed Full-time student Retired Full-time homemaker or carer No Response” 	<p>£239,600</p>
<p>Income tax from clients moving from part-time to full-time employment (Income Tax)</p>	<p>Total number of service users per annum * 4.5% increase: 21 clients</p> <p>The 3.8% percentage figure is the number of individuals in part-time employment at end of service minus percentage of individuals in part-time employment at the start of service: 15 clients</p> <p>Taken directly from TCCR’s primary data, asking clients: “How would you best describe your employment status?”</p> <ul style="list-style-type: none"> Full time (30 hours or more per week) Employed part-time Currently unemployed Full-time student Retired Full-time homemaker or carer No Response” 	<p>£346,900</p>
<p>Multiplier effects from additional clients in full time employment</p>	<p>13 clients</p> <p>Multiplier effect is for the number of additional individuals in full-time employment. Thus the outcome incidence is the same as for “Additional clients in employment full-time”.</p>	<p>£124,400</p>
<p>Multiplier effects from additional clients in part time employment</p>	<p>15 clients</p> <p>Multiplier effect is for the number of additional individuals in part-time employment. Thus the outcome incidence is the same as for “Additional individuals in employment part-time”.</p>	<p>£140,200</p>

<p>Benefits savings (JSA/IB/IS) from additional clients in employment</p>	<p>Number of service users per annum * 8.07% decrease in clients on Benefits: 38 clients</p> <p>The 2% percentage figure is the proportion of service users in receipt of JSA/Incapacity Benefit or Income Support at end of service minus those in receipt of one of these State benefits at baseline.</p> <p>Taken directly from TCCR's primary data, asking clients: "Are you currently receiving Jobseeker's Allowance; Income Support or Incapacity Benefit?" No Yes No Response."</p>	<p>£259,000</p>
<p>Avoided lost output from absenteeism saving</p>	<p>Number of service users per annum * 29%* 6.5 days= 880 days</p> <p>It is assumed that those who experienced a drop in mean CORE score from clinically significant at baseline to non-clinical at end of service (29%) will have had been absent from work given their symptoms of poor mental health.</p> <p>This had been multiplied by the mean number of sick days in 2010 (6.5 days) (CBI, 2011).</p>	<p>£147,100</p>
<p>Avoided lost output from productivity (from symptoms) from avoided sick pay</p>	<p>Number of service users per annum *29% * 6.5 days: 880 days</p> <p>It is assumed that those who experienced a drop in mean CORE score from clinically significant mental health at baseline to non-clinical at end of service (29%) will have been experiencing poor productivity at work prior treatment, which would have returned back to normal levels post-service.</p> <p>As no secondary data could be found to suggest how long periods of attending work in ill health typically last, it is assumed that mean duration is the same as the mean number of sick days taken during 2010: 6.5 days.</p>	<p>£220,600</p>
<p>Total impact labour market</p>		<p>£1,477,800</p>

4.2 Physical and Mental Health

TCCR's Contribution

Conflict, stress and anxiety at home affect both mental and physical health. Couple therapy can mitigate and prevent this in a number of ways. For those with serious physical health conditions, stronger relationships increase the likelihood that the individual patient will adhere to the treatment that they require to recover. This may include,

for example, arriving at appointments, taking regular medication or following general medical advice. Purely financially, this may increase short term health costs, but it prevents longer term health crises which are ultimately more expensive and damaging. This 'treatment adherence' impact applies equally to mental health illnesses – depression, for example.

For those without pre-existing physical health problems, therapy can alleviate various stress related problems such as ulcers, heart conditions and migraines. This includes preventing people taking risks with their health, particularly with alcohol and drugs, which cause long term damage.

In the shorter term, therapy can reduce anxiety and stress; reduce GP usage and the costs of medication. In serious cases hospital admissions, psychological treatments (such as CBT), or more acute psychological support will be avoided. Treatment also prevents incidences of domestic violence, which generates costs in the form of ambulance call-outs and hospital inpatient stays/consultant time. More serious episodes may result in the involvement of social care.

The Evidence

The relationship between depression and poor interpersonal relationships has long been recognised. For example, research has shown that people who report significantly fewer interactions with their spouse or live-in partner are more likely to suffer from depression than those with other mental illnesses (Zlotnick, Kohn, Keitner, & Della Grotta, 2000).

If interventions such as those offered by TCCR can improve interpersonal relationships, and in turn reduce the rate of affective disorders such as depression, this is of particular interest to the State. The comprehensive consideration of the cost of depression in a brief report commissioned by the All-Party Parliamentary Group on Wellbeing Economics (Harker, 2011) places the cost of consultations for depression at £46.2 million per year; drug treatment £230.1 million per year and outpatient care £9.1 million per year. This is significant given that the evidence suggests that couple therapy is an effective treatment for depression. For example, Bodenmann et al (2008) found that couple therapy is at least as effective at improving depressive symptoms as more established psychological interventions, such as cognitive-behavioural therapy.

The impact that couple-based therapies can have on alcoholism is also well-documented. One study demonstrated that cessation of heavy drinking outcomes were superior in those who had received

brief couple therapy in comparison to other psychological interventions such as individual-based treatment (Fals-Stewart, Klostermann, Yates, O'Farrell, & Birchler, 2005). However, it may be that couple therapy that is able to prevent break-up can not only treat alcohol addiction, but prevent future cases. This is because evidence suggests that divorced individuals are more likely to drink excessively than those in relationships. For example, McAllister (1995) reported that three times as many divorced as single men drink in excess of 50 units of alcohol per week, much higher than the NHS recommended weekly allowance of 21 units (NHS, 2011a).

The value that couple therapy can have not just for the individual but for national Government is apparent when the cost of alcohol abuse is considered. Approximately 1.1 million people were admitted to casualty for alcohol misuse during 2009/2010 at a cost of £2.7 billion per year to the NHS, twice the cost in 2001 (Alcohol Concern, 2011). Furthermore, it should be noted that alcoholism is not only a cost to the NHS for as long as it is a present health concern: it puts the individual at significantly greater risk of a range of serious chronic health conditions such as liver disease (NHS, 2011b) at further, long-term costs to the State.

