

**Pregnancy rates, attitudes and behaviour changes among graduates of
Teens and Toddlers:
Annual Retrospective Study 2009**

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Abstract

Objective

A retrospective questionnaire was designed in order to assess the efficacy of a teenage pregnancy prevention intervention called "Teens and Toddlers". This paper provides an account of the pregnancy rates, attitudes and behaviour changes as well as current employment and educational status of those who graduated from the programme.

Methods

Data from a 37 itemed questionnaire inviting graduates of Teens and Toddlers to comment on and evaluate the programme was posted 6 months after the intervention ended. Those who had completed the project five months or less were not eligible for the study. Projects were located in Islington, Brent, Greenwich, Camden, Southwark, Hammersmith and Fulham, Haringey, Tower Hamlets, Northamptonshire, North-East Lincolnshire, Enfield, Kent, Lewisham, Northumberland, Redcar and Cleveland, Sutton, Tameside and Walsall.

Results

Findings suggested that the aims of the programme are both well-implemented and effective. 96% of graduates under the age of 18 did not report a pregnancy incident. 97.7% from the under 16 category did not report a pregnancy incident. 92% of all respondents and 96.7% of 18's and under were in education, employment or training (EET). Attitudinal responses to questions regarding evaluations of the project were positive.

Conclusion

The findings of this retrospective study have generated results that suggest that the programme is effective in reducing expected pregnancy outcomes in high risk populations. The low pregnancy rates achieved within the sample, coupled with consistent changes in key attitudes and behaviours, as well as low NEET scores are strong evidence for the programme's efficacy. Scores suggest that the intervention tackles teenage pregnancy in a holistic approach by promoting targeted youth support. There seems to be a substantial unmet need for such programmes.

Introduction

The UK has the highest teenage pregnancy rates relative to other countries (Harden et al 2009). In some communities and social networks early childbearing may be considered normative, suggesting that variations of pregnancy rates are a reflection of social and cultural factors. For instance the pregnancy rate among adolescents in Switzerland is one of the lowest in the industrialized world (4.6 births per 1,000 women aged 15 to 19 years) (Ottesen, Narring, Renteria, Michaud, 2002), in comparison to the UK which is ten times as high. More specifically, a systematic review (Harden et al 2009) revealed that societal matters such as the community, poverty, education and family dynamics will greatly impact on young people's decisions to become a teenage parent. Teenage pregnancy is a multifaceted and complex phenomena involving cognitive, emotional, developmental (psychological and physiological) as well as environmental factors (Jordahl and Lohman, 2009). Adolescence is also the transition accompanied by an increased interest in sex, which places young people at a risk of becoming pregnant (DiCenso et al., 2002). Numerous strategies and interventions have been implemented in order to tackle such high pregnancy rates in the UK. This paper will outline some of these, prior to detailing the outcome from the Teens and Toddlers programme six months (or more) subsequent to teenagers completing the course.

A paper entitled "Teenage pregnancy: Accelerating the strategy to 2010" (DfES, 2006) addresses the growing body of evidence of what is working in areas with sharply declining rates, and reflects upon new analysis on the underlying causes of teenage pregnancy. In addition, it addresses how the government will focus support on areas with high and increasing rates. The Teenage Pregnancy National Support Team (TP NST) aims to support these strategies in each top-tier local authority area to achieve local reduction targets which underpin England's Public Service Agreement (PSA) primarily to halve the under 18 conception rate by 2010 (from a 1998 baseline). Other policy initiatives include the Teenage Pregnancy Unit (TPU), which was a ten year strategy aimed to reduce teenage conception. Unfortunately pregnancy rates did not drop by 50% as hoped. The under-18 conception rate increased from 40.9 conceptions per 1,000 women aged 15-17 in 2006 to 41.9 in 2007, and the latest data reveals a rate of 40.6 in 2008 (ONS, 2010).

There has been extensive literature linking adverse outcomes to early sexual encounters and pregnancies. An early sexual debut may lead to emotional problems, such as depression, and low self-esteem (Meier, 2007) which could impede school work and increase the likelihood of undertaking other risky behaviours as well as displaying violent acts (Grimm, 2007). Interactional theories of development (Thornberry, 1987) suggest that engagement in risk behaviours antagonises relations with conventional support systems such as school and family, and strengthens ties with unconventional peer groups (Grimm, 2007). In addition, other findings reveal negative effects associated with teenage pregnancies. Not only have there been links to mental health problems with the mothers, but also the offspring. Children of 14 year old mothers were more likely to display disturbed psychological behaviour, poorer school performance, poorer reading ability,

and were more likely to have been in contact with the criminal justice system and become teenage parents themselves (Shaw et al 2006).

It is important to explore risk factors associated with early sexual activity and unplanned pregnancies. Cross-sectional and prospective research have found that earlier physical maturation, early use of drugs and perceptions of positive attitudes to sexual activity among peers are consistent determinants of early initiation of sexual activity (Siebenbruner, Zimmer-Gembeck and Egeland, 2007). Low academic achievement and aspirations have also been widely identified as risk factors for early first encounter sexual activity (Zimmer-Gembeck & Helfand, 2008). With these research findings in mind, it is paramount that interventions aiming to reduce teenage pregnancies take these findings into strong consideration.

Teenage Pregnancy Intervention Programmes

Numerous intervention programmes have been implemented in order to target those at risk of teenage pregnancies. Evaluations of such programmes have revealed inconclusive findings in terms of their efficacy (HDA, 2004; Swann et al. 2003). Often these initiatives appear to have a positive impact on attitudes, but their effect on actual behaviour such as sexual behaviour or contraception use is inconclusive (Wight et al. 2002).

