

Parental Alcohol Use and Resilience in Young People in Northern Ireland:

A study of family, peer and school processes

End of Project Report to HSC R&D Division, Public Health Agency

Authors

Aisling McLaughlin, Tara O'Neill, Claire McCartan, Andy Percy, Mark
McCann, Oliver Perra & Kathryn Higgins

Institute of Child Care Research (ICCR),
School of Sociology, Social Policy & Social Work,
Queen's University Belfast

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Abbreviations

ACOA-Adult Child of Alcoholic

ACONA- Adult Child/Children of Non-Alcoholic

COA-Child/Children of Alcoholic

CPD-Child/Children of Problem Drinker

CPND- Child/Children of non-Problem Drinker

PYD-Positive Youth Development

Definitions

Hidden Harm- refers to those children born to and/or living in households where there is alcohol and drug misuse, including the misuse of over-the-counter and prescribed medication (DHSSPS, 2008).

Parent or Carer- When we refer to a 'parent' or 'carer,' we are referring to an adult who had responsibility for caring for a child based on the definition of a 'parent' as outlined in the Regional Hidden Harm Action Plan (DHSSPS, 2008), that is: a *'biological parent(s) and other adults who may have a caring role and/or responsibility for children in a household, such as partners of biological parents'* (pg. 10). Both terms ('parent' and 'carer') are used interchangeably throughout the report.

Problem drinking- This study uses a broad definition of *'problem drinking'* to include any form of hazardous drinking, harmful drinking, alcohol dependence and alcohol use disorders by carers (see McLaughlin et al., 2014).

Executive Summary

This study utilised detailed data (on family dynamics, peers, schools and neighbourhoods) collected from 1,097 parents, their children and siblings over a ten year period as part of the Belfast Youth Development Study. This study aimed to investigate child outcomes (substance use, mental health and education/employment) in the context of parental drinking. The study was also informed by children who were attending a service to build resilience and ensure the safety of children currently living with parental substance misuse (PSM). In *phase 1*, participatory workshops explored the factors which build resilience in children affected by 'hidden harm' providing a UK perspective. Participants (aged 7-14 years) reported their experiences of living with PSM; support seeking from significant adults; sharing experiences with others; and effective coping strategies. *Phase 2* focused on the secondary analyses of the BYDS and family survey datasets and investigated parental drinking within the context of family dynamics, peers and schools/neighbourhoods. One fifth of parents were classed as problem drinkers; the majority of whom were male. Maternal drinking was associated with paternal drinking and a greater proportion of male children lived with PSM. Problem drinkers reported higher rates of separations/divorce; were more likely to be from middle class families, the chief income earner, in full-time employment and had experienced financial difficulties in the past. Offspring alcohol use at 15, 16/17 & 20/21 years was associated with exposure to maternal and paternal drinking when aged 14. The influence of paternal drinking gradually increased over time while associations with maternal drinking peaked at 16/17 years old. Half of problem drinkers did not disapprove of their child drinking occasionally. Half of 15 year old children of problem drinkers reported their parents permitted them to drink unsupervised. Children with older male siblings who consumed alcohol had higher AUDIT scores at 15 & 20/21 yrs. Parental drinking impacted on levels of parental monitoring; and parental monitoring was uniquely associated with lower AUDIT scores at 15 and 16/17 years; positive parent-child attachment was related to lower AUDIT scores across all time points and was more detrimental to child mental health than parental drinking. Children of problem drinkers demonstrated resilience via engagement in activities and relationships outside the home environment. They spent more evenings outside the home (particularly if the male carer was a problem drinker). Aged 15, sons of problem drinking mothers spent more time outside the home and daughters of problem drinkers spent more time with friends of the opposite sex. They were not at risk of peer problems and were as likely to have a boyfriend/girlfriend as a child of a non-problem drinker. However, they were more likely (particularly girls) to be in a relationship with a substance user. Parent alcohol use was not associated with anxiety or avoidance in romantic relationships at 16/17 years. There was a negative relationship between parents AUDIT and daughter's age of sexual debut and by 20/21, a greater proportion of daughters of problem drinkers were

parents. Parental drinking was associated with school attachment and commitment to school (age 14). School commitment decreased for boys of problem drinkers more than girls. Parental drinking was also associated with educational aspirations. Maternal drinking appeared to lead to a decrease in school attachment and safety and lower school commitment and behaviour, particularly for boys. Children of problem drinkers were less likely to engage in helpful behaviour, had lower educational aspirations, were more fed-up with school/never took school seriously. Children of non-problem drinkers evidenced higher academic success however they also were more likely to drop out of a university course. For *phase 3*, workshops were used as an opportunity to validate the qualitative findings (from the previous workshops) with a new group of service users. Eleven children (7-14 years) gave their views on seeking support from others, coping strategies and leisure activities and recommendations for practitioners. A number of recommendations for policy and practice are outlined in the report. The need to support all children and young people affected by varying levels of parental alcohol abuse (e.g. hazardous, binge drinking) is highlighted alongside the adoption of a life-course perspective in service design and delivery, particularly from childhood to emerging adulthood. The development and evaluation of interventions targeting children of substance abusers (particularly those who do not come to the attention of social services) is required (although some interventions in the early stages of design/evaluation are showing signs of promise). Parenting programmes which nurture parent-child attachments, effective parental monitoring and encourage the involvement of older siblings may alleviate some of the negative effects of PSM. Workplace polices are uniquely placed to raise awareness of the impact of PSM on young people's outcomes; education services/schools should have at least one professional trained and aware of the impact of 'hidden harm' (particularly for early intervention). There is a need for universal post-primary school based interventions to build resilience and support youth and; teachers can play a valuable role in tracking and encouraging young people's engagement in afterschool activities.

1. Background to the study

1.1 Introduction

Parental alcohol problems can have a profound impact on children. Children depend on their family to meet their physical, psychological and social needs and their economic security and well-being, all of which can be jeopardised by parents misusing drugs and alcohol (NACD, 2011). It damages and disrupts the lives of children and families in all areas of society, spanning all social classes (Turning Point, 2006). These children often do not receive the attention they deserve, they suffer and grow up in silence and may not achieve their full potential in life (Harwin et al., 2010).

The prevalence of parental alcohol misuse is extremely difficult to estimate, due primarily to the 'hidden' nature of the problem within the family unit (Harwin et al., 2010; Turning Point, 2006; Templeton et al., 2006). Parents may be less willing to enter treatment due to a fear that their children may be taken into care by social services (Powis et al., 2000) (cited Percy et al., 2008) and as a consequence, treatment agency records do not accurately reflect the problem. Children may fear removal from their families and believe they are protecting their family by keeping quiet (BBC, 2014). With many children and young people never coming to the attention of services, there is an urgent need to address the significant impact parental alcohol misuse has on their lives. A number of studies have attempted to provide some estimates on the extent of 'hidden harm.' Velleman & Templeton (2007) suggest problem drinkers, will on average, negatively affect the lives of two other close family members; some of whom may be their children. Manning et al. (2009) reviewed current UK statistics (using data from the Health Survey for England and General Household Survey, both 2004) to provide country specific data on 'hidden harm' in the UK. The study concluded that the number of children living with substance misusing parents exceeded earlier estimates: a more accurate assessment was almost 30% of children (3.3 to 3.5 million) under 16 years in the UK living with at least one binge drinking parent; 8 per cent with at least two binge drinkers and 4 per cent with a lone (binge drinking) parent. In addition, drawing on the National Psychiatric Morbidity Survey (NPMS) the authors indicated that in 2000, 22% (2.6 million) lived with a hazardous drinker (90,000 babies) and 6% (705,000) with a dependent drinker (Manning et al., 2009). In Scotland, approximately 36-51,000 children are living with parental alcohol abuse (BBC, 2014) while estimates for Northern Ireland suggest approximately 40,000 children are living with parental alcohol misuse (DHSSPS, 2008). In Australia, alcohol is a risk factor in an estimated 20,000 cases of substantiated child abuse (Laslett et al., 2010): almost a quarter of those with a caring role for children, reported a child or children they lived with/were responsible for, had been affected

adversely by others' alcohol consumption in the past year (Laslett, Ferris, Dietze & Room, 2012). Dawe et al. (2007) estimated 13.2 per cent of children are at risk of exposure to short-term risky drinking in Australian households by at least one adult. In the USA an estimated 17 million children are exposed to caregivers engaging in binge drinking (National Centre on Addiction and Substance Abuse, 2005). The Substance Abuse and Mental Health Services Administration (SAMHSA) reported more than 8 million children between 2002 and 2007 lived with at least one caregiver who abused alcohol or used illicit substances during the past year or was dependent on those substances (National Survey on Drug Use and Health, NSDUH, 2009). The estimates outlined above and the literature to follow in this report reflect the cultural nature of alcohol misuse with many studies on 'hidden harm' originating in Australia, Canada, USA, UK & Ireland. Substance use is common in western societies and in the case of alcohol may be regarded as normative (Backett-Milburn et al., 2008).

In addition to the above estimates, calls to helplines such as 'ChildLine' have been used to determine the number of children seeking help due to concerns around parental substance misuse. Calls to ChildLine about parental alcohol or drug misuse (from April 2008 to March 2009) indicated almost twice as many children were counselled about parental alcohol misuse (4,028) compared with parental drug misuse (2,284) (NSPCC, 2010). More recently, figures for 2012-2013, reported ChildLine bases across the UK carried out 5,323 counselling sessions with children worried about their parents abusing drink or drugs, which was double the figure recorded in the previous year (2,509 calls) (a quarter of calls were handled by bases in Glasgow & Aberdeen) (BBC, 2014). Almost three-quarters of those seeking counselling were aged under 15 years and a substantial minority, 1 in 10, were aged 11 or under and still at primary school (BBC, 2014). Gillian et al. (2009) provided an overview of children's accounts when phoning the Childline helpline. Issues reported included difficult family relationships, violence, arguments, bereavement, parental separation/divorce and lack of parental care and attention. Other estimates have been derived using community samples: Chalder, Elgar & Bennett (2006) involving a sample of 1,744 adolescents from South Wales, reported that almost one-fifth were children of problem drinkers; they drank more frequently, more heavily, and more often alone than children of parents without alcohol problems.

1.1.1 Impact of 'hidden harm' on children

Exposure to parental alcohol misuse can have a wide range of negative consequences for children. Many children of parents with alcohol problems report feeling afraid or unsafe (ISPCC, 2010) in addition to feelings of insecurity, shame/guilt and loneliness/isolation (Harwin et al., 2010). Caregiver involvement with drug-using lifestyles often leads to unstable and chaotic

home environments for children and can involve exposure to crime or toxic substances (Staton-Tindall et al., 2013). They are at increased risk for verbal (Laslett, Ferris, Dietze & Room, 2012), physical, emotional and sexual abuse. Family alcohol misuse has been associated with low self-esteem, feelings of low self-worth (Burke, Schmied & Montrose, 2006), lack of self-confidence and finding it difficult to trust others. This has a detrimental impact on children's ability to build trusting relationships with 'caring' adults and further contributes to feelings of powerlessness and isolation. Parental alcohol abuse contributes significantly to the number of children and families on social work caseloads (Forrester & Harwin, 2004). Typically, children stay silent about their circumstances to avoid intervention from social services and the risk of becoming 'looked after.' They are at increased risk of coming into contact with mental health services and taking on caring roles and responsibilities for siblings and parents (Webb & Nellis, 2010) and have an increased likelihood of becoming homeless or socially marginalised.

1.1.2 Impact of 'hidden harm' later in life

For a substantial minority of affected children, the effect of their parents' substance misuse continues into their adult lives (NACD, 2011). For some, the impact can be multifaceted and persist not only into adult life but even into the lives of the next generation (NACD, 2011). In addition to the adverse experiences for children of problem drinkers outlined above, a range of further outcomes have been identified in the extant literature which may develop later in life, most notably, during adolescence and emerging adulthood (depending on age of exposure). Various studies suggest children of problem drinkers are at a greater risk of developing their own alcohol and drug problems later in life (Assanangkornchai et al., 2002; Chalder et al., 2006; Chassin et al., 2002; Chassin et al., 1999; Colder et al., 1997; Harwin et al., 2010; Corte & Becherer, 2007; Plant, Orford & Grant, 1989; Christoffersen & Soothill, 2003; Bensley, Spieker & McMahon, 1994; Jacob & Windle, 2000; Wisdom et al., 2007; Stein, Leslie & Nyamathi, 2002). They are at risk of developing emotional and mental health problems/psychological problems/psychological and behavioural disorders including depression, anxiety disorders, OCD and attachment related psychological adjustment (Velleman & Templeton, 2007; Velleman & Orford, 1999; Tunnard, 2002a; Christensen & Bilenberg, 2000; Chassin et al., 1999; Harwin et al., 2010; Corte & Becherer, 2007; Kelley et al., 2004; Plant, Orford & Grant, 1989; Jacob & Windle, 2000) as well as conduct and behavioural problems (Zucker et al., 1996). Exposure to parental alcohol abuse in childhood may lead to issues of trust and reliance on others, fears of abandonment and relationship difficulties later in life (Kelley et al., 2010; Kelley et al., 2004; Harwin et al. 2010). Children of problem drinkers may be at risk of/may exhibit lowered/poor educational attainment/academic achievement (Torvik et al., 2011; Howell et al., 2006; Poon et

al., 2000; Casas-Gil & Navarro-Guzman, 2002; Sher et al., 1991; NACD, 2011), poor educational functioning (Jacob & Windle, 2000) and unemployment (Christoffersen & Soothill, 2003).

1.2 Policy context

The issue of *'Hidden Harm'* presents a very significant challenge to public health policy and practice in the UK and further afield. There is a growing policy and practice focus on this topic in the UK: most is concerned with children of primary school age and younger; older children tend to be neglected in the debate and young people of age 16 years and over are mostly absent from it (Bancroft & Wilson, 2007).

1.2.1 UK policy

In 2003, the Advisory Council on the Misuse of Drugs (ACMD) prepared *'hidden harm: responding to the needs of children and problem drug users,'* focussing primarily on children of problem drug users with the impact of alcohol and tobacco considered as additional factors. The report contained six key messages including *'reducing the harm to children from parental problem drug use should become a main objective of policy and practice'*. Recommendations pertaining to alcohol use included: 1) routine collection of data (on problem alcohol use) from pregnant women at antenatal clinics (and linkage to data on stillbirths, congenital abnormalities in new-borns and developmental abnormalities in children); 2) recording of number, age and whereabouts of children of clients attending specialist drug and alcohol services; 3) the inclusion of 'impact of parental alcohol use' in general teacher training and CPD; 4) at least one trained member of staff in each school; 5) clear links between early years education providers and schools and local social services teams; 6) appropriate training of children and family services staff and drug and alcohol agencies for dealing with problem alcohol use (how to assess and meet the needs of clients as parents and their children); 7) investigation of the role of alcohol misuse in all cases of child neglect, abuse, injury and overdose; 8) all child and adolescent mental health services should explore the possibility of parental alcohol misuse; 9) all non-statutory organisations dedicated to helping children or alcohol users should consider whether they could help meet the needs of children of problem alcohol users; and 10) Drug Action Teams should explore the potential of involving non-statutory organisations in conjunction with health and social services. In 2007, the ACMD published *'Hidden Harm. Three Years On: Realities, Challenges and Opportunities,'* an updated report of the original *'hidden harm'* report and similarly, alcohol use and its effect on children, young people and families were not the main consideration of the report. However they did acknowledge that while the impact of parental alcohol misuse on children has significant parallels with that of problem drug use, it is in need of separate and priority attention.