Of the cases of domestic violence in the UK, 40% are alcohol-related (Alcohol Concern, 2011). However, regardless of the role alcohol does or does not play in an episode of domestic violence, domestic violence is a common feature of dysfunctional relationship: it is estimated that 26% of women and 17% of men have experience domestic violence at some point in their adult lives (Walby, 2004), and couple therapy could be at least as effective as more traditional therapies for treating violence in relationships (Stith, Rosen, & McCollum, 2003).

In 2009, the cost of treating health issues and injuries relating to domestic violence in the U.K. was estimated to be £1.49 billion (Wong, 2011).

Judgement of Impact

Analysis of TCCR service user data demonstrated a change in outcomes-related clinically significant mental ill health. Secondary research strongly indicates a correlation between mental well-being and use of healthcare services. We have therefore used the number of clients who demonstrate a change and the amount of change in their clinical mental health, and those who may be subject to domestic violence, to understand the potential impact on NHS services.

According to this analysis, TCCR's couple therapy services contribute nearly £140,000 of avoided healthcare services usage. It should be noted that socio-economic impact reported in this area may be an under-estimation of longer term and more broad health implications of a breakdown in couple relationships. Further research is required to capture the likely ripple effects and the extent to which they could be avoided by TCCR's services.

Table 4.2 presents the amount of change calculated from TCCR's data and the socio-economic impact. See Appendix 3 for unit cost calculations.

Table 4.2: Health service outcomes and impact

Outcome	Outcome incidence	Socio-economy impact
<p>Avoided costs through reduction in GP usage (depression anxiety stress)</p>	<p><i>Number of service users per annum * Percentage of service users reporting a clinically significant reduction in mean score on the CORE scale between baseline and end of service 29% * 2.2 visits= 298 visits</i></p> <p>The CORE is the primary data collection method used by TCCR to ascertain the mental health of its clients.</p> <p>Barkham et al (2006) defines a mean item score of one or more as clinically significant. Adopting this definition, there were 29% fewer individuals at the end of service with clinically significant means scores in comparison to baseline. A paired- samples t-test was conducted between baseline and end of service revealed that overall there was a significant reduction in mean score on the CORE scale between baseline (mean 1.15 standard deviation 0.54) and end of service (mean 0.83 standard deviation 0.53) $t(141)=7.26$ sig.<0.001.</p> <p>Research from Australia suggests that those with depression make an additional 2.2 visits to their G.P per year in comparison to those without depression (Knox & Britt, 2004) .</p>	<p>£30,000</p>

<p>Avoided costs through a reduction in CBT/Talking Therapy</p>	<p>Number of service users per annum * 19% * 29% * 8 sessions of CBT: 206 visits</p> <p>As above, the key change data used in this calculation is the percentage of individuals whose responses on CORE between baseline and end of service demonstrated a reduction in clinically significant mental health of 29%.</p> <p>TCCR client data obtained at baseline indicates that 2.8% of service users who submitted CORE data at baseline were attending couple therapy or psychotherapy and 16.2% were attending individual counselling or couple therapy, making a total of 19%. It is assumed that there would be a 29% reduction in the number of individuals attending these sessions as these individuals no longer reach clinical significance. As the precise type of therapy or psychotherapy has not been reported, and the number of recommended sessions for varies according to therapy, the assumption is made that an average of eight sessions of therapy per clients will be saved based on the NICE guidelines (NICE, 2009) for CBT.</p>	<p>£41,500</p>
<p>Avoided costs of hospital inpatient stay (physical - related to domestic violence)</p>	<p>Total number of clients per annum* 5.9% * 12.32%: 3 inpatient stays</p> <p>The starting point for this calculation is responses to one of the CORE items indicating “Risk to Self” from the CORE risk domain: “I have been physically violent towards others”.</p> <p>It was assumed that for each client who responded “Only occasionally”, “Sometimes”, “Often” or “Most of all of the time” there was one case of domestic violence. On this basis there was a 5.9% reduction in the number of inpatient stays for domestic violence.¹</p> <p>Research suggests that 12.32% of domestic violence cases result in serious or fatal injury² (Walby, 2004). Consequently the result of the calculation above has been multiplied by this figure to get the number of cases of domestic violence likely to result in patient stay.</p>	<p>£70,900</p>
<p>Total impact labour market</p>		<p>£142,400</p>

¹ It should be noted that a Wilcoxon Signed Rank Test indicated that the difference in median scores between baseline and end of service did not reach statistical significance so this percentage change should be interpreted with caution (sig= 0.058).

² For this percentage calculation “Stalking” has not been included as domestic violence

4.3 Criminal Justice Costs

TCCR's Contribution

Couple therapy prevents or 'unblocks' intractable conflict within relationships and families. Whilst this may not necessarily prevent divorce, this conflict is often manifest in civil disputes which tie up the resources and infrastructure of the criminal justice system, causing delays and additional hearings, for example. Conflict at home often requires the involvement of the police – through disorderly conduct, anti-social behaviour, disturbance of the peace or domestic violence. Treatment can prevent Police call outs, criminal charges and associated administration. It can prevent the costs of court sentencing or other punitive measures such as civil injunctions or protection orders.

The Evidence

In addition to the health service costs of domestic violence, there are associated costs for the criminal justice system. 24% of violent crime costs are estimated to be due to domestic violence. 2004 estimates placed this at a cost of £1.02 billion per year, with £489 million of these costs being Police costs, such as for call outs and arrests (Walby, 2004).

There are also some divorce costs for the State. For example, the Community Legal Service is a network of legal professionals that provide free legal advice and representation for those who could not otherwise afford it. During 2007-2008 £531 million was spent on family cases. Further costs associated with relationship breakdown are incurred if the couple in question have children. There is often difficulty agreeing the proportion to which both parties should pay to support the children's upbringing. The cost of running the Child Maintenance and Enforcement Commission, which ensure maintenance payments are made, in 2008-2009 was £601.4 million (Wong, 2011).