Sex and Relationships Education (SRE)

Analysis of school-based SRE reveals that they can impact on young people's knowledge and attitudes, delay sexual activity and/or reduce pregnancy rates, particularly when this SRE is linked to contraceptive services. There is no evidence however, to suggest that increased SRE increases the onset or frequency of sex, or the number of sexual partners. A study which systematically evaluated school-based SRE found that a high quality, experientially based SRE programme was rated highly by the young people who received it, had a positive impact on knowledge, and reduced the level of reported regret over first sexual intercourse. However, it had no effect on contraceptive use and sexual behaviour (Wight et al., 2002). Qualitative research at Teens and Toddlers (McDowell, 2005a) revealed that school-based programmes are not generally well-received by young people as they are fear-based, moralistic, inherently theoretical and didactic, and usually conducted in groups that are too large. Specific programmes should therefore be part of a multi-faceted approach if conception rates are to be tackled effectively.

More recently however the Government has reneged on its commitment to ensure that all children should receive broad, balanced and objective sex and relationship education (SRE). Personal, Social, Health and Economic (PSHE) education, which includes SRE, becomes compulsory in schools from September 2011 (updated SRE Guidance, DCSF, 2010). SRE has been supported by many schools suggesting that children should be entitled to full and accurate age appropriate Sex and Relationships Education (SRE), including unbiased information on contraception, STDs, abortion, sexual orientation, and the many forms of family relationship conducive to individual fulfilment and the stability of society.

Abstinence Programmes

Abstinence only interventions encourage both primary abstinence (delaying sexual debut) and secondary abstinence (returning to abstinence after sexual activity) through teaching the social, psychological and health related benefits of abstaining from sexual activity. There is no strong evidence to suggest that abstinence programmes are effective (Swann et al., 2003). Interestingly, there is strong evidence to suggest that they may actually increase teenage pregnancy rates (DiCenso et al., 2002).

Parent/Peer Involvement

There appears to be good evidence that including teenagers' parents in information and prevention programmes is effective. In addition, contraception use is higher in young people whose parents discuss sexual matters with them (Naik, 2008). However, there is little evidence to suggest that peer education works (HDA, 2004).

Targeted Youth Support /Youth Development Programmes

Targeted Youth Support programmes originating in America have been shown to offer the most promising best practice in terms of teenage pregnancy prevention (Swann et al. 2003). Reviews have found that the most effective programmes offer some or all of the following aspects: self-esteem building, voluntary work, educational support, vocational preparation, healthcare, sports and arts activities, and SRE. This was supported by research which revealed that out of 26 interventions, only the long-term, multi-dimensional youth development programme was effective (DiCenso et al., 2002).

Despite criticisms over some of the interventions outlined, a systematic review revealed that teenage pregnancy rates were 39% lower among individuals receiving an intervention compared to those not receiving one (Harden, 2009). In addition early childhood interventions and youth development programmes can significantly lower pregnancy levels, however sex education alone is not effective.

Summary

In summary, previous findings from intervention programmes have revealed that a more systemic approach that encompasses psychosocial factors must be considered by researchers and policy-makers. It is widely agreed that the most effective strategy to achieve a decline in teenage pregnancy is through a multi-faceted approach which does not encourage early sexual activity, but acknowledges that most people become sexually active in their teens. The approach should provide adequate education and information about sexual behaviour and its consequences, as well as confidential, affordable and accessible sources of contraception services and supplies (HDA, 2004). A document published by the DCSF (2007) called "Aiming high for young people: a ten year strategy for positive activities" sets guidelines to transform activities and support services for young people over the next 10 years by ensuring that young people are empowered to have influence over (and access to), high quality youth support services, with a particular focus on the most vulnerable and marginalised. With this in mind, Teens and Toddlers refined their programme and developed a comprehensive approach to personal development and preventing teenage pregnancies, so that it matched the aims and objectives of the strategy.

Teens and Toddlers

The Teens and Toddlers programme is an initiative of the UK charity Children Our Ultimate Investment (COUI UK). It claims to be a practical education and mental health programme that fosters awareness of the realities of conception and parenting through an experiential learning model. The course aims to educate young people about the responsibilities associated with caring for a child by a direct experience of mentoring with a 3-4 year old child.

“Teenagers” accompany and interact with a “toddler” for a two hour session, and then undertake a 1-hour class that includes experiential and theoretical learning about topics associated with understanding the impact of an unplanned pregnancy combined with personal development.

During a Teens and Toddlers programme, participants receive approximately 40 hours of contact time with nursery children and 20 hours of curriculum input. The approach comprises a confluent pedagogy through integrating participants’ personal experiences with a “toddler”, with a theoretical understanding of the impact of having a child and the effects on other aspects of life. Learning through experience is thought to create an opportunity for participants to more fully integrate their learning and increase the likelihood of a lasting effect.