1.2.2 Northern Ireland policy

The New Strategic Direction for Alcohol and Drugs 2006-2011 (NSD) (DHSSPS, 2006) identified children born to and living with parental substance misuse as a priority group for attention. The NSD contained a specific regional outcome to produce 'an integrated hidden harm strategy for alcohol and drugs' which led to the preparation of the (three year) 'Regional Hidden Harm Action Plan' (DHSSPS, 2008). A number of principles underpinned the action plan including: the welfare of the child should be of paramount consideration; work with the complexity of the issue; a non-judgemental approach; a shared commitment and response; provision to respond integrated with mainstream children's and adult services; focus on prevention and early identification; not all families affected by substance misuse will experience difficulties; parental substance misuse may have significant and damaging consequences for children; building on family strengths; and services need to be based on children's and parents/carers reports of what they need and evaluation of effectiveness. The Hidden Harm Action Plan (HSCB/PHA, 2009) aimed to provide direction, guidance and clarity in addressing Hidden Harm in Northern Ireland. The purpose of the Hidden Harm Action Plan is to put in place the structures, processes, services and support that will ensure that children and young people who experience compromised parenting due to alcohol and/or drug abuse receive the support they need to reduce harm today, and assure their health and well-being in the future. Regional priorities outlined in the plan included: training and workforce development; joint leadership and interagency working arrangements; hidden harm information baseline; and public awareness and good practice. The DHSSPSNI (2011) identified 'families and hidden harm' as an emerging issue which required greater prominence and was subsequently outlined as a key priority (under 'targeting those at risk and vulnerable') in phase 2 of the New Strategic Direction for Alcohol and Drugs (2011-2016). The revised NSD contains a greater emphasis on engaging with parents and carers, both in terms of prevention and education, and treatment and support. It also highlighted the importance of a continued focus on preventing and addressing 'hidden harm' through the implementation of the PHA's Hidden Harm Action Plan. Early intervention was identified as key for young children and families affected by hidden harm (pg. 31).

1.3 Theoretical framework

There is considerable evidence that children can grow up in all sorts of difficult circumstances without developing significant problems (Velleman & Templeton, 2007) often resulting in good outcomes in spite of serious threats to adaption and development (Masten, 2001). Resilience theory (Rutter, 1979, 1987, 2008; Werner & Smith, 1982, 1992, 2001; Garmezy et al., 1984; Luthar et al., 2000; Luthar, 2003) provides a conceptual framework for studying the

development of resilience within the context of parental alcohol use based on three factors: attributes of the young people themselves, aspects of their families and characteristics of their wider social environments. It is important to consider that resilience is not an all-or-nothing phenomenon, nor is it fixed in time (Masten, 2001). Furthermore, an individual may demonstrate major strengths in some areas and at the same time have difficulties in others. Therefore, the domains in which resilience can be observed may be specified, such as educational resilience (Wang & Gordon, 1994) or emotional resilience (Denny et al., 2004). As resilience is the product of an interaction between the individual and their social context, it is potentially open to influence (Velleman & Templeton, 2007). Investigation of the positive factors associated with resilience is vital as they can contribute to our understanding of developmental processes and provide clues for designing prevention strategies (Ostaszewski & Zimmerman, 2006). In a similar vein, the Positive Youth Development (PYD) perspective (Lerner, 2005; Lerner et al., 2005; Lerner, 2006) states that adolescent trajectories of development are not fixed, and can be significantly influenced by factors in their homes, schools and communities (Lerner, 2006).

1.3.1 Resilience

Researchers use the term 'resilience' to describe three kinds of phenomena: 1) good developmental outcome despite high risk, 2) sustained competence under stress and 3) recovery from trauma (Werner, 1997). Resilience is manifested when individuals draw on inner strengths, skills, and supports to keep adversity from derailing their lives (Moe, Johnson & Wade, 2007). There is growing evidence that some children appear to be more resilient than others to the negative impact of parental substance misuse (Templeton et al., 2006).

The Kauai Longitudinal Study monitored the impact of a variety of biological and psychosocial risk factors, stressful life events and protective factors on the development of a multi-ethnic cohort of 698 children, born in 1955 on the north-western most island of Hawaii; these individuals were followed, with little attrition, from the prenatal period through birth to 40 years of age (Werner, 1997). By the time the children from the Kauai study reached preschool age, they had developed a coping pattern that combined autonomy with an ability to ask for help when needed; characteristics which were predictive of resilience in later years (Werner, 1997). Although these children were not highly intellectually gifted, they used whatever talents they had effectively; usually they had a special interest or hobby that they shared with a friend, and that gave them a sense of pride; both boys and girls grew into adolescents and adults who were outgoing and autonomous, but also nurturant and emotionally sensitive (Werner, 1997). Other factors identified in the Kauai study included a strong belief in the effectiveness of their

own actions, a marked sense of responsibility and high self-esteem (Werner, 1997). Werner (1993) also found an individual disposition was more important for females and external support for males. Children with good coping abilities under adverse conditions have temperamental characteristics that elicit positive responses from a wide range of caregivers (Werner, 1997). Werner (1993) recognised a degree of continuity in the resilient sample whereby 'individual dispositions led them to select or construct environments that in turn, reinforced and sustained their active, outgoing dispositions and rewarded their competencies.' Werner & Johnson (2004) followed up 65 offspring of alcoholics from the Kauai longitudinal study and reported that individuals who coped effectively with the trauma of growing up in an alcoholic family and who became competent adults, relied on a significantly larger number of sources of support in their childhood and youth than did the offspring of alcoholics with coping problems by age 32. Overall, utilising a number of coping strategies and mechanisms may operate as protective factors in later life.

Rutter (1985) identified protective factors such as confidence, a sense of self-efficacy, ability to deal with change, a good range of problem solving skills aided by a secure and stable relationship and experience of success and achievement. Velleman & Templeton (2007) also identified a range of protective factors and evidence of resilience. Protective factors included: the presence of a stable adult figure; close positive bond with at least one adult in a caring role; a good support network beyond this; little separation from the primary carer in the first year of life; parents positive care style and characteristics; being raised in a small family; larger age gaps between siblings; engagement in a range of activities; individual temperament; positive opportunities at times of life transition; and continuing family cohesion and harmony in the face of misuse and its related effects (e.g. mental health problems, domestic abuse). Velleman (1996) also reported deliberate planning by the child that their adult life would be different. Many resilient youths leave home earlier and construct their own world (Velleman and Orford, 1999). However, Hussong & Chassin (2002) reported that COAs showed greater difficulties in negotiating the transition (from home to independence/adolescence to young adulthood), fewer positive feelings about the transition and different reasons for leaving home as compared to participants without an alcoholic parent. Many studies demonstrate that ACOAs do not have more problems (e.g. unemployment, difficulties at work or education, in relationships etc.) than non-ACOAs (Templeton et al., 2006). A recent review by Park & Schepp (2014) identified a range of protective factors central to the individual (being older, being male or female, high self-esteem, high self-regulation, high academic and cognitive ability, flexible child temperament/optimistic); parental level (secure attachment, positive parent-child relationship, positive and consistent parenting and less parentification); familial level (one alcoholic parent,

low family density of alcoholism, no psychopathology in parents, low family violence and conflicts, high family cohesion, adaptability and interaction, the presence of other trustworthy family members); and social level (social support, participation in extra-curricular activities, later positive interpersonal relationships).

Family composition and structure may also serve as resilience factors, with support from a non-problem parent or intact and regulated family rituals having been implicated in the literature (Gogineni, 1995). Resilient boys tended to come from households with structure and rules where a male was available as a model of identification and where there was encouragement of emotional expressiveness; the girls, in contrast tended to come from households that combined an emphasis on risk taking and independence with reliable support from a female caregiver (Werner, 1997). A mother who was gainfully employed was a powerful model of positive identification for resilient girls (Werner, 1997). Religious beliefs that provide a sense of stability and meaning in times of hardship and adversity have also been reported as protective factors (Werner, 1997).

Resilient youngsters tend to rely on competent and responsible peer friends and elders as sources of emotional support (Werner, 1997). Associations with friends and parents of friends or neighbours with stable families enable children to gain a positive perspective on family life and to maintain a constructive distance from their own dysfunctional households (Werner, 1997). Resilient children, especially girls, tend to keep their childhood friends in adulthood and rely on them in times of major life transitions (Werner, 1997). Resilient children like school and make it a home away from home; participation in extracurricular activities that reward cooperation and give them a sense of pride and accomplishment is an important protective factor (Werner, 1997). Favourite teachers or youth workers frequently become positive role models (Werner, 1997). The study by Werner (1997) reported all resilient children could identify at least one teacher who listened to them, challenged them and believed them. In early adulthood-adult education programmes, military service, active participation in a community (or church) organisation and a supportive friend or marital partner can all operate as protective factors (Werner, 1997).

Some studies indicate children, particularly boys, will not talk to anyone about their problems and many children report coping by avoiding problems (emotionally or physically) or by distracting themselves (Gorin, 2004). Gorin (2004) suggests children mainly use informal support, and are most likely to talk to parents (more often mothers) or friends, siblings, extended family and their pets. Experience of contact with professionals is mixed: children's

concerns include professionals not believing them, not talking directly to them and not asking to help them when asked (Gorin, 2004). Children want someone to talk to, who they trust, who will listen to them and provide reassurance and confidentiality (Gorin, 2004).

1.4 Literature review

Research examining the impact of alcohol misuse on individuals, families and society spans the past 40 years and there is an extensive body of literature concerning the impact of parental alcohol misuse on children and adolescents (Burke, Schmied & Montrose, 2006). Families differ according to the composition of risk factors that contribute to outcomes, and studies show that not all children experience adverse outcomes (Burke, Schmied & Montrose, 2006) (with the exception of excessive consumption during pregnancy). Most research now supports explanatory models in which the outcomes for children are not only dependent on parental alcohol misuse but on the aggregation of factors such as family demographics, individual characteristics, family interaction, and the psychological functioning of both parents (Burke, Schmied & Montrose, 2006). The following sections of the report outline the international literature on parental drinking, its impact on the wider family environment (family processes and dynamics); and the role of friends, leisure activities, school environment and community in protecting children from the negatives harms associated with parental drinking.

1.4.1 Parental drinking

The association between young people's involvement with alcohol and their parents alcohol use has been well documented (Hooper et al., 2012; Mares et al., 2011; Muller & Kuntsche, 2011; Percy et al., 2008; Kuendig & Kuntsche, 2006; Chassin et al., 1996; Hawkins et al., 1992; Abar, Abar & Turrisi, 2009). In line with social learning theory (Bandura, 1977, 1986), social theorists suggest a modeling effect whereby young people imitate, via observation of their parent's drinking behaviour. Young people are more likely to drink frequently and to excess if they are exposed to a close family member, especially a parent who drinks, gets drunk or is a problematic drinker (Bremner et al., 2011). Parental alcoholism has been associated with early-heavy binge drinking by their children, binge drinking on a weekly basis and infrequent drinking characterised by early age of onset but not escalating in frequency of binge drinking (Chassin, Pitts & Prost, 2002). Parental alcohol problems have been associated with an increased risk for heavy/problem drinking (Sher et al., 1991; Anda et al., 2002) by their child (both genders) in early adulthood (Kestilä et al., 2008) and problem drinking in high school students (Arata, Stafford & Tims, 2003). Braitman et al. (2009) investigated alcohol use among college student adult children of alcoholics (ACOAs). ACOAs reported initiating alcohol use earlier than non-(ACOAs) however, ACOAs did not drink more often or more heavily than non-

ACOAs. Parental alcohol use has been associated with onset (but not progression) of adolescent alcohol use (Stoolmiller et al., 2012). Plant, Orford & Grant (1989) reported that parents who drink heavily are also especially likely to produce children who subsequently abstain from alcohol or drink only lightly. An international review of studies by Plant, Orford & Grant (1989) indicated parents who drink heavily are especially likely to produce children who subsequently abstain from alcohol or drink only lightly. Elliott, Carey & Bonafide (2012) reported family history of alcohol problems had a minimal effect on alcohol consumption but had stronger effects on alcohol consequences, alcohol use disorder symptoms and other drug involvement among university COAs.

1.4.2 Family density of alcohol problems

Multiple problem drinkers are relatively common within families (Percy et al., 2008) and an increased risk of alcohol problems in adulthood has been associated with having had two parents with drinking problems (Orford & Velleman, 1990) or multiple family members with alcoholism (Johnson & Buyske, 2000). Studies have shown that the number of problem drinkers in the household was the strongest predictor of adolescent substance misuse (Mohr, 2000) (cited Templeton et al., 2006) and there is heightened risk to children of all forms of abuse where one or more parents were using substances problematically (Templeton et al., 2006). The number of first- or second-degree relatives with an alcohol use disorder has been associated with more negative outcomes for children. Orford & Velleman (1990) found support for increased adulthood risk among ACOAs who had two parents with drinking problems and had a parent who often drank at home. Children from families containing three or more immediate or extended family members who misuse alcohol are more likely to have adverse outcomes (Burke, Schmied & Montrose, 2006).

1.4.3 Maternal and paternal drinking

Maternal drinking problems frequently occur in the context of paternal drinking problems and maternal drinking may actually be a proxy for 'two alcoholic parents' (Keller et al., 2008; Keller et al., 2005). Few studies have differentiated between maternal and paternal drinking, examining their potentially different roles. Some suggest that maternal drinking has a greater impact than paternal drinking (Christoffersen & Soothill, 2003; Chassin et al., 1999; Orford & Velleman, 1990) while others reported that paternal drinking problems are the robust predictor of risk, with the additional presence of maternal problems having little impact (Keller et al., 2008). Variations in the role of maternal and paternal alcoholism in predicting drinking behaviour (from the paternal side) and mental health problems (from the maternal side) have also been reported suggesting that maternal and paternal alcoholism may confer different risks

varying according to the gender of the offspring (Corte & Becherer, 2007). Pearson, D'Lima & Kelley (2012) (drawing on a college student sample), reported that among women, maternal ACOAs had the greatest risk of problematic alcohol consumption whereas among men, both parent ACOA had the greatest risk of problematic alcohol consumption. Braitman et al. (2009) reported that suspecting ones mother or both parents of alcohol abuse predicted greater likelihood of lifetime drinking; suspecting ones father of alcohol abuse was associated with more frequent drinking during the school year. Assanangkornchai et al. (2002) reported being exposed to a light-drinking father increases the risk of a son's alcohol use disorders exhibited either as hazardous-harmful or dependent drinking. Exposure to a heavy- or dependent-drinking father is associated more uniquely with an increased risk of his son being alcohol-dependent. Maternal alcohol problems have been associated with alcohol use disorders in both sexes (Pirkola et al., 2005). Alcohol use by both parents has been associated with initial levels of alcohol use and volume (Capaldi et al., 2009). Gender specific studies have reported (positive) associations between daughters use of alcohol and maternal drinking behaviour (Schinke, Fang & Cole, 2008). Parental drinking behaviours, especially among same-sex family members, have been consistently linked to the drinking behaviours of offspring (Corbin, Vaughan & Fromme, 2008; White & Jackson, 2004-2005) (cited Niyonsenga et al., 2010). Most participants in the ACOA movement are females (Rudy, 1991) and most alcoholics are men (Grant, 1994) (cited Jaeger et al., 2000). A study by Latendresse et al. (2008) demonstrated that maternal and paternal alcohol use behaviours were positively linked with adolescent use behaviours at 14 and 17.5 years of age. Studies have demonstrated paternal drinking is an important factor for the development of alcohol use in adolescent boys but has less impact on girls compared with maternal drinking; alcohol use appeared to be much more closely related to family relationships in female than in male adolescents (Yeh, Chiang & Huang, 2006). Others have reported significantly less alcohol use among ACOAs (see Hall, 2010). Paternal alcoholism has been associated with elevated levels of sons disruptive behaviour problems (Loukas et al., 2003).