Judgement of Impact

Analysis of TCCR service user data did not demonstrate a change in outcomes related to avoided criminal justice costs per se. However, again using the findings of secondary research to understand a potential relationship, we have used data from the avoided inpatient stays due to serious wounding from domestic violence to assume associated cost savings to the criminal justice system. According to this assumption TCCR's couple therapy services contribute nearly £19,000 of avoided costs that would be borne by the criminal justice system.

While there may be some savings to the State in terms of divorces prevented, the number of divorce proceedings in which the State provides financial support are minimal (Walby, 2004), thus these costs will be negligible and therefore are not material to the analysis.

Table 4.3 presents the amount of change calculated from TCCR’s data and the socio-economic impact. See Appendix 3 for unit cost calculations.

Table 4.3: Criminal justice outcomes and impact

Outcome	Outcome incidence per annum	Socio-economic impact
<p>Avoided criminal justice costs relating to domestic violence</p>	<p>3 cases requiring criminal justice system resources</p> <p>It is assumed that domestic violence incidences that result in inpatient stays (Avoided costs of hospital inpatient stay (physical - related to domestic violence) would also require Criminal Justice System resources. Consequently the outcome incidence is the same for this outcome.</p>	<p>£18,700</p>

4.4 Outcomes for Children

TCCR’s Contribution

Conflict in relationships damages children. TCCR clinicians report that many of the problems seen within couple relationships are essentially repetitions of childhood experiences, psychological scars or relationships. Treatment prevents a degree of perpetuation of *all* of the problems noted above.

Stronger parental relationships and a reduction in conflict supports improved educational attainment in the children. This in turn directly increases the likelihood of employment and longer term earnings potential. Couple therapy can reduce instances of future unemployment for couples’ children, instances of self-harm or other dangerous or criminal behaviour, all of which incur public costs.

The Evidence

Any positive impacts of couple therapy on children will be a consequence of outcomes for parents. As the relationship between couple therapy and effects on children is indirect its nature is more difficult to ascertain. However, there is still evidence in the literature that the couple therapy delivered at TCCR could bring benefits for children that lead to long-term non-cashable savings for the State.

Significantly, it has been shown that parental interventions that target parental relationships in addition to parenting skills per se are more effective at producing outcomes for children (Cowan & Cowan, 1997) and interventions that intend to improve family functioning and reduce child problems are more effective if both parents are involved rather than just the mother (Brody & Forehand, 1985). Fifty per cent of the couples treated under the psychotherapy and couples therapy programmes at TCCR have children less than 18 years of age. There is a wealth of evidence outlining the negative impact that parental conflict and separation can potentially have on children and, complementing this, research outlining the benefits of a healthy relationship between parents. Clulow (2008) found that the quality of relationship between parents can impact on parenting style, which has clear consequences for a child's development. Even where TCCR is unable to prevent divorce it has a unique role to play in that it can reduce the amount of negative conflict during the separation process and help ensure amicability. This is significant given that evidence suggests that the most negative outcomes for children whose parents divorce pre-date the divorce itself (C4EO, n.d.).

Although family break-up certainly does not guarantee poor educational outcomes, longitudinal studies demonstrate that educational achievement is better amongst children in intact families than those who separate (Callan et al., 2006). There is also greater chance of further education-related problems if the child is from a one-parent family. For example, boys from lone-parent families are 2.7 times more likely to truant than those from two-parent households (Graham and Bowling, cited Callan et al).

Poor performance at school may reduce later chances of gaining stable employment. Given the evidence supporting cross-generational outcomes, it is significant that unemployment is higher in single parents than those in relationships (Office for National Statistics, 2010). In the current economic climate the number of young people not in education, employment or training (NEET) is of particular concern to the government. NEET young people are more likely to grow up in a one-parent household (Wong, 2011). This is significant given the financial burden that NEET young people can place on the State in terms of benefit claims. Wong et al estimated that the Jobseeker's Allowance payments made to young people from broken families in 2008-2009 tallied £629.35 million. While this particular figure is questionable given the methodology that Wong adopts, Jobseeker's Allowance payments are not the only costs of NEET young people incurred for the State. For example, it does not account for lost tax and national insurance takings, and the likely increase in costs for social services and the criminal justice system.

Many of the State costs avoided for clients in terms of mental health in this analysis are likely to extend to children of broken families. The reasons for this can be split into two broad categories. Firstly, children of depressed parents are likely to become depressed themselves (Lieb, Isensee, Höfler, Pfister, & Wittchen, 2002) and depression is common in both parents in conflict (as TCCR's own data shows) and lone-parent households (Brown & Moran, 1997). Secondly, regardless of the mental health status of the parent, the stress of parental conflict and separation has long been proven to have a detrimental effect of the mental health of the child (Emery, 1982).

Judgement of Impact

Analysis of TCCR service user data did not demonstrate a change in outcomes related to the future impact on children and this was expected because TCCR does not collect direct data on the client's children. However, findings from secondary research provide sufficient evidence to assume a relationship and potential impact. Using the number of clients that have children, we have drawn from secondary research to estimate the potential impact on the employment prospects and mental health of children as they transition into adulthood. According to these assumptions TCCR's couple therapy services contribute just over £260,000 of avoided costs to the State that would have been borne by the children of couples not achieving employment or strong mental health. Table 4.4 presents the amount of change calculated from TCCR's data and the socio-economic impact. See Appendix 3 for unit cost calculations.