Participants for Teens and Toddlers programmes are selected on the basis of how ‘at-risk’ they are from becoming teenage parents. Potential participants are selected by schools through an ‘at-risk’ rating questionnaire (DfES, 2006). Teachers rate participants on (1) personality factors include: shyness or withdrawn-ness; negativity and lack of self belief; depression (sub-clinical); anxiety (sub-clinical); aggressiveness; and, disengagement from others. (2) attitudes and behaviours about sex and other risk-taking behaviours for instance, frequent drug and alcohol use; lack of interest in their futures; lack of interest in school; how sexually active they claim to be; and, how acceptable they feel it is to be a teenage parent. (3) personality background information; teachers’ knowledge of (or suspicions about) poor school attendance; early puberty; history of sexually transmitted infections; previous pregnancies; family members who had been teenage parents; sexual and/or physical abuse; history of being in care; history of family instability; and history of poor academic achievement. Those scoring highest on this (most at risk) are then invited to enrol for the programme.

Aims of Teens and Toddlers

The Teens and Toddlers programme asserts that an effective way to convey the importance and the value of postponing pregnancy, and thereby achieve a reduction in teenage pregnancy rates, is to give young people an experience of the responsibility and work involved in caring for a child and to help them develop alternative goals to being pregnant, such as satisfying work and relationships. The organisation claims to address all five core outcomes of the UK Government’s Every Child Matters agenda (DfES, 2004a; 2004b) and achieve positive outcomes across a wide range of educational, health and social exclusion indicators.

Efficacy: Teens and Toddlers

Qualitative research reveals that the Teens and Toddlers approach is effective as it: (1) invites teenagers to form and express their own opinions; (2) provides a real life experience of the implications of having a child; (3) encourages them to think about their futures; (4) includes discussions about relationships; and (5) treats them like adults and trusts them to make their own decisions (McDowell, 2005a). Participants have consistently reported that they valued the practical experience of working with small children during the programmes, and that these experiences were highly influential in their decisions to postpone becoming a parent (McDowell, 2004). Further, the process of mentoring a small child during the Teens and Toddlers programme and consistent interaction between “teens” and “toddlers” creates a positive and measurable effect on the small child’s learning. Participants report that this contributes to an increased sense of self esteem and a positive sense of contributing to their communities (McDowell, 2005b).

The most effective measure of the programmes efficacy is longitudinal tracking of graduates in order to determine their pregnancy status. In 2004 a retrospective analysis of graduates pregnancy status revealed no pregnancies had occurred among respondents, and that lasting attitude and behaviour change was produced through participation in the programme (McDowell, 2004). Analysis from the retrospective study in 2006 revealed that the aims of the programme are both well-implemented and effective. This was reflected by data revealing that 97.5% of programme graduates under 18 were found not to have become pregnant or caused a pregnancy. Similarly last year’s (2008/2009) retrospective study suggested that overall 96.9% of respondents did not report a pregnancy incident.

Retrospective Study 2009/2010

Participants

The sample consisted of 451 graduates from T&T who had completed the course a minimum of 6 months prior to posting the survey. From this sample, 397 (88%) were female and 54 (12%) were male with a mean age of 16.7 (SD= 1.88) ranging from ages 14-26. The sample consisted of a variety of ethnic backgrounds (see table 1).

Table 1 displaying ethnicity

	Frequency	Percent
Black	74	16
White	272	60
Mixed	30	7
Asian	24	5
Chinese	4	2
Missing	47	10
Total	451	100

Method

Questionnaires were posted with a free post envelope enclosed, to the graduates of Teens and Toddlers between 2001 and 2009. The programmes were located in Islington, Brent, Greenwich, Camden, Southwark, Hammersmith and Fulham, Haringey, Tower Hamlets, Northamptonshire, North-East Lincolnshire, Enfield, Kent, Lewisham, Northumberland, Redcar and Cleveland, Sutton, Tameside and Walsall.

Response rate

Typically response rates for post based surveys are low, so a £10.00 Arcadia voucher was offered for completion of the questionnaire. Questionnaires were sent via email as well as via the post in order to increase response rates. Previous research revealed that despite great efforts to track teenagers (through visiting their homes) the response rates only increased slightly. In most cases the teenagers had moved away and were not contactable. An executive decision, not to waist time and effort in calling or resending questionnaires when most young people move or change numbers, was reached. 1,188 questionnaires were sent, 451 were returned, and the total response rate was 38% which exceeds the average response rate for postal questionnaires, which is 30% (Heerwegh 2005).

Measures

The questionnaire consisted of 37 questions quizzing teenagers on Teens and Toddlers, how it had effected their beliefs and attitudes about sex, parenting and alcohol as well as exploring their future aspirations and details regarding education, employment and training (see table 2). The questionnaire comprised five sections and was designed to ensure the language and concepts were suitable for the sample group. The instrument was piloted with other young people before distribution and it was modified

accordingly to ensure it was suitable for young people at different levels of educational and ability.

Table 2 displaying sections in retrospective questionnaire

<p>Section 1 asked young people to assess what young people had learned from Teens and Toddlers and to what extent it affected their attitudes, values and behaviours regarding key issues sexual health, parenthood, education and aspirations.</p>
<p>Section 2 ascertained respondent's current situation with reference to education, training and employment.</p>
<p>Section 3 asked respondents to report their pregnancy status. For those who had a pregnancy incident, respondents were asked to indicate dates and opinions regarding the ideal age to become a parent and for those who had had a child, whether they felt they became pregnant at the right time.</p>
<p>Section 4 questions participants on their views regarding alcohol and sexual activity and allowed respondents to make general comments.</p>

When young people initially enrolled onto the programme they were asked to complete a questionnaire (Start up questionnaire) designed to assess their attitudes on a variety of issues relating to the aims of the Teens and Toddlers programme (such as the age they felt able to look after a child, how old they wanted to be when they had a child, STI's and risk). This data was compared to the participant's attitudes now.