Serec et al. (2012) reported more mental health difficulties among 12-18 year old COAs, with girls reporting more emotional and somatic symptoms than boys. Kelley et al. (2011) reported associations between both maternal and paternal alcohol abuse and depressive symptoms on ACOAs. Balsa, Homer & French (2009) reported adult children of problem drinking fathers were more likely to have been diagnosed with mental health problems while those with a problem-drinking mother had poorer self-perceived health and mental health scores. Respondents with a problem-drinking mother were also more likely to have ever been diagnosed with a mental health problem. Outcomes were worse for daughters of problem drinkers than for sons (data

from NLSY79). A study by Tweed & Ryff (1991) indicated that while ACOAs did not differ from comparison groups on the majority of measures of multiple aspects of psychological wellbeing, they did score significantly higher on measures of anxiety and depression than adults from non-alcoholic families; few gender differences were obtained. A review of the research evidence by Burke, Schmied & Montrose (2006) indicated sons of parents who misuse alcohol are particularly prone to mental health problems. Lynskey, Fergusson & Horwood (1994) investigating adolescent psychiatric disorders among a cohort of New Zealand children up to 15 years, reported COAs had risks of adolescent psychiatric disorders that were between 2.2 to 3.9 times higher than children whose parents did not report alcohol problems (1.6 to 3.0 times higher after adjusting for a range of confounding factors). No gender differences were reported. Findings from a study by Chen & Weitzman (2005) on COPD (children of problem drinkers) college students indicated parents who were active problem drinkers were at increased risk of depressive symptoms and DSM-IV alcohol abuse. Female children were at increased risk of depressive symptoms and alcohol abuse while males were at risk of depressive symptoms only. Stratified analysis by both parent and child gender revealed depressive symptoms among female COPDs were affected by both paternal and maternal drinking whereas among their male counterparts, depressive symptoms were present only when the affected parent was the father. Associations between parental alcohol abuse and depression may be accounted for by the higher risk of having adverse childhood experiences in alcoholic families (Anda et al., 2002). A review by Templeton et al. (2006) indicated parental substance abuse may affect boys and girls differently: the impact on boys tended to manifest itself through externalised behaviours, such as increased aggression whereas girls internalised the negative effects and were more prone to withdrawal and mental ill health. ACAs report more symptomology indicative of depression and general maladjustment than non-ACOAs; gender of the parent and child were not significant predictors of psychopathology in ACOAs (Belliveau & Stoppard, 1995).

Numerous studies have also demonstrated that children growing up in households with parental alcohol misuse are at greatest risk of developing their own alcohol problems in later life. For example, Anda et al. (2002) investigated how growing up with alcoholic parents and having adverse childhood experiences are related to the risk of alcoholism and depression in adulthood; they reported the prevalence of alcoholism was higher among persons who reported alcohol abuse, no matter how many adverse experiences they reported (e.g. sexual abuse, domestic violence, parental separation or divorce). Kilpatrick et al. (2000) suggest substance use among adolescents is a coping strategy to deal with their chaotic family lives.

Brook et al. (2010) reported associations between parental alcohol use (as reported by their children) and early adolescent alcohol use which was associated with late adolescent alcohol use. Late adolescent alcohol use was related to psychological symptoms in late adolescence which predicted young adult psychological symptoms. Males reported more alcohol use and more psychological symptoms than females in late adolescence and more psychological symptoms in young adulthood. In a recent review of the literature, Harwin et al. (2010) suggested many children of parents with alcohol problems are prone to feelings of insecurity, shame and loneliness and suffer from anxiety, depression, aggressive behaviours, and relationship difficulties in their later lives.

1.4.4 Location of/exposure to parents drinking

A report by Demos, which used data from approx. 18,000 people participating in the British Cohort Study (BCS) (participants were born in 1970 & categorised their parents drinking at age 16 and 34 years), found no relationship between drinking habits of fathers and the later behaviour of their adult children (Telegraph, 2012). The authors concluded that fathers were likely to do most of their drinking outside the home (e.g. in pubs) while drinking by mothers was more likely to be witnessed by children and have more of an influence. A delayed effect was reported, that is what teenagers perceived about their mothers drinking habits didn't have an impact at the time, but decades later (cultural acceptability of male drinking might reduce influence of fathers on children's attitudes to alcohol). Velleman & Orford (1990) also reported mothers with drinking problems as being more likely to drink regularly at home. A review of the research evidence by Burke, Schmied & Montrose (2006) reported that there is no clear evidence that maternal alcohol misuse has a greater or lesser impact on children than paternal alcohol misuse. They suggested that children of mothers who misuse alcohol are more likely to be exposed to a variety of risks and it is the accumulation of risk factors that poses the greatest threat.

1.4.5 Family functioning and processes

Children of alcoholics have to contend not only with parental alcohol misuse but also the consequences of the problem spilling over into the wider family environment and family functioning. Parental alcohol misuse brings disruption to family functioning. In general, such families perceive their environments to be less cohesive, lack ritual and routines, tend not to positively express feelings, warmth or caring (either physically or verbally), and have higher levels of unresolved conflict (Burke, Schmied & Montrose, 2006). Dysfunctional family processes lead to greater negative impact on childhood self-esteem than parental substance misuse (Godsall, 1995) (cited Templeton et al., 2006). It can disrupt family life in a variety of

ways including marital distress, separation and divorce, impaired parenting and disrupted family rituals (see Sher et al., 1991; Windle and Searles, 1990), all of which are discussed in the following sections.

1.4.6 Parenting

Parental alcohol use can result in impaired parenting (Sher et al., 1991; Van der Vorst et al., 2006; Van Zundert et al., 2006). Substance misuse jeopardizes the individual's ability to parent consistently and to provide structure in their child's life (NACD, 2011). Maladjustment among COAs is due in a large measure to disruptions in parenting, particularly parents efforts to socialize and nurture their children (Seilhamer and Jacob, 1990) (cited Cavell et al., 1993). Alcohol misuse can impact on the quality of parenting and specific effects can include inconsistency in parenting behaviours, harsh or erratic discipline, high frustration and low tolerance (NACD, 2011; Birdwell, Vandore & Hahn, 2012; Burke, Schmied & Montrose, 2006). When parental judgment is impaired under the influence of alcohol, children are at risk of suffering both intermittent and chronic neglect (Burke, Schmied & Montrose, 2006). Latendresse et al. (2006) demonstrated positive associations between maternal and paternal alcohol use behaviours and adolescent drinking at 14 and 17.5 years of age. However, they also demonstrated that parental monitoring and discipline has unique mediating capabilities, net the effects of all other parenting behaviours. Curran & Chassin (1996) outlined that maternal parenting behaviours may serve to protect or buffer a child from the effects associated with an alcoholic father. Parental monitoring (Stattin & Kerr, 2000) and consistent discipline are important aspects of the parent-child relationship which may be disrupted by parental drinking problems (Roosa et al., 1993; King & Chassin, 2004; Chassin et al., 1993). Monitoring is particularly important during adolescence when a parent's close attention to adolescent activities can prevent substance use, delinquency and other risky behaviours (Beck et al., 2004). Monitoring of child behaviour and greater sensitivity and consistency in discipline and social support for children are important in reducing the impact of parental alcohol misuse (Burke, Schmied & Montrose, 2006). Impaired monitoring can lead to greater peer influence. Abuse of substances can diminish a caregivers ability to respond to children's cues for nurturing, and can impair judgement of priorities relating to care, supervision and guidance (Testa & Smith, 2009); parenting skills and parental attention to the child (Templeton et al., 2006).

1.4.7 Parent-child attachment

There is strong evidence of the indirect effect of parental alcohol misuse on children through the impact of alcohol misuse on parental warmth (Burke, Schmied & Montrose, 2006). Kelley et al. (2011) reported an association between maternal alcohol abuse and reported negative mother-child relationships and paternal alcohol abuse with negative father-child relationships. Cavell et

al. (1993) reported that paternal alcoholism predicted poorer attachment between adolescents and their fathers but was unrelated to maternal attachment. While attachment itself may not be genetic, it might serve to moderate high genetic risk for the development of alcohol use disorders in offspring of alcoholics (Jacob et al., 2003) (cited Vungkhanching et al., 2004). Andrews, Hops & Duncan (1997) reported older boys modeled their fathers alcohol use if they had a relatively good or moderate relationship with that parent but did not model their parents use if the relationship with that parent was relatively poor; the authors highlighted caution should be exercised in assuming that relatively good relationships with a parent are always protective. Family bonding has been shown to be negatively related to adolescent drinking (Kuendig & Kuntsche, 2006) and Masten & Powell (2003) suggest that family bonding is a potentially powerful mechanism to develop or strengthen adaptive resources and competences. Parental drinking can affect caregiver expression of emotion which can interfere with secure caregiver-child attachments (Staton-Tindall et al., 2013).

1.4.8 Family conflict and parental stress

Parental alcohol use can impact on family processes leading to family conflict (Cleaver et al., 2007). In particular, the Stress-Strain-Coping-Support model has been identified to help explain how family members are impacted by another's alcohol use (Orford et al., 2010). Specifically, the model proposes that living with a parent with an alcohol problem is stressful therefore placing children at risk of physical and/or psychological health problems in the future. The availability of coping mechanisms and social support are thought to influence the level of stress experienced. For example, one of the earliest studies on COAs by Cork (1696) interviewed 115 children (aged 10-16) of middle and upper class alcoholics. Findings indicated the majority of children were concerned about parental fighting and quarrelling and they were more deeply affected by disharmony and rejection than by excessive drinking. Everyday alcohol problems may more often have an indirect effect on parenting through marital functioning rather than a direct one (Keller et al., 2005). It has been theorised that marital conflict acts as a stressor that decreases effective parenting or negativity spills over into the parent-child relationship (Grych, 2002). For those whose partners misuse substances, their experiences of parenting can be dominated by a range of associated stressors including relationship conflict and/or breakdown, domestic abuse, family disruption/breakdown, social isolation and insecurity (NACD, 2011). The quality of family life and family cohesion are eroded and the relationship the child has with his/her parents and other family members can be negatively affected (NACD, 2011). Templeton et al. (2009) reported on young people's (aged 12-18 years) experiences of living with parental alcohol misuse and violence. Strong links emerged between parental drinking and domestic abuse, with verbal aggression common, and frequent and physical violence less frequent but of

equal concern. Parent-adolescent conflict was related to problem behaviour for adolescent children of alcoholics but not for non-ACOAS (Barrera & Stice, 1998). Burlew et al. (2013) reported an indirect effects pathway in which unfavourable parenting practices predict parental stress which predicts internalising (negative mood, interpersonal problems, low self-esteem) and externalising (hyperactivity, impulsivity, aggressive/disruptive) behaviours in their children (among children of substance abusing parents). Templeton et al. (2006) reported that associated factors such as parental conflict, family disharmony or worry about drinking that most significantly affect children. Family conflict predicts adult alcohol problems in ACOAs (Gogineni, 1995) (cited Templeton et al., 2006).

1.4.9 Parental attitudes/sanctions/alcohol-use norms

Parental attitudes towards their child's alcohol use, drinking with a parent (for older children) and parent/adult provision of alcohol (for older children) has been associated with a lower risk of regular drinking (Velleman, 2009). Brody et al. (2000), reported that the link between parents alcohol-use norms (acceptability of child's engagement in alcohol use behaviours) and children's drinking behaviour was mediated through the children's own norms. Father-child relationship processes moderated the links between fathers and children's norms and between children's norms and subsequent alcohol use. Parental permissibility of alcohol use is a consistent predictor of teen drinking behaviours (Abar, Abar & Turrisi, 2009). Parental alcohol use is also related to alcohol-specific rule enforcement and alcohol availability in the home (Van Zundert et al., 2006). Alcohol-specific parenting practices appear to be highly important in regulating adolescent alcohol use (Van Zundert et al., 2006). In addition, lenient parental attitudes about alcohol have been directly related to more excessive drinking and alcohol-related problems in adolescents (Mares et al., 2011). Van der Vorst, Engels & Burk (2010) reported both drinking at home (with and supervised by parents) and outside the home predicted subsequent problem drinking, recommending that parents should be more aware of their role in delaying the age of drinking onset. Parents who drink regularly (and are from higher socio-demographics groups) have been reported to have more permissive attitudes to teenage drinking (Smyth et al., 2010). A systematic review of longitudinal cohort studies by Ryan, Jorm & Lubman (2010) reported that delayed alcohol initiation by adolescents was predicted by parental modelling, limiting availability of alcohol to the child and parental monitoring. Reduced levels of later drinking were predicted by parental modelling, limiting availability of alcohol to the child, disapproval of adolescent drinking, and parental monitoring. Some studies (see ISPC, 2010) suggest some young people may view parents and children drinking together as a way of bonding with a parent, normalising alcohol use and accessing alcohol in the home.

1.4.10 Family structure

A cohort study of over 80,000 children in Denmark indicated parent's alcohol abuse is associated with a very high occurrence of family separations (Christoffersen & Soothill, 2003). Other studies have reported similar findings of family disruption (Bensley, Spieker & McMahon, 1994). Dual and mother-only alcoholic families exhibited the most impaired parent-child interactions (Moser & Jacob, 1997). A study by Laslett et al. (2012) indicated that while problem drinking by parents extends across the social spectrum, children in single-parent homes may be at higher risk.

1.4.11 Other factors impacting on family dynamics in wet households

Parents who misuse alcohol may have other multiple and complex problems which impact on their capacity to care for and protect their children. It is difficult to separate the contribution of alcohol and other drug misuse to parenting difficulties from other factors known to impair parenting (Burke, Schmied & Montrose, 2006). Christoffersen & Soothill (2003) reported mothers alcohol abuse seemed to be associated with higher occurrences of disadvantages identified in the study (including drug addiction, teenage pregnancies and unemployment). Parental alcohol problems rarely exist in isolation from other difficulties such as parental mental health issues (Harwin et al., 2010), parental drug use, financial hardship (Girling et al., 2006) and parental separation or loss. Personality characteristics or impairments accompanying an addiction may affect the ability to raise a child (Mayes and Truman, 2002). Even having children with certain characteristics may influence a parents' risk of developing alcohol problems (Pelham and Lang, 1999). Antisocial personality disorders and mood disorders in parents appear to be associated most strongly with alcohol misuse by parents (Burke, Schmied & Montrose, 2006).