Table 4.4: Children outcomes and impact

Outcome	Outcome incidence per annum	Socio-economic impact
<p>Costs avoided through future potential employment in children (benefits avoided and income lost)</p>	<p>Number of clients with children * 20% * 7%: 5 cases</p> <p>The GRIMS item “I suspect we may be on the brink of separation” has been selected as an indicator of the number of clients with children at risk from separation or divorce. Between baseline and end of service the number of individuals indicating that they “strongly disagreed” or “disagreed” with this statement increased by 20%, suggesting that relationships have been saved amongst 20% of clients with children³. Research suggests that men aged 33 years old are more likely to be unemployed if their parents divorced when they were aged 16 years old ((Kiernan, 1996). Therefore the percentage of men who <u>did not</u> have divorced parents and were unemployed at the age of 33 has been subtracted from the percentage of men who <u>did</u> have divorced parents and were unemployed at the age 33 to calculate the percentage of cases of future unemployment specifically associated with divorce (7%).</p>	<p>£109,000</p>
<p>Costs avoided through avoiding difficulties in children related to depression /trauma /anxiety/ stress</p>	<p>Number of clients with children * 32.4% * (62.5% -12.3%) : 57 cases</p> <p>The total number of clients with children has been multiplied by the percentage of clients with children showing a clinically significant reduction in Mean CORE score⁴, to obtain the number of clients with children who have experienced a reduction in depression during the course of treatment.</p> <p>The results of this calculation have been multiplied by the number of children estimated to be likely to suffer from depression if their parents had suffered from depression (62.5%) (World Health Organisation (WHO), n.d.) disregarding those who will suffer from depression anyway regardless of parents health status (12.3%). The resulting figure is the number of cases of depression in children saved due to change in parent’s mental health status.</p>	<p>£152,500</p>
<p>Total impact on children</p>		<p>£261,500</p>

³ Wilcoxon Signed Rank Test indicated that the median of differences between baseline and end of services were statistically significant (sig.=0.005).

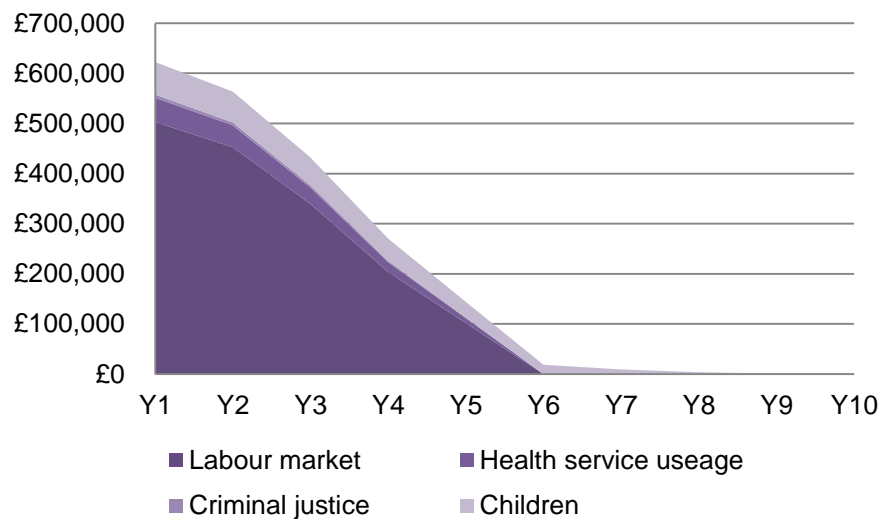
⁴ This difference in mean CORE score amongst parents is statistically significant (t(73)=6.32 sig<0.001)

4.5 Value for money

Based on an investment of £415,100 (to the nearest £100), we estimate that TCCR's couple therapy and psychotherapy therapy services saves or generates some £1,900,400 for the State over a five to ten year period. This suggests a return of some £4.58 for every pound invested in the service, plus or minus 20%⁵, with a positive return from TCCR by year three. Furthermore, it should be noted that of the £415,000 investment figure only £134,000 (32%) comes directly from Government sources, demonstrating additional value for money for the State. The return on Government investment **only** can be understood to be just over £14 for every £1 invested. However, it should be noted that it is the full value of the investment in TCCR's services that has resulted in the socio-economic benefits, of which Government investment is a significant contributor and therefore any ratio is illustrative.

It is evident that most of the impact occurs within the first three to four years with some impact continuing until the tenth year, as presented by figure 4.5.

Figure 4.5: timescale of impacts



The majority of the impact occurs to the labour market and health service. This is unsurprising given that service user data was strongest – in terms of magnitude of change and direct questions – for

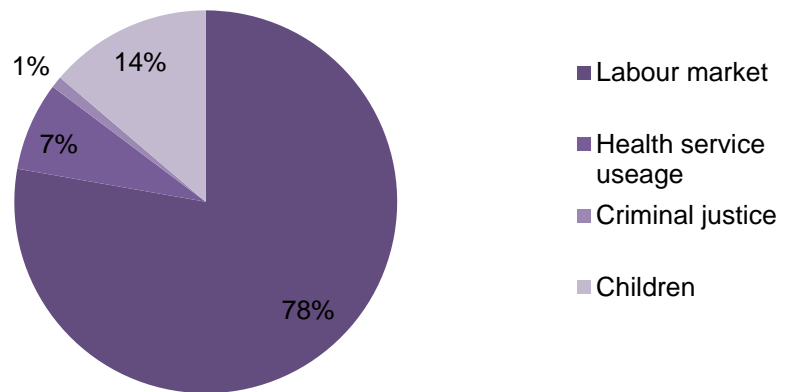
⁵ We present the results within a sensitivity of plus or minus 20%.

these outcomes. Table 4.5 and Figure 4.6 provide a summary of the State outcomes and the value associated with each.

Table 4.5: breakdown of impact by State area

State outcome area	Socio-economic impact
Labour market	£1,477,800
Health service usage	£142,400
Criminal justice	£18,700
Children	£261,500
Total impact	£1,900,400

Figure 4.6: breakdown of impact by State outcome area



This is a strong and finite piece of socio-economic research using TCCR’s own data to understand wider impact. The socio-economic impact identified is an unintended consequence of TCCR’s work –it is arguable that TCCR does not exist to create value to the State and that any impact is an unintended consequence of its work with couples in distress. Put differently, TCCR is not an employment programme or domestic violence service. As such, it is unsurprising that impact is via small numbers of people experiencing change (relative to the numbers of clients seen by the service) and therefore insufficient for statistically valid tests, because the primary aim of TCCR’s data collection is not to measure socio-economic impact.