Analysis

Data management and analysis were conducted using SPSS for Windows, Release 17.0. Multiple regression analysis was applied. The model takes the form of an equation that contains a coefficient (*b*) for each predictor and its associated t-test that produces a significance level. When t-tests were performed Levene's test for the equality of variance was routinely applied and, if necessary, the unequal variance model is reported (including adjusted degrees of freedom).

All data collection processes were conducted in accordance with the Children and Young People's Unit (CYPU) Core Principles and COUI's internal research policy.

Results

Teenage pregnancy incidents

96% of participants under the age of 18 did not report a pregnancy incident. Those reporting a pregnancy incident were predominantly white (83% were white, 6% were mixed race and 11% were black). For births, the age was calculated for the age of the mother at the time of the birth; for miscarriages and terminations, the age is calculated for the age of the mother at the time of the miscarriage or termination. Government statistics such as those reported by the UK Teenage Pregnancy Unit, do not incorporate the category of miscarriages. Consequently, the current data presents a more robust measure of pregnancy incidents. Out of 18 pregnancy incidents, 5 had a baby, 5 had a miscarriage (this data is removed from overall pregnancy incidents), 2 had a termination and 6 are currently pregnant and plan to keep it. Graph 1 displays frequency of pregnancy incidents for respondents under 18.

Graph 1 displaying pregnancy frequencies.

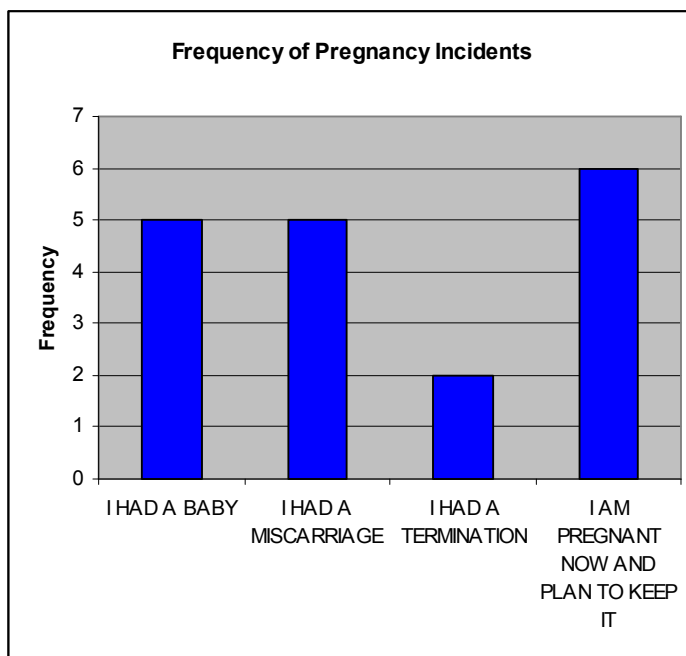


Table 3 provides a full account of the births, miscarriages and terminations reported by respondents since undertaking the Teens and Toddlers programme, corresponding to age group and area. Responses are presented according to the customary teenage pregnancy age bands of 'Under 16' and 'Under 18'. Note that these age categories correspond to the age of the young person at the time of their pregnancy incident, and not their current age. Furthermore those who are pregnant are planning on having the child. Projects located in Camden, Southwark, Hammersmith and Fulham, Enfield, Kent, Redcar and Cleveland and Sutton did NOT report a pregnancy incident.

Table 3: Pregnancy incident by location					
Age group	Births	Miscarriage	Termination	Pregnant	Totals
Under 16					
NE Lincolnshire (n = 37)		1			1
Tameside (n = 28)		1	1		2
Walsall (n = 35)	1				1
Lewisham (n = 17)		1			1
Under 18 (16 & 17)					
Tower Hamlets (n = 7)	1				1
Greenwich (n = 26)		1			1
Hammersmith and Fulham (n = 3)	1				1
Haringey (n = 34)	1	1			2
Islington (n = 48)	1				1
Northumberland (n = 24)				1	1
Brent (n = 48)				1	1
Walsall (n = 35)			1		1
Redcar/Cleveland (n = 25)				1	1
NE Lincolnshire (n = 37)				1	1
Northampton (n = 7)				2	2
Total	5	5	2	6	18

Analysis from the sample of respondents, reveals that for the under 16's category, 97.7% did not report a pregnancy incident. This is not including pregnancy the 3 miscarriages. 96% of under-18 respondents did not report a pregnancy incident. Similarly, this is not including pregnancy statistics for miscarriages whereby 2 were reported. Overall, 28% wished they had waited to have a child, yet do not regret becoming a parent. 17% reported that they felt ready to have a child and the remaining 55% did not comment.

Multiple regressions used to predict behaviours were applied to pregnancy outcome to explore if they could be predicted by Borough. With a significance level of $p < .05$, t tests associated with the b value revealed that there was a relationship but this was not significant enough to predict pregnancy outcome ($t(26) = 1.9, p = 0.06$). It is important to keep in mind that with such a small sample of young people reporting a pregnancy incident, it is difficult to make generalisations.

The questionnaire asked participants what their perception of the right age for them to become a parent. Table 4 displays the overall response to this question. 98% felt that under 18 was too young to have a child. 29% of these were respondents who reported a pregnancy incident. For the pregnancy incident sample, the mean average fell in the 16-18 age brackets, hence lower than the majority of the sample who rated 22-24 to be the ideal age to become a parent.