1.4.12 Protective factors

In line with resiliency theory and PYD, the effects of parental drinking may be restrained by other child or family factors. The individual temperament of the young person is likely to be relevant (Velleman & Templeton, 2007). Positive family functioning in conjunction with external support for the family (e.g. the presence of a stable adult figure) is considered valuable in terms of increasing children's resilience (Burke, Schmied & Montrose, 2006). Other protective family factors include being raised in a small family, large age gaps between siblings and engagement in a range of family based activities (Velleman & Templeton, 2007). Those exposed to parental alcohol misuse may even move away from the parents earlier than expected

(Bancroft et al., 2004; Werner, 1993) with a view to developing their lives through their own family and children, wanting to escape, to achieve independence and normality.

1.4.13 Parental employment/ SES

COA families have been reported to have higher unemployment rates and lower economic status (Serec et al., 2012). In addition, middle and higher income respondents were less likely to report alcohol related harm to children compared to respondents on low incomes (Laslett et al., 2012). Parental alcohol misuse has been associated with financial loss and vocational instability (see Sher et al., 1991; Windle and Searles, 1990). Households affected by hidden harm tend to be chaotic with above average levels of poverty and worklessness (Webb & Nellis, 2010).

1.4.14 Genetics

Alcohol use disorders run in families, with 40%-60% of the variance or risk explained by genetic influences (Goldman et al., 2005). Substance use disorders may be transmitted across generations through many inter-related influences including heritability (see Kendler, Prescott, Myers & Neale, 2003) and the social environment, including neighbourhood, family and peers. There is some evidence of genetic and intergenerational transmission of alcohol use disorders (Hill & Muka, 1996; Barnow et al., 2002). While it is not within the scope of the current study to investigate heritability, it is possible to investigate peer and neighbourhood factors in the development of child substances use or indeed resilience.

1.4.15 Sibling alcohol use

Parental alcohol misuse may impinge differently on different siblings in the same family (Werner, 1997). A lower risk of regular drinking has been associated with low sibling willingness to use alcohol (Velleman, 2009). In addition to parental drinking, older siblings' desire to use and their actual use of alcohol have also been shown to be predictors of younger siblings' later relationship to alcohol (Velleman, 2009). Research has indicated that older siblings may serve as role models and can influence the drinking behaviour of their younger siblings. In accordance with social learning theory, several investigations report the strongest relationships for siblings who are close in age and of the same sex (Fagan & Najman, 2005). In one early study by Needle et al. (1986), 508 families with an adolescent aged 11-13 and an older sibling aged 14-18 were assessed. The authors reported significant associations between the older and younger siblings' alcohol use if older siblings had not used alcohol in the past year. Conversely, if the older siblings reported using alcohol 20 or more times in the past year, more than 25 percent of their younger siblings reported drinking.

1.4.16 Peer influences & relationships

Two common patterns often emerge among adolescents living with a parent with a substance misuse problem: 1) the development of strong peer relationships which are kept separate from the family, which may themselves involve early alcohol or drug use, participation in sub-cultures perceived to be 'deviant', in antisocial activity, unsafe sex and unplanned and/or early pregnancy and; 2) increasing introspection and social isolation, friendship difficulties (e.g. young person unlikely to visit or invite friends to their own home), anxiety or depression and attempts to escape the family home (e.g. leaving home at an early age, entering into a long term relationship) (Velleman & Templeton, 2007). In addition, ACAs describe themselves as having more negative interaction styles in attachment relationships with peers than non-ACAs (Brennan, Shaver & Tobey, 1991; El-Guebaly et al., 1993) (cited Jaeger et al., 2000).

Fraser, McIntyre & Manby (2009) conducted a small scale qualitative study with children living with parental drug misuse. The children, who displayed considerable resilience, were aware of the emotional turmoil caused by their parents substance use and viewed their social workers as important people in their lives. Children frequently highlight the importance of establishing trust when discussing their needs (see Gorin, 2004) and the 'personal qualities' of helpers, for example, someone who is kind and someone who will listen (Gorin, 2004; Bancroft et al., 2004) (cited Templeton et al., 2006). Children have also reported that professionals in particular fail to listen or understand and appear to talk in a different language (Templeton et al., 2006) or may not speak directly to children (Gorin, 2004) (cited Templeton et al., 2006). Children have reported feeling aggrieved that people have not tried harder to break down this barrier and uncover the truth (Kroll & Taylor, 2003).

The attachment relationship between parent and child is universally recognised to be pivotal for the appropriate long-term development of a child. In the first months after birth, a child seeks proximity to the primary caregiver and if the parent responds sensitively to the needs of the child, the child will create a secure attachment with the parent from which it will explore the world (Bowlby, 1969). Children who experience available and responsive attachment figures will be inclined to develop expectations that they are worthy of love and support and that others are generally trustworthy and available. Conversely, children who do not experience such responsive attachment may believe they are not worthy of the love and support of others and that people are largely unreliable and rejecting. The notion that childhood experiences with parents are 'carried forward' to affect attitudes and behaviours relevant to later intimate relationships is consistent with attachment theory (El-Guebaly et al., 1993). In particular, attachment theory posits that, through continual and repeated interactions with the primary

caregiver, children create internal representations or “working models” of both the self and of the attachment figure (Bowlby, 1969) and of how relationships should function and be maintained in later adult life (Hazan & Shavar, 1987). From this perspective, some early research has noted that alcoholic parents are often inconsistent with the affection they give their children, fluctuating between displays of love and warmth to rejection and detachment (Woititz, 1985). Consequently, COAs have trust issues from an early age and may experience persistent fears of abandonment. Therefore, although ACOAs may desire love and intimacy, it is expected, they are fearful that romantic relationships in their adult lives may be as negative as their early relationships (Wood, 1987). For example, El-Guebaly et al. (1993) drawing on a cross-sectional sample of 203 individuals attending either a short term hospital based outpatient psychiatric program or a community based alcoholism treatment programme, compared the attachment patterns of ACOAs and ACONAs. Results indicated female ACOAs had a distinctive dysfunctional attachment profile; there were no significant differences in the attachment styles of male ACOAs compared to ACONAs, or male substance abusers as compared to non-abusers. Gordon (1995) reported that their ACOA sample had a more “avoidantly attached” attachment style, which they suggested may have served to protect these individuals from the deleterious effects of parental ‘alcoholism’.

Compulsive caregiving has been (negatively) associated with attachment security in adult daughters of alcoholic fathers (Jaeger, Hahn & Weinraub, 2000). Pace, Martini & Zavattini (2011) in examining the factor structure of the IPPA (75-item version) reported sixteen year olds had lower attachment security to their fathers than the results of the other adolescent age groups. Males reported lower alienation scores than females in the paternal form, while females had higher attachment security, trust and communication scores than males in the peers form. These home environments may promote concerns about being able to trust and rely on others, difficulty becoming close to others, and fears of abandonment (Kelley et al., 2010) and it has been suggested that children raised in alcoholic families may carry the problematic effects of their early family environment into their adult romantic relationships (Kearns-Bodkin & Leonard, 2008). People who fearfully avoid intimacy view themselves as undeserving of the love and support of others (Bartholomew, 1990) and have a negative perception of themselves and others (Bartholomew & Horowitz, 1991). A study by Brennan, Shaver & Tobey (1991) indicated ACOA's scored high on avoidant, anxious-ambivalent and fearful-avoidant scales. El-Guebaly, West, Maticka-Tyndale & Pool (2006) found that female ACOAs had a distinctive dysfunctional attachment profile; there were no significant differences in attachment styles of male ACOAs as compared to ACONAs.

ACOA's may approach adult relationships with more apprehension than non-ACOAs. Previous studies have indicated ACOAs report more anxious and avoidant behaviours in their romantic relationships (Kelley et al., 2010; Kelley et al., 2005) and a more fearful style of general adult attachment (Kelley et al., 2005). Kelley et al. (2010) indicated females who suspected their mother of alcohol abuse, reported significantly greater avoidance within romantic relationships compared to those who suspected neither parent of having an alcohol problem: no differences emerged in relation to general attachment. College-student ACOAs report significantly higher anxiety and avoidance scores as compared to non-ACOAs (Kelley et al., 2004). Furthermore, research suggests that children raised in alcoholic families may carry the problematic effects of their early family environment into their adult romantic relationships. In particular, one study using data from the National Survey of Families and Households (Watt, 2002) found that children raised in alcoholic families were less likely to marry, more likely to be unhappy in their marriage, and more likely to divorce, even after controlling for parental divorce. Alcoholic parents may be less able to provide nurturance which is necessary to form a secure parent-child attachment. In anticipation of rejection, ACOA's may prefer to distance themselves from romantic partners; they may desire intimate relationships but may have greater difficulty trusting others and expect rejection and abandonment. These issues are important to address as poor relationships early in life may lead to repetition of behaviour later in life and reinforcement of Internal Working Models (IWMs). Vungkhanching et al (2004) reported participants with a family history of alcoholism were more likely to have insecure attachment, characterized by fearful-avoidant and dismissive avoidant styles. These attachment styles were related to the presence of an AUD even after controlling for sex and family history. Studies suggest a father or male carer's alcohol abuse is associated with insecure attachment in ACOA's (Jaeger et al., 2000; Kelley et al., 2004) (cited Kelley et al., 2010). Individuals with insecure attachment styles have been reported to be more likely to use alcohol in order to cope with a troubled relationship (Levitt et al., 1996; Vungkhanching et al. 2004).

Lindgaard (2005) reported adult COA's are much more prone to be involved in a relationship with an alcoholic. Other studies have indicated they may be at greater risk of early sexual debut (Chandy et al., 1994) and teenage pregnancy (Werner, 1993; Christoffersen & Soothill, 2003). Studies have shown that parental alcoholism is associated with both husbands and wives attachment representations indicating that children raised in alcoholic families may carry the problematic effects of their early family environment into their adult romantic relationships (Kearns-Bodkin & Leonard, 2008). A study by Larson & Reedy (2004) reported young adults from alcoholic families in which family processes were less negatively affected by parental alcoholism, were less likely to report lower dating relationship quality than those from families

in which family processes were more negatively affected by parental alcoholism. Parental divorce was directly related to lower relationship quality.

1.4.17 Leisure activities as a 'coping' strategy

Strategies for dealing with parental alcohol misuse have been identified such as spending time in their room or going to visit friends (Bancroft et al., 2004). Engaging with stabilising people outside the family can be a positive factor in the development of resilience. Serec et al. (2012) found that COA's (aged 12-18 years) reported spending more time in sedentary activities (such as watching television, internet, listening to music) and less time in physical activities. McCauley Ohannessian (2009) reported heavier use of technology (text messaging, emails, watching tv) among adolescents with an alcoholic parent which was also associated with earlier and heavier substance use during adolescence. It may be difficult for some to seek external support due to reasons such as transportation, money, parent's permission (Velleman & Templeton, 2007) or location. Some studies (see ISPPC, 2010) have indicated parental alcohol misuse can impair the child's ability to go places (e.g. parent can't drive if drunk) and friendships (e.g. unable to invite friends home). Individual disposition appears to be more important for females whereas external support is more important for males (Werner, 1993). In addition, while the support of friends appears to be an important protective factor for young people, others suggest that many young children may find it hard to make friends (Werner, 1993). As previously highlighted, exposure to parental alcohol abuse in childhood may lead to issues of trust and reliance on others and fears of abandonment (Kelley et al., 2010). While strategies of detachment, avoidance and withdrawal (Werner & Johnson, 1999) in dealing with a parent can be very effective, they can result in attachment and relationship difficulties later in life (Harwin et al., 2010).

1.4.18 Protective influence of schools

There are a plethora of research studies which focus on parental alcoholism and poor academic performance and educational outcomes of children. While researchers in this area such as Barnes & Farrell (1992) and Casas-Gil & Navarro-Guzman (2002), outline aspects of children's educational achievement that correspond with their school performance including school characteristics, parental involvement in children's school activities, traumatic childhood experiences, family systems, and mental health; there appears to be gaps within the literature concerning the discrete effects of maternal and paternal alcohol abuse on children's school and educational outcomes.

Parental alcohol misuse can affect a child's school work (ISPPC, 2010) and they are at increased risk of interrupted education (Webb & Nellis, 2010). Children of alcohol abusers are at risk of attention and conduct problems at school, repeating a grade, low academic performance, skipping school days and dropping out of school (Serec et al., 2012; Torvik et al., 2011; Casas-Gil & Navarro-Guzman, 2002) and low school bonding (Mylant et al., 2002). Maternal alcohol abuse is particularly predictive of attention and conduct problems and studies indicate children of abstainers do significantly better than children of light drinkers (Torvik et al., 2011). However this association was reduced when the authors controlled for adolescent mental distress (Torvik et al., 2011). McGrath, Watson & Chassin (1999) reported lower school grades among COAs compared to their peers; COAs with two alcoholic parents and at least one parent diagnosed as alcohol dependent showed particularly low grades. Chandy et al., (1993) reported teenagers of alcohol misusing parents perform significantly worse at school. However, the study did identify some protective factors: those who did well perceived that their parents had high expectations of them, rated themselves as generally healthy and assessed themselves to be religious.

The mediating mechanisms accounting for lowered academic achievement and poor school performance among COAs are relatively ambiguous. For example McGrath, Watson and Chassin (1999) suggest that children of alcoholics may have poor organisational and self-regulatory skills attributable to cognitive and attentional deficits associated with parental alcoholism. Therefore, poor academic performance may be linked in some way to prenatal exposure to alcohol due to maternal drinking. In contrast, paternal drinking may have similar effects on children's school and educational outcomes. For example, Farrell, Barnes and Banerjee (1995) found that a father's problem drinking can be a chronic stressor and this environmental influence could account for poorer outcomes in children. In particular, having a father with a reputation as a problem drinker may place additional stress on the child, particularly when they reach adolescence, a period of increased sensitivity and anxiety. Research has also demonstrated that even when fathers live outside the family home, the adolescent may be inadvertently affected by their heavy drinking through visits or via accounts from others of drinking episodes. Indeed, a heavy-drinking father has been associated with depression and other symptoms including poor academic success and lower involvement in school activities (Casas-Gil & Navarro-Guzman, 2002).

A number of additional pathways have been identified that may account for poor school and educational outcomes of COAs. Alcoholic parents may be less encouraging of academic success in their children and may not place as much emphasis on academic achievement. If alcoholic

parents are less involved with their children's school activities than are non-alcoholic parents, they may provide a less supportive environment for their children's academic success. For example, they may not monitor children's activities at home regarding their schoolwork, homework and exam preparation because of their drinking patterns and associated behaviours. This may in part, be due to their own lowered educational success and disinterest in academic achievement which, may not provide an intellectually stimulating environment that encourages academic success in their children (McGrath et al. 1999). A study by McGrath et al. (1999) found that cognitive stimulation in the home partially accounted for the relation between parental alcoholism and cognitive functioning and cognitive functioning is well known to impact negatively upon school and educational outcomes.