TCCR does create demonstrable changes in clinical outcomes and this difference made to individuals and to couples should also be taken account of in decision-making. By performing further research in this area TCCR will have a better idea of impact on the State.

Figure 4.7 provides a detailed summary of the socio-economic model.

Figure 4.7: Detailed summary

State outcome	Outcome incidence (amount of change)	Incidence unit	Outcome	Proxy per person (GBP)	Gross Impact all stake holders/ incidence	Deadweight proportion (keep amount)	Attribution proportion (keep amount)	Displacement proportion (keep amount)	Value after attribution, deadweight & displacement	Value Year 1	Value Year 2	Value Year 3	Value Year 4	Value Year 5	Value Year 6	Value Year 7	Value Year 8	Value Year 9	Value Year 10	Total Value	NPV	NPV Rounded GBP
Labour Market	12	Service users	Income tax from additional patients in employment full time (Income Tax)	14,414	168,199	0.95	0.72	0.75	85,807	81,517	73,365	55,024	33,014	16,507						259,426.46	239,543.61	239,600
	21	Service users	Income tax from additional patients in employment part time (Income Tax)	11,594	243,526	0.95	0.72	0.75	124,235	118,023	106,221	79,666	47,799	23,900						375,608.62	346,821.39	346,900
	12	Service users	Multiplier effects from additional patients in full time employment	7,485	87,347	0.95	0.72	0.75	44,560	42,332	38,099	28,574	17,144	8,572						134,721.06	124,395.82	124,400
	21	Service users	Multiplier effects from additional patients in part time employment	4,684	98,395	0.95	0.72	0.75	50,196	47,686	42,918	32,188	19,313	9,656						151,761.89	140,130.62	140,200
	38	Service users	Benefits savings (JSA/IB/IS) from additional patients in employment	3,620	136,374	0.95	0.72	1.00	92,762	88,124	79,311	59,483	35,690	17,845						280,453.05	258,958.69	259,000
	880	Service users & days	Avoided lost output from absenteeism	88	77,427	0.95	0.72	1.00	52,666	50,033	45,029	33,772	20,263	10,132						159,229.12	147,025.55	147,100
	880	Service users & days	Avoided lost output from presenteeism (from symptoms)	132	116,141	0.95	0.72	1.00	78,999	75,049	67,544	50,658	30,395	15,197						238,843.69	220,538.33	220,600
Health Service Usage	298	Vists	Avoided costs through reduction in GP usage (depression anxiety stress)	53	15,783	0.95	0.72	1.00	10,736	10,199	9,179	6,884	4,131	2,065						32,458.24	29,970.59	30,000
	206	Visits	Avoided costs through a reduction in CBT/Talking Therapy	106	21,810	0.95	0.72	1.00	14,835	14,093	12,684	9,513	5,708	2,854						44,851.39	41,413.91	41,500
	3	Admissions	Avoided costs of hospital inpatient stay (physical - related to domestic violence)	11,000	37,321	0.95	0.72	1.00	25,386	24,117	21,705	16,279	9,767	4,884						76,750.97	70,868.66	70,900
Criminal and Civil Justice Usage	3	Costs	Avoided criminal justice costs relating to domestic violence	2,900	9,839	0.95	0.72	1.00	6,693	6,358	5,722	4,292	2,575	1,287						20,234.35	18,683.55	18,700
Children	5	Children	Costs avoided through future potential employment in children (benefits avoided and income lost)	8,071	39,767	0.95	0.72	1.00	27,049	27,049	25,697	23,127	18,502	12,951	7,770.71	3,885.35	1,554.14	466.24	93.25	121,095.69	108,973.54	109,000
	57	Children	Costs avoided through avoiding difficulties in children related to depression/trauma/anxiety/stress	972	55,637	0.95	0.72	1.00	37,844	37,844	35,952	32,357	25,885	18,120	#####	5,435.94	2,174.38	652.31	130.46	169,423.25	152,463.32	152,500

Total benefits	£1,900,400
Total inputs	£415,100
SROI Ratio	4.58

5. Conclusion

Marital and family treatment research studies rarely include information on economic impacts of the treatments being evaluated, instead focussing on clinical outcomes.

As such it presently lags behind other forms of treatment (e.g. individually based treatments) in evaluating cost-benefit and cost effectiveness, placing them, at a distinct disadvantage....drawing from the limited number of studies that have been done...proponents of marital and family treatments have little to fear.

The few cost evaluations of such treatments ...have consistently revealed that these interventions, for a variety of individual disorders and family problems, have excellent cost benefit and cost effectiveness ratios, compared with other interventions.

Fals-Stewart et al, Journal of Family Psychology, March 2005.

This report has analysed the socio-economic (State) impact generated by couple counselling and couple psychotherapy services delivered by TCCR. Underlying much of TCCR's work is a fundamental belief in the value of the therapeutic relationship and its ability to improve the lives of both adults and children. Our research is based on a statistical analysis of baseline and end of session service user data from 2009/2010, secondary research and a selection of interviews with TCCR staff to understand the socio-economic impact of the services.

TCCR's couples counselling and couples psychotherapy services are cost effective. We estimate they deliver savings to the state of around £1,900,400 over a five year period for outcomes relating directly to the couple, and over a ten year period for outcomes relating to children (Appendix 2). Based on the total cost of delivering the services, this represents a value of around four and half times the investment of £415,000 or £4.58 for every £1 invested.

The source of the impact is predominantly in avoided labour market costs, in terms of full or part time employment, additional taxation through the salaries of those in employment, cost savings from benefits payments and increases in local consumer spending by newly employed persons. We also identify savings resulting from a reduction in healthcare service usage costs due to avoiding inpatient stays resulting from domestic violence, visiting the GP, and avoided costs of psychotherapy used to treat depression.