Table 4: Age to become a parent		
	Frequency	%
Under 16	0	0
16-18	7	2
18-20	41	9
20-22	77	17
22-24	147	33
Over 25	128	28
Missing	51	11
Total	451	100

Coefficient tables displaying t values from multiple regression analysis were used to see if pregnancy outcome could be predicted by initial perceptions of the right age to become a parent. This information was taken from a separate questionnaire (Time 1, see measures section) which was given to the young person at the beginning of the T&T programme. The prediction in this case was not significant ($t(14) = .46 = p > .05$) implying that the perception of an age they feel they could look after a baby did not match what happened subsequently. Looking at the means during pre-testing, we can see that most teenagers felt able to look after a baby at the ages of 18-20, when in actual fact the mean age of pregnancy (calculated at birth of child) was 16 years old.

Qualitative data may shed some light onto how teenagers feel about becoming pregnant. Table 5 displays some of the comments made by teenagers.

Table 5

If you are pregnant, do you feel that you became pregnant at the right time?
<ul style="list-style-type: none"> • <i>I don't regret having my daughter I just believe I could have waited until I was older.</i> • <i>I don't think it was the right time but I wouldn't change him for the world.</i> • <i>I wish I was a bit older because I feel like 16 is too young.</i> • <i>No. I should have waited longer till I got all my grades and finished college.</i> • <i>Yes because I am stable.</i> • <i>Yes, I am in a stable relationship and we are both currently working</i> • <i>Yes, my beautiful daughter helped me get off the streets and to look at life from a different perspective.</i> • <i>Yes I feel ready and mature enough to take on the responsibility.</i>

Education, employment and training

Young people were asked to report their current situation in terms of employment, education and training. Table 6 indicates that 5.8% (94.2% EET) of respondents (overall) were not in education, employment or training (NEET). The majority were still at college or school. The latest figures for the end 2009 show that the proportion of young people aged 16-18 participating not in education or training reached 16.6% (DCSF). When selecting the 18 and under category 3.3% (that is 96.7% EET) are not in education, employment or training (NEET) which is significantly less than the DCSF findings. The high response rate for those in education is reflected in responses to a question asking participants to what extent they agree with the statement, *"I learned that having a good education gives you more choices"* where 92% agreed or strongly agreed with the statement and only 2% disagreed. Interestingly, some graduates of Teens and Toddlers programmes who report pregnancy incidents remained in education, employment or training. Only 7% of those who had a pregnancy incident were unemployed.

T tests revealed no difference between NEET and ethnicity between ethnic minorities and white participants, furthermore, there was no significant differences between gender and NEET.

Table 6 Displaying Information for Employment and Education and Training

WHAT ARE RESPONDENTS DOING NOW				
	Frequency (overall)	%	Frequency (18's and under)	%
School	253	56.1	231	63.9
College	110	24.4	93	25.7
Employed full time	11	2.4	3	0.8
Employed part time	9	2	4	1.1
Training programme	8	1.8	4	1.1
University	13	2.9	0	0
NEET	26	5.8	12	3.3
Missing	21	4.7	15	4.1
Totals	254	100	362	100

Main source of financial support

Young people were asked what their main source of financial support was (see Table 7). Overall, 61% relied on their parents, 12% had their own job for funding and only 7% reported that they relied on benefits. Analysis for the sample who reported a pregnancy incident revealed that 50% relied on parents and 33% on benefits.

Table 7: Main source of financial support		
	Frequency	%
Own job	54	12
Benefits	33	7
Partner	4	1
Parents	275	61
Other relatives	8	2
Other	26	6
Missing	51	11
Totals	451	100

Attitudes and views about the Teens and Toddlers programme

Tables 8 and 9 provide an overview of the responses to the attitudinal questions asked about the Teens and Toddlers project. The tables provide the number of responses (not all participants answered all questions), the mean response, standard deviations, and the minimum and maximum responses. Additionally, the final column in the table provides a summary of the percentage of positive responses recorded for each question. Response scales for this section comprised of either one of two five-point Likert Scales (either 'Strongly disagree', 'Disagree', 'Unsure', 'Agree' or 'Strongly agree'; or 'Not at all', 'Not much', 'Unsure', 'A little' or 'A lot'). Therefore the percentage of positive responses is achieved by summing the number of the 'Agree' and 'Strongly agree' responses, or the 'A little' and 'A lot' responses, to each question and then expressing them as a percentage of the overall number of responses.

Table 8: Attitudinal Questions: Respondents' perceived impact of Teens and Toddlers						
Question	N	Mean	SD	Min.	Max	% +ve
During the T&T project I learned about sexual health – issues such as STIs, pregnancy, and deciding when to have sex.	434	4.3	.7	1	5	91%
During the T&T project I learned that having a good education can give you more choices in life.	435	4.4	.8	1	5	92%
Doing T&T made a positive difference in my life.	435	4.1	.8	1	5	83%
Since doing T&T I am more likely to stay away from people who might get me in to trouble.	433	4	.9	1	5	77%

Table 9: Attitudinal Questions: Respondents' perceived impact of Teens and Toddlers						
Question	N	Mean	SD	Min.	Max.	% +ve
How much do you feel that doing T&T increased your practice of safer sex (i.e. use of condoms)?	428	4.4	2.55	1	5	84%
How much do you feel the T&T project influenced the age at which you would like to have children?	434	4.3	1.07	1	5	83%
How much do you feel that doing T&T had a positive impact on your grades and attendance at school?	434	3.9	2.25	1	5	69%
How much do you feel that doing T&T helped you feel more confident in yourself?	432	4.3	2.61	1	5	84%
How much do you feel that doing T&T made you more determined to achieve your goals?	435	4.3	.89	1	5	87%
How much do you feel that doing T&T helped you understand the need to have financial security and a stable relationship before having a child?	435	4.6	.73	1	5	94%

The data suggests that the most powerful messages that have made most impact on young people are related to the importance of financial security (94%) education (92%) and sexual health (91%). There was no attitudinal difference between males and females. Mean values were virtually identical and standard deviations were very low indicating that respondent's answers were similar. Likewise, there were no ethnicity differences with regards to the attitudinal means thus no further analysis involving t tests were required.