Furthermore, poor school performance may lead to school failure and to limited educational and vocational opportunities. Thus, lowered academic achievement among COAs is a potentially important mediator of their negative outcomes (Kandal, 1990) and of future progression to higher education and subsequent employment opportunities. For example, Balsa (2008) using data from the NLSY79 reported having a problem-drinking parent is associated with longer periods out of the labour force, lengthier unemployment and lower wages, in particular for male respondents. This may be due to increased probabilities of experiencing health problems and abusing alcohol. One way that many children demonstrate their resilience is by the professions they enter (Templeton et al., 2006). Studies have demonstrated that adults who were children of substance misusers were now successfully engaged in careers as therapists, social workers, medical students or doctors (see Coombes & Anderson, 2000).

Extensive research on young people's connectedness with school has proved to be a protective factor; a strong social bond with school is associated with diminished involvement in a range of adolescent health-risk behaviours (Bond et al., 2005; Jenkins, 1997; Resnick et al., 1997; Libbey, 2004) and conversely a reduced connection with school can have a negative health impact (Bonny et al., 2000). Other school attributes including school size, discipline policies, classroom management and extracurricular activities have all been found to modify school connectedness (McNeely et al., 2002) and it is therefore important to consider this context in terms of hidden harm.

While schools are a complex risk environment for the adolescent (Perra et al., 2012) they do have potentially significant benefits for CPD's. The first goal of schools is to provide education and skills. However, schools also play a pivotal socialisation role and are usually the first formal social environment that children experience. Furthermore, school peers may be important in

influencing the values and behaviours of young people, particularly as they become independent from their families. Support from the school can be a protective factor that can lead to more resilient outcomes for young people as they attempt to move on from their difficult pasts by their own actions such as making the most of education or work opportunities (Bancroft et al., 2004). Evidence suggests children of alcohol abusers even report that they enjoy being at school as much as other children (Torvik et al., 2011). Where some elements of parenting skills may be deficient, teachers have been shown to help compensate for lack of parental warmth and support at home particularly for those families on a low income; positive relationships with teachers have been shown to be beneficial in motivating low SES students and can have positive effects for students at risk (Wehlage 1989). Overall stabilising activities such as school, clubs, sports and religion can be beneficial in helping a young person to develop a sense of self and self-esteem (Velleman & Templeton, 2007). In particular, some research has suggested that children who attend religious services and/or believe that religion is important in their lives, may be protected from parental substance misuse.

1.5 Methodological shortcomings of previous studies

The limited research to date, that has attempted to unveil the types of harm associated with parental substance misuse, is largely restricted to retrospective cohort studies (see Manning et al., 2009; Anda et al., 2002). Relatively few longitudinal studies have addressed the impact of heavy drinking in families and allow questions of causality to be addressed (Girling et al., 2006, van der Zwaluw et al., 2008) particularly during adolescence and emerging adulthood and many have highlighted the need for further research to address this gap (see Adamson & Templeton, 2012). Clinical studies of alcoholic parents (e.g. Chalder et al., 2006; Obot & Anthony, 2004; Orford & Velleman, 1990; Christensen & Bilenberg, 2000; Sher et al., 1991; Colder et al., 1997; Orford et al., 2003) and treatment agency records do not accurately reflect this 'hidden' problem. Clinical samples may overestimate pathology by focusing on more severely impaired patients (Chassin et al., 1999) and they do not encompass those who have not acknowledged their drinking as problematic or are 'functioning' heavy drinkers, remaining undiagnosed. Parents may also be less willing to enter treatment than non-parents due to a fear that their children may be taken into care by social services (Powis et al., 2000). As parental drinking is usually extreme before services are made available to families and given that heavy parental drinking is more prevalent than clinical drinking problems, these behaviours may have a more pervasive impact on outcomes for young people (Keller et al., 2005) and implications for society as a whole. Girling et al. (2006) reported the need for research among the general population, both internationally and locally. The potentially different roles of maternal and paternal drinking also require further investigation (Girling et al., 2006). Many studies of ACOAs

examined university or college students, relatively few examined community samples of ACOAs (Park & Schepp, 2014). University/college ACOA's may be relatively resilient populations because they have achieved academic success despite adverse circumstances (Park & Schepp, 2014).

1.6 Rationale for the current study

A recent systematic review by Stanton-Tindall et al. (2013) highlighted the lack of research examining the direct effects of caregiver substance use on child outcomes. The impact of parental alcohol use on children can be diverse and 'each family has to be assessed in its own right and assumptions cannot be made' (Kroll and Taylor, 2003: 173). One of the strengths of this study is the collection of longitudinal data from young people (and their parents/carers) over a long period of time. Data collected over a number of years allows us to investigate more extensively developmental change in a number of important domains (e.g. educational and substance use).

1.6.1 Study aims

This study aims to:

- Examine longitudinally relations between family alcohol use, family processes, peer and school effects;
- Determine the positive/protective factors that promote particular domains of resilience (e.g. mental health, academic) during adolescence and emerging adulthood;
- Engage with service users during the research process;
- Inform the development of effective policy and practice in Northern Ireland and future afield, to improve outcomes for children and young people exposed to 'hidden harm.'

1.7 Methodological overview

The study was set within a pragmatic paradigm using a sequential mixed design (Teddlie & Tashakkori, 2009) whereby each strand of the study occurred in chronological order (see figure 1). Questions or procedures of one strand emerge from or depend on the results of the previous strand and research questions are built on one another and may evolve as the study unfolds (Teddlie & Tashakkori, 2009).

1.8 Advice & Implementation Group (AIG)

An AIG group was established at the outset of the study. Membership consisted of academics from Queen's University Belfast and representatives from the Public Health Agency including

the 'Hidden Harm' coordinator and the Health Intelligence Manager (who are also members of the Regional Hidden Harm Quality Assurance Group which oversees the implementation of the Regional Hidden Harm Action Plan). The AIG also contained representation from those currently working with children living with parental substance misuse including the Pharos service at Barnardo's (the Children's Services Manager, Pharos practitioners) and the South Eastern Trust (Health Development Specialist). The aim of the group was to develop and regularly update a plan for the transfer of knowledge to ensure appropriate dissemination of research findings to current service users and practitioners and policy makers in Northern Ireland (and beyond). The AIG advised on the plan of research (e.g. suggesting objectives, hypotheses), provided their views on the results of the analyses and advised on the potential for producing outputs and routes of dissemination. Current service users informed the study via the participatory workshops (outlined in sections 2 and 7 of this report). Contact with the AIG group has been ongoing (since completion of the study) and a recent addition in an advisory capacity to the study, is Professor Mark McGovern from the Dartmouth Institute for Health Policy and Clinical Practice, New Hampshire, who specialises in Implementation research. Professor McGovern is currently advising the group on the preparation of a knowledge transfer application to implement the findings from this study into practice/intervention design.

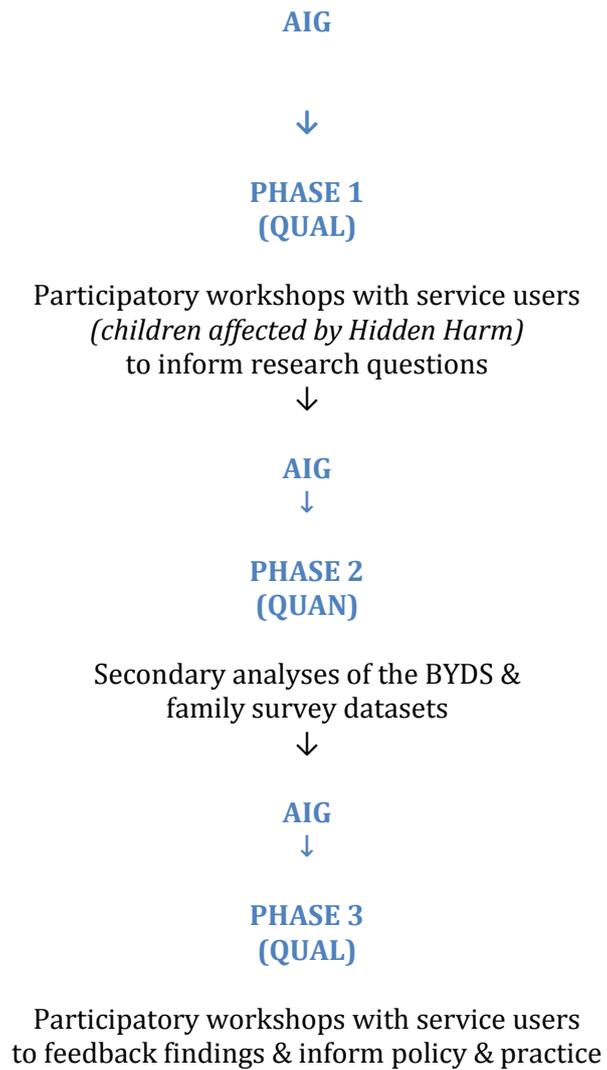


Figure 1 **Phases of the research study**

2. Participatory workshops with service users

2.1 Background

To date, research aiming to understand the experiences of children of alcoholics/problem drinkers has tended to focus on their experiences of living with a substance misusing parent (e.g. Wilson et al., 2007). The seminal study by Cork (1969) interviewed 115 children (aged 10-16 years) from middle and upper class families in Canada where a parent/s were alcoholics, with young people providing accounts of their experiences of living with an alcoholic. Kroll (2004) conducted a content analysis of studies featuring accounts from children, young people and young adults about growing up with parents who misuse substances and identified six primary themes: denial, distortion & secrecy; attachment, separation and loss; family functioning, conflict and breakdown; violence, abuse and living with fear; role reversal, role confusion and the child as a carer; the needs of the child. Barnard & Barlow (2003) interviewed 36 children of drug dependent parents and described the experiences of these young people (themes included discovering drug use, keeping it in the family, responding to the discovery). Others (such as Templeton, Novak & Wall, 2011) have accessed children's opinions on how they view and benefit from services. A number of key overlapping themes which dominate the findings in relation to children's views include secrecy, isolation, emotions, conflict & disharmony, roles and coping (Templeton et al., 2006). Hill (2013) explored the impact of parental alcohol problems on the lives and experiences of support received among thirty children and young people (aged 9-20 years) in Scotland. The main themes which emerged from this study were the direct and indirect ways in which children discussed a parent's problem drinking. Direct discussions on alcohol focussed on historical parental drinking (which was deemed easier to talk about due to '*a sense of distance*'), views on treatment services for parents (e.g. positive signs of parental engagement in treatment) and living circumstances (fluidity of living arrangements throughout childhood, absent parents, important role of the wider family). Indirect discussions on parental alcohol problems were identified via extensive knowledge about alcohol problems, use of the third person, using a hypothetical scenario, talking about their own lives with the impact of parent's alcohol problems implied and talking about a collective experience. Emergent themes reflected participant's knowledge about alcohol as a substance; the health consequences of drinking alcohol; and how it affects the behaviour of the person drinking, and to a lesser extent the feelings of those around them (these were viewed as indications of being exposed to parental drinking). Hill (2013) reported the majority of children express their love for a parent and concern for their wellbeing: children may feel upset and anxious as well as frustrated and angry about their parents' use of substances and the impact on their lives.

To date, empirical studies have relied primarily on quantitative data to understand the individual and environmental factors associated with the lives, the developmental trajectories, and the growth of children of alcoholics and other substance users. Many of these studies focus on their risks, and very few of them focus on their strengths (Moe, Johnson & Wade, 2007). Some studies have elicited retrospective accounts (e.g. Velleman & Orford, 1990, Wilson et al., 2007; O'Connor et al., 2014) from adults who have grown up with parents who misused substances recalling their experiences and emotions at a distance (Kroll, 2004). However the reliability of these recollections has been questioned Kroll (2004). To our knowledge, there has been relatively little research into the perspectives of children on 'resilience' using participatory methods, their understanding of the factors that build resilience and the use of coping skills in children affected by 'hidden harm.' While quantitative studies are valuable, qualitative methods can provide greater insight into the child's perceptions of resilience and the people or activities (e.g. a protective older sibling; involvement in sports) they found beneficial in coping with parental drinking. Templeton et al. (2006) identified a need for more qualitative work that examines the views of (parents and) children, and work which focuses on positive, resilient and strength-based approaches. A couple of studies such as Moe, Johnson & Wade (2007) (using standardised qualitative interviews) and Holmila, Itäpuisto & Ilva (2011) (open-ended responses to web-based questionnaires) have attempted to elicit views on factors which build resilience and accounts of children's experiences of living with parental substance misuse. In addition, studies (on parental substance misuse) which access children directly are relatively rare due to the sensitivities and ethics involved (O'Connor et al., 2014). Talking about parental alcohol and/or drug use is difficult for children (Kroll & Taylor, 2003). Family members including children can be hard to engage with, because they feel too ashamed about their situation, are used to keeping the substance misuse a secret, or simply do not know where to go for help or what to do if help is available to them (Templeton et al., 2006).

While the in-depth review of the international literature has identified a range of family, peer and school factors that can build resilience in young people, we were keen to engage with current service users (prior to the analyses of the BYDS data) to ensure their experiences of living with 'hidden harm' informed the research questions/process. This is in line with Article 12 of the UNCRC (1989) which states that children and young people have a right to have a say in issues that affect them. Kroll (2004) reported that children need to be seen, heard and engaged with on a real level if they are to feel confident about being helped. Thus the aim of this section is twofold: 1. to identify/understand the factors that help a child to be resilient based on the perspectives of children currently living with parental alcohol misuse and, 2. to give children

an opportunity to inform the research questions and objectives for the secondary analyses of the BYDS datasets.

2.2 Methods

2.2.1 Recruitment & sample

Participants were selected for the study due to their experiences of living with parental alcohol misuse and were current service users attending the 'Pharos' service at Barnardo's. Although the Pharos service deals with substance misuse, the majority of children attending the service are there due to parental alcohol misuse. Inclusive practice was used to ensure the involvement of all eligible participants. Participants were assured that a decision not to take part in the study would not affect their service provision. The research team relied on gatekeepers (children's services manager, group work practitioners) for the initial recruitment of service users; staff members indicated that the children attending the service are keen to help other children in similar circumstances. A member of the research team (AMcL) met with staff on a number of occasions to discuss the project in detail and inform the development of 'user friendly' (accessible language) information packs. Gatekeepers were provided with information packs to distribute to the children and their parent/carer. Each pack contained a participant information sheet (PIS), a consent form (to be signed by the child and a parent/carer/guardian) and a freepost envelope. The packs were distributed during the group work sessions and the practitioner read the PIS and consent form with the children, providing them with opportunities to ask questions. The researcher briefed the practitioners on all aspects of the study/potential questions; provided the practitioner with a mobile phone number if any questions were raised during the sessions which were held in the evenings/afterschool. The children were encouraged to take the information packs home, read with their parent/carer and sign the consent form by 'opting' in to take part in the study (both child and a parent/carer were required to sign the form) (returned to practitioner or researcher via freepost envelope). Consent forms required them to indicate they had: read and understood the PIS; understood they could leave the study at any time without giving a reason; understood the information they gave would be kept private; and agreed they were willing to participate in the project. Parents were aware the child was attending the programme and alcohol misuse was an issue that the parent and child had already discussed/shared. Therefore, distributing information packs was not deemed to be a risk of generating any problems/issues between the parent and child. Contact details for the researcher were provided so that the parent/caregiver or child may contact the researcher if they had any questions.