The socio-economic impact identified is an unintended consequence of TCCR's work –it is arguable that TCCR does not exist to create value to the State and that any impact is an unintended consequence of its work with couples in distress. Given the lack of economic outcomes data of the additional state outcomes 'areas' and the strength of the secondary research we find it reasonable to assume that the impact of TCCR's work is potentially being under-claimed. Further research into the link between a reduction in domestic violence and serious couple conflict is required to effectively model TCCR's impact. Likewise with children; there are a number of potential outcomes and the literature documents well the impact on children of family and parental strife.

Marital and family treatment research studies rarely include information on economic impacts of the treatments being evaluated (Fals-Stewart 2005) and this is a hindrance for TCCR and others to understand and demonstrate their impact in the current political and economic climate. As TCCR's work continues it should consider recording economic outcomes systematically and longitudinally. While TCCR collects much valuable evidence for State outcomes it is more difficult to identify benefits for the State without more direct indicators.

Directly asking TCCR clients about situations that will have direct consequences for the State (for example, whether they have been absent for work due to sickness, and if so how long for) would make the analysis more robust and perhaps enable TCCR to identify further value.

This analysis has been prepared using Social Return on Investment (SROI) principles, but we have focused solely on the economic and state impacts of TCCR's work. Beyond this, the clinical evidence and secondary literature suggests that the programme also has a material impact on the individual wellbeing of couples: improving resilience, co-operation, self-esteem and acceptance. Moving forward, TCCR may consider adopting a full SROI analysis which would place a value on these improvements, bringing this social value onto the balance sheet alongside its economic role.

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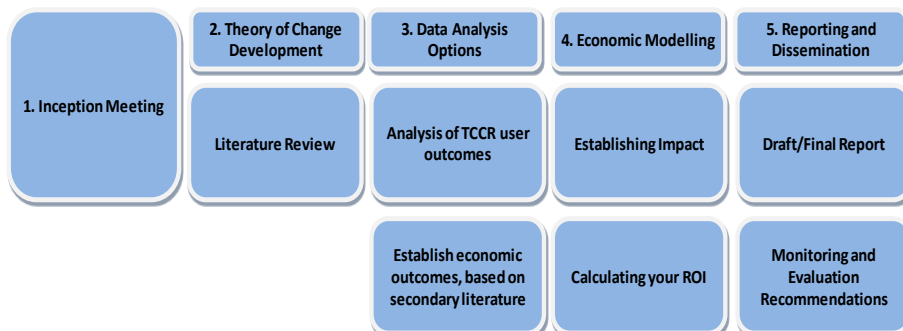
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Appendix 1: Approach

Our methodology for this study is summarised below and explained in the remainder of this section.

Figure A1: Summary of our approach



Stage One: Inception

We held an inception meeting with TCCR where we received a briefing of the full range of therapy services TCCR offers. We obtained service user data (i.e. data that is collected, on a wide range of fields, on the emotional and other characteristics amongst service users and how this changes whilst undergoing treatment).

Stage Two: Theory of change development

Literature Review

We examined TCCR's Theory of Change (TOC). This articulates the process by which TCCR makes a difference in the lives and relationships of those that use its services. Put simply, this is the story of how TCCR creates change. It is the backbone of the assessment, as it is from this understanding that the socio-economic relationships will be explored. TCCR aided the first part of this research by providing the following:

- An outline Theory of Change, to help us organise our research. This was then refined by nef consulting.
- A list of references to the body of research on links between couple therapy and some of the State outcomes we mention above.

We then conceptually linked the individual 'well-being' outcomes that TCCR have recorded to State outcomes: (e.g.. *what evidence is there*

that links better mental health and stronger relationships to increased productivity at work, reduced absenteeism or reductions in NHS service us?). We have reviewed the body of research literature and have made common sense reasonable judgments, linking these wellbeing outcomes to state impact. This has involved a number of assumptions, which have been explained in the report and in Appendix 2.

Stage Three: Data Analysis

User outcomes

We have analysed the TCCR service user data to provide an indication of the scale of change and the likely number of beneficiaries. This is explained in more detail in the report.

Stage Four: Economic modelling and analysis

This stage involved building an economic model. This involved four principle tasks, as follows.

- 1. Monetising the TCCR State outcomes:** we placed monetary values on a range of outcomes that the service (indirectly) generates. In practice, this involved identifying from the literature sufficiently clear and persuasive casual relationships that link the TCCR 'wellbeing' outcomes with state outcomes (*preventing x number days lost at work, x number of GP/NHS counselling visits saved etc*).
- 2. Building the ROI economic model:** We then built these values into an economic model consistent with HM Treasury's Green Book. We have kept this relatively straightforward. we explain any assumptions made and the rationale for these in the report and in appendix 2.
- 3. Establishing impact.** Having collected evidence on outcomes and monetising them, those aspects of change that would have happened anyway or which result from other factors were eliminated from consideration (providing us with a 'net-additional impact'). At the same time, we judge the extent to which outcomes resulting from the investment will last over time and to what extent they are diluted by other factors.
- 4. Calculating your Return on Investment.** Adding up the values of all the benefits (including those that might be projected into the

future) and dividing the result by the cost of delivering the service annually.