Some comments reflect the high impact percentages. For instance:

Table 10 Respondents comments:

<ul style="list-style-type: none">• <i>“I think T&T is very helpful for some people and could make a big change and difference in people’s lives”.</i>• <i>“I really enjoyed tots and teen and would recommend it to anyone. One of the most amazing things I have ever done. The team were great and hugely supportive”.</i>• <i>“Hopefully I will have finished school and I will be a nursery teacher and Teens and Toddlers helped me with that”.</i>• <i>“T&T has given me an experience in life to know how it feels working with children”.</i>• <i>“In five years time hopefully I will be working with disabled children. T&T has taught me to reach my goals”.</i>• <i>“It made me more determined what to do - want to take part in different projects and made me more determined in life”.</i>• <i>“Teens and Toddlers helped me so much build up my confidence. If I could do the program again I would 100%”.</i>• <i>“From T&T I improved lots of skills. Patience was a key skill and I use this skill outside school all the time”.</i>• <i>“I have learned a lot about myself - confidence I don’t know I had”.</i>
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Lessons learned from T& T

Participants were asked to reflect on their T&T experience and identify three things that they had learned from the course. The resulting data may be clustered into 4 categories.

- Interaction with children/ children’s development
- Communication and relationships
- Sexual Health and Risk
- Education

Below is a table of some of these responses to the question “*What have you learned from T&T*”:

Table 11 displaying what graduates had learned from T&T

Interaction with children and children’s development

- “Children behave according to the environment they are involved/brought up in”
- “Working with children.”
- “How to look after kids and babies.”
- “Having a child is a change of lifestyle”
- “How to deal with toddlers.”
- “Children are more than just cuddles and kisses”
- “How to communicate with and understand young children.”
- “How to interact with children”.
- “About how children keep things inside them instead of letting things out”

Communication and relationships

- “Empathy - considering how others may feel at certain times”.
- “Interpersonal skills - enabling me to be better at integrating with others and how to approach particular situations with love”
- “Being able to say no”
- “How to build relationships”.
- “How to discuss problems with family”.
- “Communication is important”
- “The importance of having a stable relationship”
- “Have finances sorted, stable relationship and education before children”
- “Learning to communicate with your partner. Learning to communicate with children”

Sexual health and risk

- “Safe sex, to be careful.”
- “Safer sex - use contraception and Sexually transmitted infections/diseases”
- “Use a condom”
- “Understand safe sex and sexuality.”
- “Safe sex as it is easy to catch things such as STI's and getting pregnant”
- “you are more likely to have sex when you are drunk”

Education

- “Good education can give you a better life”
- “Have a future and get an education before having kids”.
- “Education is important”
- “Education comes first, babies can wait”
- “I leaned education is a good choice and how to achieve my grades”.
- “A good education can help me achieve my goals”

Future Aspirations

All 451 participants answered the question, *"in 5 years time, what do you hope to be doing"* with answers suggesting that the young people had high aspirations and looked forward to their futures. 58% wanted to work with children (for instance, child psychologist, social worker, paediatric nurse, child protection lawyer, working in a hospital for children, working in a nursery, teacher, midwife) based on their experience at T&T. Interestingly, those who reported a pregnancy incident held high aspirations for the future also (including further education, working with children, becoming a photographer and other careers). Many hoped to go to university or go into training (e.g. fire-fighter, beauty and alternative therapist). Interestingly 90% of the responses were jobs that were people focussed, therefore implying confidence in their own communication and interpersonal skills in order to hope to pursue these careers. Many accounts were highly detailed. For example, *"I would have completed my degree in journalism and then a masters in business. By then I will have a book being published, if not I would like to be a full time journalist and live abroad"*. Goal setting involves identifying and remaining devoted to specific activities essential to reaching an objective. Thus having specific and detailed goals increases the likelihood that these aspirations and goals will become a reality.

Alcohol and Sex

When participants were asked whether drinking alcohol made them more likely to have sex, 83% agreed that it would and only 4% said it would not. The remainder were unsure. Respondents were asked to agree or disagree on a statement regarding sex and alcohol and how this can lead to regret. Most teenagers agreed with this statement (74%) and only a minority disagreed (5%) while the rest were unsure. 22% of the sample admitted to not having sex with a condom, and from this 7% agreed that it was due to alcohol whereas 78% said it was not. Therefore, in terms of risk, teenagers perceived unprotected sex as not necessarily being related to alcohol, whereas having sex in the first place could be due to alcohol. There seems to be a misperception with regards to alcohol and sex.

Commonly held public belief about gender would lead us to believe that males would respond differently to women in terms of attitudes towards alcohol consumption and sex, however in this sample there were no significant differences between males and females.