Twelve children (five boys & seven girls) participated in two workshops (six in each group) in two locations (Armagh & Belfast). It is important to note that initial discussions with the service providers indicated that teenagers would be accessing the service (up to 16 years of age). However, once recruitment was initiated it was clear the sample were much younger. Children taking part in the groups were aged 7 to 14 years old (average age was 10 years old). It was not possible to stratify groups by age due to time constraints and as a result there were quite large age gaps between children in groups: group one- 8 to 14 year olds; group two – 7 to 12 year olds. The researcher did not collect information on the gender of the carer/parent who had the drink problem, who the child was currently living with or indeed the circumstances surrounding the parent's substance/alcohol misuse (e.g. length of the time the child had been exposed to parental drinking). There were a number of sibling groups across the workshops: 2 x 3 siblings and 1x 2 siblings.

2.2.2 Procedure for workshops

Participatory style workshops were chosen as an enjoyable and age appropriate method of data collection and were deemed to reflect an appropriate level of involvement for the service users. Due to the sensitivity of the research topic and vulnerability of service users, the research team decided not to fully engage with children on a regular basis throughout the research project as they may find it difficult to commit time to the study. Workshops held at the outset of the research project provided the young people with the opportunity to inform the research process by identifying the factors that had helped them/they thought could help other children in similar situations to become resilient despite exposure to a parent drinking; and to suggest research questions/areas that require further investigation. Workshops held towards the end of the study gave participants a further opportunity to provide their views on the research findings, derive their own recommendations for policy and practice and recommend strategies (that may be utilised by the research team and the Regional Hidden Harm Quality Assurance Group for the potential application and dissemination of study findings). Workshops also gave the participants insight into the research process.

The method of data collection was chosen as children attending the service were familiar and felt comfortable with sharing experiences in a group setting (as it is similar to the format of delivery of the Pharos service). A familiar venue was also used to ensure they felt safe and secure. Workshops were held during the final week of the Pharos programme (each child had attended the programme for a number of weeks). Consent forms (signed by the child and a parent/carer/social worker) were returned prior to the workshops. Each group lasted approx. 45 minutes to 1 hour and were facilitated by one researcher (AMcL). Some Pharos staff were

present during the workshops: a Pharos volunteer (& social worker) were present during the first group; both the Children's Services Manager and a Pharos social worker were present during the second workshop.

Each child was asked to complete a name badge and a brief demographic sheet (age, gender). The researcher explained why they were asked to take part in the study (by telling us what you think/what questions we should ask, you will be able to help other children in similar situations e.g. by helping to improve services and support for children) and advised that they did not need to talk about their own personal experiences; they could simply discuss young people or children in general who had been affected by hidden harm (a practitioner was present in the event of a child disclosing or elaborating on personal experiences that hadn't previously been raised). Confidentiality, anonymity and privacy were explained to the children (in the information sheet and on the day of the workshop) and they were very familiar with the terms due to their involvement in the Pharos group work programme). They were advised that in the event of disclosure during the workshops (that raised concern for their safety or for the safety of others), the researcher would have to inform an adult (such as their Pharos practitioner) to ensure their/others safety and provide signposting to relevant help-lines and support agencies to deal with specific issues. The children were encouraged to ask questions at any point during the workshop. Some ground rules were outlined: don't repeat anything that's been said outside the workshop; can stop or leave the group at any time by using hand signals (hand up indicating 'STOP' or 'don't want to answer,' time-out sign to end questioning; thumbs up to continue questioning); everyone's opinion is important; give each other a chance to speak; try not to speak over each other; and don't have to agree with each other. The researcher was also prepared to stop the workshops if any of the children became distressed.

The term '*resilience*' can be a difficult concept for children to grasp (see Moe, Johnson & Wade, 2007). With this in mind, the children were asked to suggest 'who' or 'what' can help children or young people to be strong, to cope or be happy or indeed what can protect them from harm when they have a parent who has a problem with alcohol use (and to identify how they made a young person happy/what effect it had). The researcher guided the participants through the discussion using a topic guide which was informed by the review of the literature including: parents/carers, other family members, friends, school, neighbourhoods/communities. The children were provided with poster paper, coloured cards, glue, markers etc. and were encouraged to write down anything they thought could be useful in helping other children affected by hidden harm. Each took it in turn to write/draw on the cards. Some children did not want to write-they were encouraged but not coerced to do so. Other children often volunteered

to write the suggestions on their behalf. Once they had exhausted all ideas, they completed a ranking exercise (poster) to list the factors from most to least important which provided prompts for the discussion or representation of the key issues. The physical logistics of completing the poster making/ranking exercises often involved the facilitator and the children sitting on the floor in a circle. This may have encouraged informality, and may have countered any perceptions of the facilitator as an authority figure. The facilitator dressed casually, wore a name badge and was on first name basis with Pharos facilitators etc. Participants were given the opportunity to ask any final questions at the end of the workshop.

The researcher took field notes, with the consent of the children, which were anonymised. She explained that the notes were simply to help her remember the important things they said during the workshops. Discussions were not audio recorded to put the children at ease as an in-depth content analysis of children's views was not an objective of the study. The poster making ranking exercises ensured that all key variables were recorded and ranked by importance. All notes were stored on a password protected computer in an encrypted file. Consent forms were stored in a locked filing cabinet in the ICCR.

Each child received a thank you card, a list of local support agencies and a small gift as recognition of their time and effort. Appropriate support was available during and after the workshops: children were encouraged to talk to their practitioners if any issues were raised during the workshops. Debriefing meetings were held with practitioners after the workshops.

2.2.3 Ethics

Ethical approval for this phase of the study was sought and granted by the School of Sociology, Social Policy & Social Work Research Ethics Committee (REC) (Dec 2012) and the Barnardo's REC (Jan 2013). The study was registered with the University Human Subjects Research Database. Protocols were developed to ensure the safety of service users and the researcher. A member of the research team was identified as a point of contact and was made aware of the researchers location at all times to ensure personal safety. Protocols were also developed to address the disclosure of serious incidents and service user distress. In the event of disclosure the researcher would provide appropriate signposting to relevant helplines or encourage the children to speak to their practitioner (who was present during the workshops). Both committees reviewed consent arrangements, participant information sheets, confidentiality arrangements, fieldwork protocols (researcher safety, disclosure of serious incidents, participant distress), data handling and storage and security to ensure the study met acceptable ethical standards.

2.2.4 Data Analysis

The field notes and posters/ranking exercises were condensed into a list of themes and subjected to a thematic analysis using NVivo (2013). Analyses focused on the spoken or written words of the participants (while completing drawings). Drawings were not analysed, they were simply used to facilitate discussions.

2.3 Research findings

2.3.1 Living with an alcoholic parent

When discussing the parent or carer with the alcohol problem, the children talked about their frustration with their parent. A twelve year old boy reported the best approach for dealing with a parent who abuses alcohol is to throw them out of the house (*see image 1*). Other approaches for dealing with an alcoholic parent were suggested: 'You have to be hard on them. They won't listen if you're soft' (female, age 10). When asked whether the parent with the drink problem could do anything to help the child, opinions were divided. The majority of participants in one group were adamant that the parent was not capable of helping the child until they helped themselves. These children suggested that 'parents need to give themselves support' (female, age 10) and they 'should go to the doctor and ask for help' (male, age 12). However, children in the second group did identify their mum and dad as people they could approach for support (although they may have been referring to the parent or carer who did not have a drinking problem).

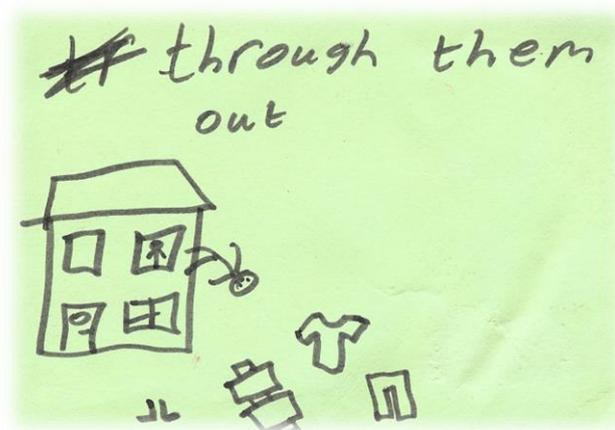


Image 1 Male (age 12)

2.3.2 Sources of social support for children affected by 'hidden harm'

The children attending the groups highlighted the value in having someone to 'talk or listen to you,' recommending that children in similar situations should 'talk to someone' and the

importance of *'sharing ideas'*. The effect of discussing their experiences of hidden harm with someone was described by a ten year old girl as: *'when you talk to someone, then it feels good.'* While the parent with the alcohol problem was generally not viewed as a source of support for the child a number of other individuals were identified. The people they felt they could initially approach included school counsellors, teachers, principals, family members such as grandparents, aunts and uncles, cousins and friends. Others suggested as helpful, once the parents drinking problem was identified, included social workers and their Pharos practitioners/group workers.

In relation to the family, many children suggested that *'family members need to find out what's happening'*. Children often felt that their opinions were heard and that significant adults should ask them what was happening in the home. The caring role of grandparents was reported *'grannies and granddads look after you'* and siblings were also reported as being helpful, specifically older siblings. A 12 year old girl suggested *'an older brother or sister might be able to help you but not younger ones. They wouldn't understand.'*

Within the school environment, the children were aware of certain individuals who could be approached if they needed to talk about their parents drinking: *'there's teachers in school that are trained especially to help'* (male, age 12). Some reported positive experiences: *'a teacher that you can talk to can really help'* (male, age 12) and *'I can talk to one teacher 'cause he's like a 2nd uncle to me'* (female, age 12). One participant in particular spoke about her experiences of attending the school counselling service to help her cope with her parents drinking:

I went to see a counsellor in my old school (primary school). I used to go for six weeks at a time and it was really helpful and I could go back for more anytime I wanted to. The counsellor gave me loads of advice. She told me, when I'm angry, I should sit on my hands. I used to fill out a form every week with faces on it. When I started I picked a sad face but it changed every week. By the time I was finished, I didn't have a smiley face but it was further up than a sad face. I don't see a counsellor anymore 'cause I'm at my new school now (female, age 12).

However, other children had less positive experiences. A ten year old girl reported *'some teachers don't really listen. You tell them but then the next time they're like what? They don't really listen to what you say.'* Other children in the same group had similar experiences and highlighted their frustration with adults who were unable to provide support to the child due to poor listening skills or were simply unwilling to provide support. This was an issue that was extremely important for the children as they often felt no one would listen to them.

Friends were also reported as a source of social support for the child. Participants suggested they can, 'support you', 'distract you' and 'can help you to take your mind off things.' One group talked about having sleepovers with friends and when asked if this was helpful, a boy (age 12) reported 'not really, just having a bit of craic with friends.' Issues of trust and reliance however were raised when disclosing information about parental drinking to friends. In general, participants were wary about who they shared their experiences with, differentiating between 'friends' and 'best friends' (female, age 10). A 12 year old girl stated 'friends can't always be trusted. They tell other people your problems. You can only tell best friends.' Similarly, others reported:

Mostly best friends because friends can chat to other people and tell them your problems (female, age 10)

Best friends are more trustworthy but don't seriously talk to someone else. Talk to the dog (male, age 12)

Participants spoke about the support they receive in their neighbourhood. One girl (age 12) spoke about her neighbour: 'my neighbour came in and gave me a hug when JLS split up. My neighbour lets me go to their house to do my research/homework' (when she needed peace and quiet away from her own home). The children also discussed other methods of sharing their feelings and experiences perhaps in the absence of adults or peers who they could talk to or share their problems with or to enable them to share/vocalise their problem without the worry of them telling anyone else. A seven year old girl, whose older siblings also took part in the group drew a picture saying 'when I'm sad I talk to my toy bunny' (see image 2). Others spoke about their pets: 'you can tell the dog your problems 'cause they won't be able to tell anyone else' (male, age 12).

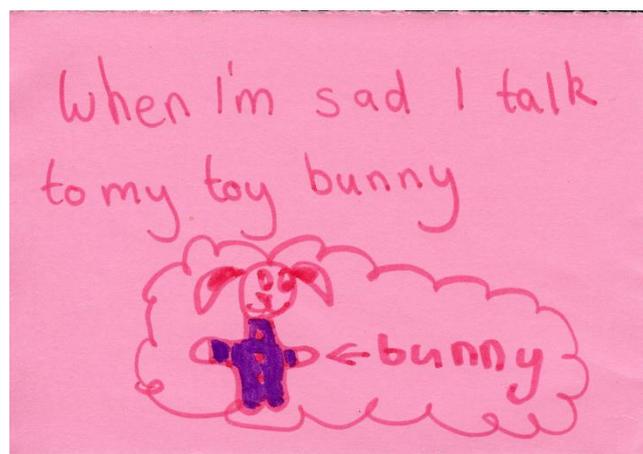


Image 2 Female (age 7)

2.3.3 Coping with a parents drinking

In addition to sources of social support and the sharing of problems or experiences with others, the children spoke about coping strategies they found useful in dealing with a parents drinking. As highlighted earlier, their frustration with the parent was apparent. A ten year old boy described how the *'anger is like a volcano building up inside you. You just erupt!'* One boy (age 12) described an occasion when he alleviated his feelings of anger towards the parent: *'I was really angry one day and ran upstairs and put a size five hole in the wall at the top of the stairs. It's still there today.'* A ten year old girl reported how spending time in her bedroom *'hitting a pillow helps'* in venting her anger and frustration with her parent/carer (see image 3). Others described less physical methods of releasing stress. A boy (age 12) spoke about how simply *'laughing out loud'* can be helpful while a ten year old girl reported how she copes: *'when I get stressed I talk rubbish for a minute and let it all out and I feel really (shakes head over and back and makes noise) it just lets out all my stress!'*



Image 3 Female (age 10)

2.3.4 Leisure activity (and involvement in the community) – as a means of distraction

Involvement in leisure activities both at school and in their own spare time were discussed not only as a method of alleviating the stress, anger and frustration they feel towards the alcoholic parent but also to serve as a distraction from their home life as it's *'not good having too much time thinking about things'* (female, age 12). Leisure activities frequently mentioned which were reportedly beneficial included involvement in sports with friends/or alone (football, shot put), spending time in the park (jogging, walking the dog), art classes, listening to music, learning how to play musical instruments, going to bible club and drama class (female, age 10). One boy (age 12) reported the benefits of *'PE at school, especially shot put. It helps you to let everything out, all the anger and stress and everything.'* Participant's also spoke about a boy (age 12) (who was absent from the group) who liked boxing as *'it's better than standing out on the streets*

drinking and smoking.' Children also spoke about the positive effects of art classes in school. One boy (age 11) suggested other children affected by hidden harm should '*do art to take your mind off it.*' Others reported: '*art in school helps. It helps you to forget about social services and Barnardo's and everything*' (male, age 12). A girl (age 10) reported '*I like art in school 'cause you can scribble. Even if you make a mistake, it doesn't matter, you can turn the picture into something else.*' Others reported '*listening to music can help*' (male, age 12). One girl said '*I listen to really silly songs to let off steam*' and a boy (age 12) reported how he likes to '*listen to music. I like to listen to music and play the drums.*' Contributing to their local communities and neighbourhoods was also discussed. A boy (age 12) reported: '*I'm in the YI, youth initiative.*' The same boy reported on other schemes he has been involved in: '*I'm in a summer scheme-we go to old people's house and cut the lawn for them and help out with other things around the house.*'

2.3.5 Childs Attitudes (the importance of being positive)

Despite the adversities experience in their homes lives, some of the children demonstrated a positive outlook, with one boy stating 'you only live once.' While many of the children discussed different coping strategies, a participant (age 12) spoke about how he is naturally resilient.