Appendix2: Modelling assumptions

Area of Impact	Judgment	Evidence & Rationale
Population and scope	467 patients	This analysis is based on couple therapy only. This analysis is based on data obtained for 2009/2010. We have calculated the average number of seen by TCCR in this period by analysing the patients seen in 2009 (765) and 2008 (708). An average of these years is 737 patients. Average patient duration is 7.6 months (63% of one year) so we assume 63% of 737 to be reasonable estimate of the number of patients per annum.
Deadweight: proportion of outcomes that would have been occurred anyway, in the absence of the therapy provided by TCCR.	5% (i.e. keep 95%)	For all outcomes we assume a nominal deadweight to account for the fact that TCCR are not alone in creating these outcomes (attribution captures some of this change). This is a reasonable assumption to make given the lack of data (primary and secondary) about alternative avenues for couples. It is important to note that this is a conservative assumption as it is possible that negative deadweight (i.e. a worsening situation) could occur should TCCR's services should not have been sought. Further empirical research in this area is required to understand how much change would occur.
Attribution: the proportion of outcomes and impact which is the result of the therapy provided by TCCR.	28.4% (keep 71.6%)	For all outcomes we assume an attribution of 71.6%. This is calculated from TCCR baseline data which asks where patients are currently seeking support: GP, other couple therapy, individual counselling or psychiatrist). 28.4% of patients state that they are seeking support elsewhere and so we attribute the remaining value to TCCR's contribution. We consider this appropriate.
Displacement: reduction of outputs & outcomes in other areas caused by the intervention	<ul style="list-style-type: none"> • 25% (keep 75%) • 0% 	<ul style="list-style-type: none"> • Economic conditions mean that there is a surplus of unemployed persons seeking employment. But this judgment relates to the specific beneficiary group (i.e. couples seeking support by TCCR), not all those seeking employment. In our view displacement within this beneficiary group will be minimal, precisely because therapy is not about employment but about personal relationships. To account for the fact that displacement does occur we have applied a 25% displacement rate to all labour market outcomes and we consider this appropriate. • In our view no displacement will occur for the outcomes related to health usage, criminal or civil justice costs of intergenerational outcomes.
Multipliers: 'downstream' economic activity caused by the intervention.	0.21	Multipliers quantify the further economic activity (jobs/expenditure or income), resulting from 'new' expenditure in a local economy. These are multiplied because of the knock on effects of this type of expenditure. We have applied this local economic impact to the value of net additional salaries paid to those who are in employment as a result of couple therapy. We have used a modest composite multiplier of 0.21. This means that for every net additional pound spent a further 21 pence is generated. Source: The Additionality Guide, English Partnerships (note the multiplier is based on those used to assess the economic impacts of retail developments. In our view this is appropriate as this assumes modest local economic linkages).
Benefit Period: The duration over which the outcome has or is expected to last. Usually	<ul style="list-style-type: none"> • 5 years, for 	<ul style="list-style-type: none"> • It is considered best practice to model social outcomes on a five-year benefit period. We have

Area of Impact	Judgment	Evidence & Rationale
<i>referred to in years.</i>	labour market, health usage and criminal justice outcomes <ul style="list-style-type: none"> • 10 years for children outcomes 	used this shorter time period because we lack the evidence to make long term claims, which would require some longitudinal data as well as a reference group. In the absence of this, we prefer to be conservative. <ul style="list-style-type: none"> • Evidence about long-term impact on children from parents who divorce is well documented up to the age of 33 years old ((Kiernan, 1996). We therefore assume that impact on children will last into the future and affect their employment and mental health. We select a ten-year benefit period to illustrate this making the assumption that the benefits will occur between the ages of 23 years old and 33 years old.
<i>Drop off: The deterioration of an outcome over time. Expressed as a percentage, which is subtracted per year.</i>	Labour market, Health usage and criminal justice outcomes <ul style="list-style-type: none"> • Yr 1 – 5% • Yr 2 - 10% • Yr 3 – 25% • Yr 4 – 40% • Yr 5 – 50% Children outcomes <ul style="list-style-type: none"> • Yr 1 –0% • Yr 2 - 5% • Yr 3 – 10% • Yr 4 – 20% • Yr 5 – 30% • Yr 6 – 40% • Yr 7 – 50% • Yr 8 – 60% • Yr 9 – 70% • Yr 10 – 80% 	We have considered two kinds of drop off. The extent to which the outcome deteriorates over time and the extent to which the attribution TCCR can claim deteriorates over time. We have already used conservative benefit periods to make allowance for outcome drop off. Whilst the couples may achieve long term stability and well-being, we preferred to be conservative and this also reflects the nature of other influences in their lives. <ul style="list-style-type: none"> • We have assumed relatively low attribution drop off in the very early stages reflecting the nature of the support described above for labour market, health care usage and criminal/civil justice outcomes. After these initial early stages, in our view, the couples themselves play an increasingly important role ensuring that they make decisions that reduce conflict and anxiety. This proportion increases quickly to 50% in year five. • We have considered a slower drop rate for the intergenerational outcomes to reflect the longer benefit period. We assume that these outcomes drop off steadily over the ten year period.
<i>Net Present Value: Today's value of all outcomes that are expected to occur in the future.</i>	3.5% discount rate	This is used to represent a preference for benefits now rather than later and is expressed as an interest rate used to discount future costs and benefits to a present value. The Treasury currently recommends a discount rate of 3.5% which has been applied to all future benefits.

Area of Impact	Judgment	Evidence & Rationale
<i>Inputs: Total monetary value of TCCR's couple therapy and psychotherapy services</i>	£415,100 (to the nearest £100)	The total value of TCCR's couple counselling and psychotherapy services understood in terms of cost of clinical service (direct costs) and the various overheads allocated by function i.e. proportions of overheads such as building, management, and finance). These costs represent are for services in 2009/2010.