Facebook

As part of the Youth Development Scheme, T&T graduates were given the opportunity to join a Facebook group where they would be able to discuss topical issues in a forum and access information on sexual health, self esteem, health issues or any other topic that is of interest. 80% of the sample joined which would lead to the interpretation that young people show high regard for the work undertaken at COUI.

Discussion

The results from the retrospective questionnaire reflect the aims of the Teens and Toddlers programme. The programme proved effective in delivering an approach that invites teenagers to express their own opinions, encourage them to think about their futures and encourage them to seriously consider the difficulties of having children early. Prior to discussing the findings in further detail, it is important to note that consideration of the findings in this discussion needs to be undertaken with an appreciation of the fact that Teens and Toddlers actively seeks to work with young people who are considered to be at high risk of teenage pregnancy. Therefore all of the pregnancy rates reported should not be directly compared with population statistics as reported by the Government (TPU and ONS). In fact, the outcomes reported in this study are extraordinarily positive given that the sample size has a much higher than average chance of having a teenage conception.

Pregnancy Incidents

The first finding of interest was the low percentage of pregnancy incidents considering the demographic of the sample. Only 4% reported a pregnancy incident under the age of 18 and this was found in only 13 Boroughs (Lincs, Tameside, Walsall, Lewisham, Tower Hamlets, Greenwich, Hammersmith and Fulham, Haringey, Islington, Northumberland, Brent, Redcar/Cleveland, Northampton). Although there was a relationship between Borough and pregnancy outcome, this was not of statistical significance. Possible reasons for these findings may be attributed to logistical or organisational biases.

Multiple and linear regressions could not predict pregnancy status, however the small sample limits the extent to which statistical analysis may be conducted and hence to what extent this may be extrapolated and applied to the general population. Data collated prior to the course starting, revealed that those who fell pregnant initially scored a mean of 18-20 as being an ideal age to have a child, which matched the rest of the sample thus no differences were sought at the beginning of the intervention to identify those who were most likely to become pregnant. However in the recent data (from the retrospective questionnaire), those who reported a pregnancy claimed that 18-20 would be the ideal age to have a child, but the rest of the sample's average increased to 22-24. The two reported terminations would reflect this, however a significant proportion were either pregnant and planning to keep it or had had the baby. Comments from the participants were mixed. Some teenagers felt that they were not ready but do not regret their decision to have a baby, while others felt that they were in stable relationships and felt that it was a good time to have a child. Interestingly one comment suggested that having a child was responsible for taking her off the streets and looking at life from a different perspective.

It would be interesting to explore if Teens and Toddlers had taught the teenage mothers about becoming a good parent, helping them by building up their self-confidence, knowledge of children and interpersonal skills. It could be argued that respondents who reported a pregnancy incident had such a positive experience with their toddler, that it influenced their decision to become pregnant. Although we cannot wholly discount that enjoyment of the

programme could be a contributing factor in a very small amount of cases, we do not think that this is the case with the vast majority of participants. Furthermore, there is a possibility that some young people who intend to have a child before they even start the Teens and Toddlers programme and no intervention could dissuade them. The fact that they are keen to become a young parent could even have motivated them to participate in the programme, because they get the chance to spend time with young children.

Research suggests that for those who are particularly keen to become a young mum, it is extremely difficult to intervene and present new options to them (Cater and Coleman, 2006). It is feasible that the Teens and Toddlers programme works with a sample of young people with this profile, because it works with 'high-risk' audiences from areas of poverty and disadvantage. However, Cater and Coleman (2006) found that some young people are 'positively ambivalent' towards the idea of becoming a young parent. That is, they do not mind what 'happens to' their body and they are not taking active steps to avoid pregnancy (i.e. they are not using contraception). They do not necessarily feel in control of their sex lives, their bodies, and subsequently their pregnancy status. It was found that this group of young people are key, because they are more open to interventions and are more open to other ways of thinking about their future. The issue of whether the Teens and Toddlers programme ever reinforces or even increases a young person's wish to have a child is clearly something that requires future research.

NEET

5.8% of respondents overall and 3.3% from just the "under 18 category" were not in education, employment or training (NEET). This is over five times less than the DCSF findings of 16.6%. The majority of the participants were still at college or school. Questions relating to their current situation as well as what their attitudes are towards education were very positive. For instance, agreeing to statements regarding the importance of education, as well as anecdotal evidence (comments from teenagers) revealing that many respondents considered education to be of high importance.

Only 7% of the pregnancy incident population in the sample were unemployed. Just as a comparison (but taking into consideration the low sample yet again) the Teenage Pregnancy Strategy (SEU) set the target of getting 60% of young mothers into education, employment or training (EET). The positive findings could point to the notion that, if graduates of Teens and Toddlers become pregnant, they are equipped with the motivation to work as they understand the importance of creating emotional and financial stability in order to raise a child appropriately. When questioned what they would hope to do in 5 years time, all held high aspirations such as going to university, working with young children, becoming a nurse, photographer, owning their own business and even becoming involved in an intervention like T&T. T tests revealed no difference between NEET and ethnicity between ethnicity and white participants, furthermore, there was no significant differences between gender and NEET.

Attitudinal results

The responses to the attitudinal measures were very positive. While attitudes do not necessarily 'cause' behaviour change, it is reasonable to propose that positive attitudes can often lead to positive related behaviours, and indeed this is the premise of all educational and awareness building programmes. The strong attitudinal findings reported in this current study strengthen the position of the Teens and Toddlers programme in terms of extending beyond its original remit of a teenage pregnancy prevention programme. In addition, it has developed in order to incorporate a holistic approach to youth development. The attitudinal questions sampled teenagers attitudes towards Teens and Toddlers and whether it affected their attitudes, values and behaviours concerning certain key issues such as sexual health, parenthood, education and aspirations.