- Par My counsellor half-filled a glass with water and she asked me was it half-full or half-empty? I said it was half-full and she said that was good and it means I'm an optimist.
Res How did you learn to be an optimist?
Par I didn't learn it anywhere. It's just the way I am. I just know how to be positive!

2.4 Discussion

To our knowledge, few studies to date have used participatory methods with children to explore the factors that build resilience in those exposed to 'hidden harm'. The children in this study discussed their experiences of living with parental substance misuse, reinforcing the findings from previous studies (see Moe, Johnson & Wade, 2007; Holmila, Itäpuisto & Ilva, 2011). For example, these findings provide support for the Kauai longitudinal study where all resilient children could identify at least one teacher who listened to them, challenged them and believed them (Werner, 1997). The findings also shed light on factors which build resilience in children, providing data specific to Northern Ireland/UK. These factors include: seeking support from significant adults e.g. school counsellors, teachers, family members, social workers, neighbours, practitioners; sharing experiences with others; effective strategies for coping/dealing with anger/frustration; engagement in leisure activities (e.g. sport, art, music) and other distractions. A couple of methodological constraints must be acknowledged: the wide age range may have made it difficult for younger children to give their views, however, this was a product of the natural make-up of the groups due to service provision and many had older siblings in the

groups who may have spoken on their behalf. Given that children of alcoholics tend to be a hidden population it must be acknowledged that the sample may not be representative of children living with 'hidden harm' as the children who took part were from families who had come to the attention of social services (and therefore considered a clinical sample in the extant literature). The findings may have been different for more hidden populations who were not currently accessing help. In addition, as children were in the final week of the programme they may have learned a number of coping techniques/strategies from group work exercises (via support from established relationships with each other and the practitioners) i.e. findings may have been very different if the children participated in the workshops in the first week of service delivery. None the less, this first phase of the project provided valuable insight into children's view on 'building resilience' and will be used to inform the next phase of the study, that is, the secondary analyses of the BYDS and family survey datasets.

3. Secondary analyses of the BYDS & family survey datasets

The factors identified by the children in the previous section were used to inform the research questions/objectives for the secondary analyses of the BYDS and family surveys datasets (provided the information was collected during the data sweeps). The following sections outline the BYDS and family survey sample and the measures used in the data sweeps. It is important to note that we included all male and female carers (that is, primarily birth parents but also smaller numbers of grandparents, aunts, uncles etc.).

3.1 Sample

Participants in the present study were young people who took part in the Belfast Youth Development Study (BYDS). BYDS is a longitudinal study of adolescent development (drugs, alcohol use, lifestyles) that collected data from a community sample/cohort of approximately 4,500 young people who attended post-primary schools in three sites across Northern Ireland: Ballymena, Downpatrick and Belfast representing a mix of urban and rural locations. Data were collected across seven sweeps: initially during school from (academic year) 2000/1 (when students were in year 8, aged 11-12 years old) to 2005 (year 12; aged 15/16 years old); Participants were surveyed again in 2006/2007 (aged 16/17 years) and 2010/2011 (aged 20/21 years). Data were also collected from 1,097 parents or caregivers (such as grandparents) of a sub-sample of BYDS cohort members during the 'Family Survey' in 2004.

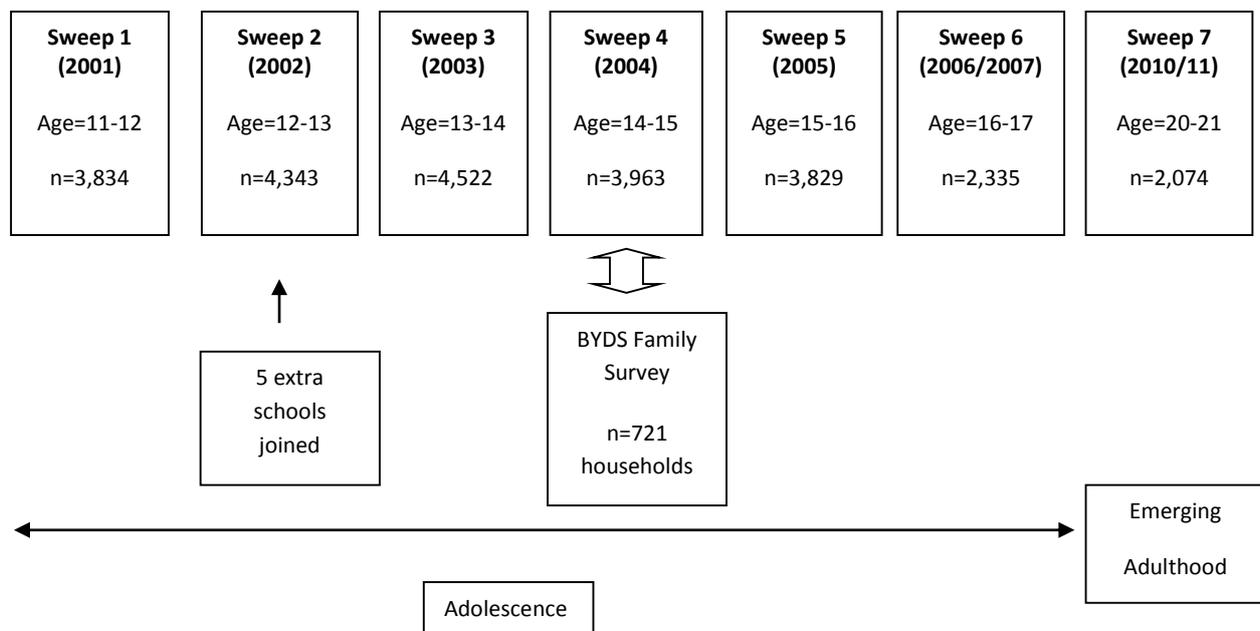


Figure 2 BYDS sample 2001-2010/11: year, age range and number of participants

Parent (and sibling) data were matched to BYDS cohort member data across four sweeps. Table 1 below shows the parent-child dyads which were matched over the sweeps of BYDS data collection (*matched on id and child gender*).

Table 1 Family survey data matched to BYDS cohort over 4 sweeps

Family survey	BYDS Sweeps			
	Sweep 4 2004	Sweep 5 2005	Sweep 6 2006/2007	Sweep 7 2010/2011
Parent-child dyads	970	925	551	487
<i>Mother-son</i>	389	359	189	160
<i>Mother-daughter</i>	204	200	128	125
<i>Father-son</i>	240	232	138	114
<i>Father-daughter</i>	133	133	91	88

Note. Some cases are missing for child gender

The majority of the parents/carers (n=1,097) in the family survey were female (n=679; 62 per cent). Parents who participated in the survey described themselves as follows: birth father (n=393, 36 per cent), birth mother (667, 61 per cent), stepfather (n=18), stepmother (n=2), adoptive father (n=3), adoptive mother (n=2), partner of mother (n=3), partner of father (n=1), aunt or uncle (n=2), grandparent (n=3) or other (n=3). Both parents were interviewed in 376 households (752 individual interviews) while a single parent or caregiver was interviewed in 345 households (a total of 721 households took part in the survey). Caregivers were on average 45 years of age (n=1,097, std=6.0, range 24-74 years). Male caregivers were on average 47 years of age (n=418, std=6.2, range 22-74) while female caregivers were on average 44 years of age (n=679, std=5.6, range=24-69). In terms of marital status, the majority of carers were married (n=888, 81 per cent) (see table 2 below).

Table 2 Martial status of parents/caregivers

	<i>n</i>	<i>%</i>
Single (never married)	50	4.56
married and living with husband/wife	888	80.95
married and separated from husband/wife	66	6.02
Divorced	74	6.75
Widowed	17	1.55
Don't know	2	0.18
	1,097	

Parents were asked to report on how many individuals lived in the household in addition to themselves and the BYDS participant. On average there were at least two other people living in

the household (ranging from 0-9 people). The sample were predominantly white (99.3 per cent) and there was a high representation social classes A to C (80.12 per cent) (social class of chief income earner). At the time of data collection, the majority of children were living with both biological parents (82 per cent).

In addition to the carers described above, 211 (older) siblings were interviewed during the family survey, the majority of whom were female (n=114, 54 per cent) (in one household, two siblings were interviewed). These siblings reported the BYDS participant was either their sister (n=113, 54 per cent), brother (n=97, 46 per cent) or step-brother (n=1). This provided 61 male dyads, 44 female dyads and 106 male/female dyads. Of these siblings, the majority were working fulltime (n=60, 28%); others were currently at school (n=57, 27%), at university (n=44, 21%) or FE college (n=30, 14%); working part-time (n=13, 6%) or unemployed (n=7, 3%).

3.2 Ethics

Ethical approval the secondary analyses of the BYDS datasets was granted via the School of Sociology, Social Policy & Social Work Research Ethics Committee (REC).

3.3 Measures

3.3.1 Parent/carer alcohol use

Parents were screened for alcohol related problems/excessive drinking using the Alcohol Use Disorders Identification Test (AUDIT) (Babor et al., 2001) a ten item scale which covers the domains of hazardous alcohol use, dependence symptoms and harmful alcohol use. Each item is scored between zero and four, giving a maximum score of 40. Scores in the range of 8-15 represent medium levels of alcohol problems while scores of 16 and above represent high levels of alcohol problems. This study uses a broad definition of '*problem drinking*' to include any form of hazardous drinking, harmful drinking, alcohol dependence and alcohol abuse by a parent/carer (see McLaughlin et al., 2014). For ease of comparison, we have defined their children as 'children of problem drinkers' (CPD) (at least one parent/carer with an AUDIT score of 8+) and 'children of non-problem drinkers' (CNPD) (AUDIT score of 0-7 *including* abstainers).

3.3.2 Parental monitoring

Parental Monitoring was measured using the 9-item parental monitoring subscale (Stattin & Kerr, 2000). Using a 5-point likert scale, parents responded to items such as 'how often would you know what type of homework (child) has?' 'how often would you know what (child) spends money on?.' Items were summed to provide an overall measure of parental monitoring. In

addition, when aged 14 and 15, participants were asked whether they had ever run away from home for one or more nights without their parents knowing or without telling them where they were going. Parents also responded to other parenting sub-scales on solicitation, parental control and child disclosure. However, for the purposes of this report (and in line with the extant literature) we have focused on parental monitoring only. Children also reported on parental monitoring (in years 4&5). However, we used parent/carer reports in the analyses to ascertain the degree to which their drinking impacted on their perception of their parenting.

3.3.3 Attachment to parents

In year 4 (aged 14) BYDS cohort members completed the parental sub-scale (28 item original, 5-point likert scale) of the Inventory of Peer and Parental Attachment (IPPA) (Armsden & Greenberg, 1987). An example of an item includes '*my parents respect my feelings*' (BYDS did not ask about mother/father as with the revised version). The IPPA was developed in order to assess adolescents' perceptions of the positive and negative affective/cognitive dimension of relationships with their parents particularly how well these figures serve as sources of psychological security (Greenberg & Armsden, 2009). Three broad dimensions are assessed: degree of mutual trust; quality of communication; and extent of anger and alienation (Greenberg & Armsden, 2009). Higher scores on the scale indicate high levels of attachment and positive relationships between participants and their parent(s).

3.3.4 Conflict between parents/carers and marital satisfaction/parent-child conflict

As with parent-child conflict, scales were constructed by the research team to measure conflict between parents/carers. Frequency of arguments among parents/carers was assessed using six items, measured on a five point likert scale, with higher scores indicating greater frequency of arguments between parents. One item measured frequency of arguments while the remaining items assessed arguments over children, money, refusing to speak as a result of arguing, length of time not speaking and arguments caused or made worse by alcohol.

A *marital satisfaction* scale was derived from the Comprehensive Marital Satisfaction Scale (Blum & Mehrabian, 1999). The scale included 14 questions, such as "My spouse/partner is very loving and affectionate" or "My spouse/partner and I seldom laugh together". Agreement to each question was expressed in a 9-point Likert scale from "Very strong agreement" (+4) to "Very strong disagreement" (-4), whereby higher scores indicated more positive outcomes and higher marital satisfaction. The scale displayed good internal consistency, with Cronbach's alpha equal to 0.86.

A set of questions were asked in order to assess frequency and intensity of conflict with the child and attempts to resolve conflict. Frequency of conflict was investigated by asking 11 questions where caregivers reported how often they had conflicts with their child on certain issues (e.g. How often would you argue about how well your child is doing at school?). Frequency of arguments items were measured on a 5-point scale (ranging from “most days” to “never”). Items were recoded so that high scores indicated greater frequency of arguments. If caregivers reported any argument, they were also asked questions concerning intensity of conflict and conflict resolution. The conflict intensity subscale included 10 questions (e.g. When you and your child argue how often do you shout or yell at him/her?): five response categories were provided ranging from never/almost never to always/almost always (higher scores indicate higher levels of conflict intensity). The conflict resolution sub-scale included 9 items that enquired about caregivers’ attempts at avoiding conflict (e.g. How often would you walk away, leave the room or leave the house to end an argument?): five response categories were provided ranging from never/almost never to always/almost always. Coding of responses ensured that higher scores indicated more frequent and intense conflict. Higher scores in the conflict resolution sub-scale indicated more frequent attempts at avoiding conflict. The three sub-scales demonstrated good internal consistency, as indicated by high Cronbach’s alpha values equal to 0.88, 0.79 and 0.75 for the conflict frequency, intensity and resolution scales respectively.

3.3.5 Peer variables

In sweeps 4, 5 and 6, participants reported on which evenings (defined as after 6:30pm) they usually go out with friends (Monday through to Sunday or ‘dont go out in evenings’). Items were summed in each sweep to give an average number of evenings spent with friends. In sweep 5, participants also responded to 5 items on a 4-point likert scale (never, sometimes, often & always), relating to how often they go to places with their friends, how often they hang around with friends of the opposite sex, how often they spend a lot of spare time alone, whether they have at least one or two close friends and whether they have difficulty making friends.

They were also questioned on whether they had any friends in school who were not in their year group, whether they were younger or older than them and their gender. They reported whether they had friends who did not attend their school, whether they were younger or older and their gender. In addition, they provided information on who they hang out with in the evenings and at weekends (school friends/non-school friends).

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) contains a sub-scale on peer relationship problems/peer problems (5-items). Items include: *I am usually good on my*

own, *'I have one good friend or more'*, *'other people my age generally like me'*, *other children or young people pick on me*, *'I get on better with adults than with people my age'* rated on a 3-point scale (not true, somewhat true, certainly true). Participants responded to this scale in sweep 4.