Appendix 3: Financial calculations

State outcome 'area'	Outcome	Proxy description	Proxy	Comments/source
Labour market	Income tax and National Insurance from additional patients in employment full time (previously unemployed)	Gross mean full time salary in London is £50,058 per annum. Proxy is income tax and National Insurance on this income, calculated using Pru income tax calculator http://www.pru.co.uk/guides_tools/calcs/income_tax/ .	£14,414	This is the tax income gained by the State on full-time employment. Assumptions taken from the Annual Survey of Hours and Earnings (ASHE) (Office for National Statistics, 2011) and represent a UK average.
	Income tax and National Insurance from additional patients in employment full time (previously employed part-time) (Income Tax)	Gross mean part-time annual salary in London is £16,197 per annum Income tax and National Insurance paid is £2,820. The proxy is the different between income tax between full-time and part-time £14,414-£2,820	£11,594	This is the tax income gained by the State from full-time employment minus tax income from part-time employment. Assumptions taken from ASHE (Office for National Statistics, 2011) and represent a UK average.
	Multiplier effects from additional patients in full time employment from unemployment	Full-time mean London income after tax is £35,644. Assume a 21% multiplier effect on income after tax on the local economy. ££35,644 * 21% multiplier effect	£7,485	Multipliers quantify the further economic activity (jobs/expenditure or income), resulting from 'new' expenditure in a local economy. These are multiplied because of the knock on effects of this type of expenditure. We have applied this local economic impact to the value of net additional salaries paid to those who are in employment as a result of couple therapy. We have used a modest composite multiplier of 0.21. This means that for every net additional pound spent a further 21 pence is generated (English Partnerships, 2008) (note the multiplier is based on those used to assess the economic impacts of retail developments.
	Multiplier effects from additional patients in full employment (formerly in part-time employment)	Part-time mean wage after tax in London is £13,337 Assume a 21% multiplier effect on income on local economy. £13,337* 21% multiplier effect = £2,800	£4,684	

State outcome 'area'	Outcome	Proxy description	Proxy	Comments/source
		The proxy is the difference in multiplier effect between full-time and part-time employment. £7,485-£2,800		In our view this is appropriate as this assumes modest local economic linkages).
	Benefits savings (JSA/IB/IS) from additional patients in employment	Average cost of JSA, IB and IS per year, taken from the following average weekly amounts: JSA £59.82 IS £84.88. JSA £64.17	£3,620.41	This represents the average cost of benefits that could be avoided through couple therapy. Given the range of clients that TCCR has we find it reasonable to assume an average of JSA, IB and IS. Source: directgov.gov.uk.
	Avoided lost output from absenteeism saving (from symptoms)from avoided sick pay	Average cost of absenteeism is £9.76 per hour in £2004 or £11 in £2011 (adjusted for inflation). £11*8 hours = cost per day	£88.00	This represents the value of lost output to the economy (via businesses) per day of absenteeism (Oxford Economic Forecasting, 2005).
	Presenteeism: Avoided lost output from productivity (from symptoms) from avoided sick pay	Average cost of absenteeism is £9.76 per hour in 2004 or £11 in £2011 (adjusted for inflation). Presenteeism costs 1.5 times in lost productivity to the state than absenteeism. £88*1.5 = £132 per day	£132.00	This represents the value of lost output to the economy (via businesses) per day of presenteeism (Oxford Economic Forecasting, 2005).
	Avoided costs through reduction in GP usage (depression anxiety stress)	Unit cost per visit to a GP.	£53.00	The cost of a CBT session (2 hours) to the public sector (NHS) is of £106 taken from the Personal Social Services Research Unit (PSSRU) (Curtis, 2011). We assume 8 sessions as per NICE guidelines (sessions are calculated in outcome incidence)

State outcome 'area'	Outcome	Proxy description	Proxy	Comments/source
Health Service Usage	Avoided costs through a reduction in CBT/Talking Therapy	Unit cost of CBT session is £106.	£106.00	The cost of a Cognitive Behavioural Therapy session of 2 hours to the NHS (Curtis, 2011).
	Avoided costs of hospital inpatient stays (psychological)	Weighted average of hospital inpatient stay per day for mental health problems is £321. This is multiplied by mean length of inpatient stay for psychological problems, which is 58 days. £321 * 58 days	£18,618.00	This represents the average unit cost of a psychological inpatient stay. Weighted average of hospital inpatient stay per day for mental health problems (Curtis, 2011) is multiplied by mean length of inpatient stay for psychological problems (MIND, 2006).
	Avoided costs of hospital inpatient stay (physical - related to domestic violence)	Unit cost of an inpatient stay for serious wounding related to domestic violence.	£11,000.00	Cost of inpatient stay for serious wounding (Walby, 2004). Figures adjusted to 2011 for inflation
	Avoided costs from long term damage due to drugs and alcohol	Unit cost of alcohol admissions to hospital.	£2,454.00	Total cost of alcohol admissions per year divided by total number of admissions (Alcohol Concern, 2011). This is likely to be a conservative proxy as it is possible that the same individual will be admitted on more than one occasion within a year.
Criminal and Civil Justice Usage	Avoided criminal justice costs relating to domestic violence	Average cost to criminal justice system from wounding during domestic violence.	£2,900.00	Source (Walby, 2004). Figures adjusted to 2011 for inflation.
Intergenerational (children)	Costs avoided through future potential employment in children (benefits	Avoided payment of unemployment benefits paid is 11% of UK average wage i.e. $£500.7 * 52 * 11\% = £2,864$	£8071.28	This represents the avoided benefits paid and lost income tax the State will incur if children of parents who divorce become unemployed later

State outcome 'area'	Outcome	Proxy description	Proxy	Comments/source
	avoided and income lost)	In addition, average income tax per year lost due to unemployment is $\text{£}500.7 \times 52 \times 20\% = \text{£}5,207.28$ This is a cost per year per person.		in their lifetimes. Proportion of unemployment benefits is taken from the Institute of Study of Labor (IZA) (Immervoll, 2009) and average wage is taken from Annual Survey of Hours and Earnings (ASHE) (Office for National Statistics, 2011).
	Costs avoided through avoiding difficulties in children related to depression/trauma/anxiety/stress	Cost of depression and mental health issues per person per year.	£972.00	Depression is estimated to cost England £10.96 billion per annum in social and health costs (Harker, 2011). £8.97 billion of this figure is not included in proxy calculation as it is an estimate of total loss of earnings and consequently there is a risk of double-counting value already accounted for in "Employment in Children". The resulting £1.97 billion had been divided by the number of individuals estimated to have a mental health disorder in the U.K. and receive treatment (The NHS Information Centre, 2007).