Responses regarding attitudes about the Teens and Toddlers programme suggested that it was very useful and worthwhile. Overall, items scored greater than 69% in positivity, with an average of 84.4%. When asked, 'During the T&T project I learned that having a good education can give you more choices in life.' 92% of respondents scored this question positively (i.e. the two most positive answers on the scale). This finding clearly demonstrates that participants feel that the programme's emphasis on education and the opportunities it provides has resonated within the teenagers. This is a key finding, as it supports the youth development aims of Teens and Toddlers as well as the Government's target of reducing those who are not in education, employment or training (NEET). The question that elicited the most positive response was 'How much do you feel that doing T&T helped you understand the need to have financial security and a stable relationship before having a child?', with 94% of respondents scoring positively. There is strong evidence to suggest that Teens and Toddlers is achieving its aim of encouraging young people to think more carefully about other aspects of childrearing such as the financial costs associated with it. Finally, 91% of respondents felt that they learned about issues relating to sexual health.

The participants were asked what their perceptions of alcohol and its relationship with sex. The majority could identify a link between alcohol willingness to have sexual intercourse (lower inhibitions). Further they could appreciate that this may be associated with feelings of regret afterwards. Qualitative analysis revealed that many respondents felt that alcohol was a problem in teenagers and that "stricter rules" should be applied in terms of its access. Interestingly many did not agree that drinking alcohol would make them less careful in terms of contraception. Overall comments were mature and showed clear understanding of the effects of alcohol and its relationship with sex.

There were no gender differences associated with attitudes, however it is important to note that the ratio of males to females was disproportionate and therefore difficult to draw conclusions based on the sample.

Future Aspirations

All 451 participants (including those reporting pregnancy incidents) answered the question, *“in 5 years time, what do you hope to be doing”* with answers suggesting that the young people had high aspirations and looked forward to their futures. It is interesting to observe the high percentages wishing to pursue a career working with people in an advisory role or caring profession. It could be suggested that the T&T experience may have shaped these future aspirations. In some cases respondents have suggested that the programme has contributed to shaping their future aspirations. Behaviour modification experts recognise that having aspirations and specific goals such as those the participants are reporting is extremely important (Hajek, Humphrey and McRobbie, 2009). By setting sharp, clearly defined goals, individuals can measure and take pride in the achievement of those goals. By setting goals, individuals will also raise their self-confidence, as they recognise their own ability and competence in achieving the goals that have been set. Thus having specific and detailed goals increases the likelihood that these aspirations and goals will become a reality.

Establishing causal links

Causation is a difficult concept to demonstrate, however the respondent's reports and comments from the retrospective questionnaire reveals that T&T has made a positive impact with regards to their attitudes and behaviours. These attitudes have remained positive over varying times suggesting that the Teens and Toddlers programme is effective in the long term and short term. Further evidence to support this may be found in the very low pregnancy status of the graduates. Although cause may not be extrapolated, there is a plethora of evidence to suggest the relationship between the programme and the attitudes of those participating in it. The results suggest that this intervention, targeting at risk teenagers, is efficacious in comparison to other programmes such as abstinence, SRE and peer involvement programmes which were discussed previously.

Improvements to the study's design and implementation

Although the sample size was large, if it were larger validity would increase further. While a 38% response rate is acceptable considering the at-risk and often transient population sampled, the improvement of this would be highly positive, enabling more definitive statements about the programmes efficacy. Typically response rates are 30% for the general population, so considering that the sample consists of low-socioeconomic groups who are notoriously transient and difficult to research, the response rate is not bad.

It was suggested in last year's study that further questions were asked about the respondents' views on alcohol and employment status and this has been achieved in this study. While the original aim of the tracking was to source pregnancy status only, it is suggested that the inclusion of these variables makes it possible for the organisation to draw further conclusions about the programme's effectiveness given the multiple proposed benefits of Teens and Toddlers.

Further research

The DCSF recently commissioned a Randomised Control Trial (RCT) of Teens and Toddlers. The National Centre for Social Research (NatCen) is midway in the Process Evaluation, and will finish in 18 months. This is an exciting development as it should shed some more light on what is most effective about the programmes, and the causal pathways which lead to this.

The current research has concentrated on pregnancy prevention and youth development; however it would be useful to explore this further at a more micro level. It would be interesting to gain an in depth richer understanding of what increases future aspirations and motivation towards educational achievement, as well as the barriers. This may be achieved through semi structured interviewing followed by qualitative analysis such as Discourse Analysis or Interpretive Phenomenological Analysis (IPA). Through generating constructs, these may then be implemented and then tested quantitatively to test the efficacy of the support provided on the intervention. Outcomes will be directly compared to the aims and objectives outlined in the “Aiming high paper” discussed previously.

Conclusion

The findings of this retrospective study have generated results that suggest that the programme is effective in reducing expected pregnancy outcomes in high risk populations. The low pregnancy rates achieved within the high risk sample, coupled with consistent changes in key attitudes and behaviours, are strong evidence for the programme’s efficacy. Teenage pregnancy is a multifaceted and complex phenomena involving cognitive, emotional, developmental (psychological and physiological) as well as environmental factors. Teens and Toddlers has provided a comprehensive intervention that encompasses all these factors, hence yielding low NEET scores, positive attitudinal scores and low pregnancy incident rates.

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