3.3.6 (Disposable) Income

In sweep 4 participants reported on how much pocket money they usually receive each week from their parents/carers; how much money they receive each week for babysitting, doing paper rounds, jobs around the house or other work; and how much money they usually get each week from other sources such as selling things or stealing. Using an open-ended response format, participants were required to indicate how much they receive in pounds and pence.

3.3.7 Leisure activities

In sweep 4, participants responded to a list of activities (n=21) young people may do in their spare time after school such as 'stay at home and watch tv,' 'go to a park or playground' and 'go to a sports club or team.' They indicated their frequency of involvement in activities using a 4-point likert scale (more than once a week, once a week, once or twice a month, rarely or never). Items were recoded so that higher scores indicated greater involvement in leisure activities.

3.3.8 School variables and employment

In sweeps 4 & 5 (aged 14 & 15), participants provided information on whether they received any lessons or information on drugs at school, were in receipt of free school meals, or engaged in any of the following behaviours in the previous year: skipped or bunked off class, got into trouble with the principal, been in detention or been in a fight.

In sweeps 4 & 5, participants also responded to a series of thirteen statements using a five-point likert scale (1=almost never or never true to 5= almost always or always true) on school variables referring to school commitment, educational aspirations, teacher-pupil relationships and school problem behaviour (e.g. *'I think going to school is a waste of time,' 'I am quiet in class and get on with my work' 'I want to go to university after school'*). Negatively worded items were reverse scored to ensure higher scores corresponded to 'positive behaviour' (Items 1, 3, 6, 8, 9). Total scores for each subscale were calculated by summing scores for the respective items.

Subscales included school attachment (feelings of belonging to the school, feelings about the school, nature of the relationship established between teacher and pupil) (Items 1, 3, 4, 5, 6, 7, 8), school commitment (students personal effort and investment in school) (Item 2 & frequency of absenteeism, getting into trouble with the principal, being in detention at school), educational

aspirations (Items 9, 10, 11, 12, 13), school safety (1-item i.e. frequency of fights in the school ground in the previous 12 months).

In sweep 5, participants also responded to 6 items on how well they perform at school work (4-point likert scale, ranging from never-always). Items included 'do you get good marks in maths?' and 'are you successful with your school work?'

3.3.9 Support seeking

In sweep 5 (aged 15), participants provided information on access to social support by responding to one item- 'do you have an adult that you can talk to if you are having problems, for example, a parent, a teacher or a youth worker?'

3.3.10 Child outcome variables

The present study focuses on a number of key outcome variables which children may be at risk of developing due to exposure to parental alcohol use including: their own alcohol use later in life, mental health problems, difficulties in forming attachments/relationships with others and educational and vocational outcomes.

3.3.10.1 Child alcohol use

As with their parents/carers alcohol use, BYDS participants were screened for alcohol related problems/excessive drinking using the Alcohol Use Disorders Identification Test (AUDIT) (Babor et al., 2001) a ten item scale which covers the domains of hazardous alcohol use, dependence symptoms and harmful alcohol use. Each item is scored between zero and four, giving a maximum score of 40. Scores in the range of 8-15 represent medium levels of alcohol problems while scores of 16 and above represent a high level of alcohol problems. Child alcohol use data used in the present study were collected when the participants were 15, 16-17 and 21-22 years of age. In addition to the AUDIT, participants responded to other alcohol related items across sweeps. In sweep 4, they responded to items on drinking alcohol and being drunk including: lifetime use of alcohol/experience of being drunk, last year use of alcohol/being drunk, parental permission to use alcohol, location of alcohol use/getting drunk (e.g. friends house, concert or festival), sources of alcohol (e.g. older friends, parents), frequency of alcohol use/getting drunk, quantity of alcohol consumed when getting drunk and weekly expenditure on alcohol.

3.3.10.2 Mental health

Participants completed the 13-item Short Form Moods & Feelings Questionnaire (MFQ) (Angold & Costello, 1987; Angold et al., 1995), a measure of childhood and adolescent depression

designed for rapid evaluation of core depressive symptomology or for use in epidemiological studies. BYDS participants completed the measure when aged 15 years old. The MFQ consists of a series of descriptive phrases regarding how the subject has been feeling or acting recently. Codings reflect whether the phrase was descriptive of the subject most of the time, sometimes, or not at all in the past two weeks. Items include 'I felt miserable or unhappy,' and 'I thought I could never be as good as other kids.' Each item is keyed to a three-point scale with the following possible responses: 'true' (scores 2) 'sometimes true' (scores 1) or 'not true' (scores 0). A total score of 8 or more on the child version of SMFQ is considered significant. Kuo, Stoep & Stewart (2005) suggest a cutoff ≥ 10 .

The Patient Health Questionnaire (PHQ) is a self-administered version of the PRIME-MD diagnostic instrument for common mental disorders (Kroenke, Spitzer & Williams, 2001). The PHQ-9 is the depression module, which scores each of the 9 DSM-IV criteria as "0" (not at all) to "3" (nearly every day) (Kroenke, Spitzer & Williams, 2001), providing an overall score from 0-27. BYDS participants completed the Patient Health Questionnaire (PHQ-9) quick depression assessment at 20/21 years of age (sweep 7). Total scores on this scale range from 1-27 and can be further divided into five categories (including minimal depression, 1-4; mild depression, 5-9).

3.3.10.3 Attachments and (romantic) relationships with others, sexual activity

In sweep 5, participants were asked whether they had a girlfriend or boyfriend (yes/no). In sweep 6, they were asked if they ever had a boyfriend or girlfriend, had a girlfriend/boyfriend in the previous 12 months or currently had a boyfriend or girlfriend (yes/no). They also reported on the age of their current (or last) girlfriend/boyfriend and their involvement in (categorical: yes; no; don't know) substance use (6 items covering smoking, alcohol, cannabis, ecstasy or amphetamines, cocaine and heroin) and delinquent activities (4 items- fight or get into trouble with other people; commit crimes to get money or other things e.g. shop lifts or steals things; been in trouble with the police; been in court for something they did). In sweep 6, the young people responded to items relating to sexual activity including: ever had sexual intercourse; age when first had sex; ever had a one-night stand; age of last person they had a one night stand with and number of different sexual partners in their lifetime. In sweep 6 participants reported whether they had any children, how many children they had and their ages. Female participants reported whether they had ever been pregnant. In sweep 6, they also reported on marital status and sexual orientation.

In sweep 6, respondents completed the Experiences in Close Relationships-Revised (ECR-R) questionnaire (Fraley, Waller & Brennan, 2000), a 36-item measure on attachment related anxiety (items 1-18) and avoidance (items 19-36), using a seven-point likert scale (1=strongly disagree, 7=strongly agree). A number of items were reverse scored (Items 9, 11, 20, 22, 26, 27, 28, 29, 30, 31, 33, 34, 35 & 36). The ERC-R assessed participants' emotional experiences within intimate relationships; anxiety items assess fear of abandonment and desire for intimate contact while avoidance items assess discomfort with interpersonal disclosure about personal issues (Kelley et al., 2005). Responses were averaged to produce an overall score for each subscale. Kelley et al. (2010) reported cronbach alphas of .92 and .94 for the anxiety and avoidance scales, respectively. Cronbach alphas for the subscales in the present study were also .92 (anxiety) and .94 (avoidance).

4. Alcohol use in the context of the family

In the following sections we outline the use of alcohol by parents and siblings and present the results relating to child exposure to alcohol within the home, parental attitudes towards alcohol use and alcohol sanctions (as reported by the child and/or parent). The findings provide an overview of alcohol use within the context of varying family dynamics and processes. The longitudinal association between exposure to parental drinking at age 14 and offspring alcohol use from 14 to 22 years of age is also presented.

4.1 Carers alcohol use

The vast majority (n=921, 84 per cent) of parents reported they had consumed alcohol in the previous 12 months (176 indicated they had abstained). As outlined previously, alcohol problems were measured using the AUDIT (Babor et al., 2001) whereby scores of 8 or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence. The average AUDIT score for all parents (including abstainers) was 4.2 (n=1,097, std=3.9, range=0-33). Table 3 outlines average parent AUDIT scores (with abstainers removed) which overall fell below the threshold for problem drinking, indicating that the vast majority of parents, did not have a problem with alcohol use. Male carers had slightly higher average AUDIT scores than females, although both fell below the threshold for problem alcohol use (*see table 3*). There was a significant (negative) correlation between carers gender (*male=0, female=1*) and their AUDIT scores ($r = -.18, n=921$). There was also a significant negative correlation between parents age and AUDIT score ($r = -.13, n=921$). There was a larger negative correlation between a male carers drinking and their age ($r = -.24, n=365$) compared to females carers ($r = -.14, n=556$).

Table 3 - Parents gender by AUDIT score (abstainers removed)

	<i>N</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Min</i>	<i>Max</i>
Carers who drank (previous 12 months)	921	5	3.7	1	33
Male carers	365	5.8	3.9	1	33
Female carers	556	4.5	3.4	1	28

It is important to note that these analyses use a broad definition of *'problem drinking'* to include any form of hazardous drinking, harmful drinking, alcohol dependence and alcohol abuse by a parent (See McLaughlin et al., 2014). Using this criterion, 164 caregivers (one fifth of those who drank alcohol in the previous year; 15% of the total sample) were classified as problem drinkers. The majority of problem drinking carers were male (59 per cent) (see table 4). Around two per cent (n=19) of the carers who consumed alcohol reported high levels of alcohol

problems (AUDIT = 16+). A further, 16 per cent of carers (n=145) reported medium levels of alcohol problems in the previous year (AUDIT = 8-15).

Table 4 - Parents gender by AUDIT category/zone (abstainers excluded)

AUDIT Zone	Zone 1 (0-7)	Zone 2 (8-15)	Zone 3 (16-19)	Zone 4 (20-40)	Total
Male carers	269	87	5	4	418
Female carers	488	58	6	4	679
Total	757	145	11	8	921

4.1.1 Maternal drinking: a proxy for two problem drinking parents?

An objective of these analyses was to investigate the female caregivers drinking (problems) within the context of the father or males carers drinking. For these analyses, we investigated mother-father dyads only, that is, 374 mother-father dyads (total n=748), who provided information on their alcohol use in the previous 12 months. There was a moderate significant correlation between female and male carer AUDIT scores ($r=.41$, $p < 0.01$). The potentially differing roles of female and male carer drinking on child outcomes will be investigated later in the analyses.

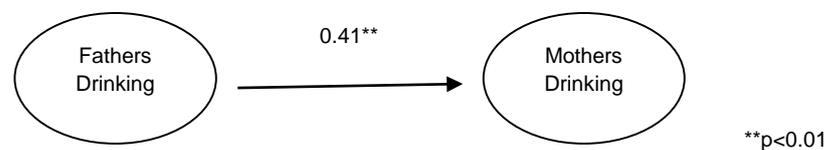


Fig 3. Model showing relationship between father and mother drinking for parent dyads

In the majority of these households (n=203), both male and female carers drinking fell below the threshold for problem drinking, while in the remaining households (n=90), there was at least one problem drinking parent. In 16 households, both the female and male carers were classified as problem drinkers. In 15 households, the mother was a problem drinker and the father was not. However, in 59 households, the father was a problem drinker and the mother was not (see table 5 below).

Table 5 - Number of households by male/female carers AUDIT zone (number of parents in brackets) (176 abstainers excluded)

Male carers		Female carers				
		<i>Non-problem drinkers</i>		<i>Problem Drinkers</i>		
		0-7 <i>Zone 1</i>	8-15 <i>Zone 2</i>	16-19 <i>Zone 3</i>	20-40 <i>Zone 4</i>	
Non-problem drinkers	0-7 <i>Zone 1</i>	203 (406)	12 (24)	3 (6)	0	218 (436)
	8-15 <i>Zone 2</i>	55 (110)	13 (26)	1 (2)	0	68 (136)
Problem Drinkers	16-19 <i>Zone 3</i>	4 (8)	0	0	0	4 (8)
	20-40 <i>Zone 4</i>	1 (2)	1 (2)	0	1 (2)	3 (6)
		263 (526)	26 (52)	4 (8)	1 (2)	294 (588)

The largest proportion of children living with a problem drinking parent were male (n=114; 72 had a problem drinking father and 42 had a problem drinking mother). Among daughters, 24 were living with a problem drinking father and 26 were living with a problem drinking mother (n=50).

4.2 Family structure and marital status

A greater proportion of the problem drinking parents had been married and separated (11 per cent compared to 5 per cent of NPDs) or divorced (9 per cent compared to 6 per cent of NPDs) while a greater proportion of the NPDs were married (82 per cent compared to 73 per cent of PDs) or widowed (1.6 per cent compared to 1.2 per cent of PDs); the differences across the groups were statistically significant (χ^2 (5, $N=1,097$) =11.8, $p<.05$). Problem drinking parents were more likely to have been involved in at least two (33 per cent vs 6 per cent of NPDs) or four or more serious relationships (8 per cent vs none of the NPDS) with a person other than their child's mother/ father/current partner, since the child was born, which was significant (χ^2 (3, $N=46$) =9.6, $p<.05$). A greater proportion of the problem drinking parents (30 per cent compared to 11% of NPDs) reported that their child had at some point, lived with a previous partner and not with them (χ^2 (3, $N=238$) =9.6, $p<.05$).

4.3 Social class, parental employment, income

Evidence suggests that families from all walks of life can be affected by a carers problem drinking. Social class categories were combined to create a dichotomous variable: middle class (categories A, B, C1) and working class (categories C2, D, E). A greater proportion of the problem drinking parents were in the 'middle class' (52%) category ($\chi^2 (1, N=921) =13.0$ $p<.0005$). More specifically the highest proportion of problem drinkers (26%) were in the 'lower middle class' category (i.e. supervisory, clerical and junior managerial, administrative or professional) ($\chi^2 (5, N=921) =22.0$ $p<.005$). There were interesting differences between problem drinking and non-problem drinking parents in relation to their employment status. Problem drinking parents (66%) were more likely to report themselves as the chief income earner compared to non-problem drinkers (46%) ($\chi^2 (2, N=786) =17.5$, $p<.0005$). A greater proportion of problem drinking parents (62 per cent compared to 50 per cent of NPDs) reported that they were in full-time employment (more than 30 hours per week), a difference which was statistically significant ($\chi^2 (1, N=921) =6.7$, $p<.05$). Furthermore, a greater proportion of the non-problem drinking parents (23%) reported that they worked part-time (less than 30 hours per week) compared to problem drinking parents (12%), which was significant ($\chi^2 (1, N=921) =10.0$ $p<.005$). In addition, a greater proportion of problem drinking parents reported they were unable to work because of sickness or disability (7% compared to 3 per cent), ($\chi^2 (1, N=921) =7.5$ $p<.05$). There were no significant differences between problem drinkers and non-problem drinkers across the remaining occupational statuses (i.e. self-employed, unemployed, full-time housewife/ househusband, in full-time education or training, retired). Parents were also asked about their current partner's employment status. Overall, there were few differences between problem drinkers and non-problem drinkers with a couple of exceptions: the non-problem drinkers were more likely to have a partner in full-time employment (63% compared to 50% of problem drinkers), ($\chi^2 (1, N=786) =7.2$ $p<.05$) and the problem drinkers were more likely to report that their partner was in part-time employment (27% compared to 14% of non-problem drinkers) ($\chi^2 (1, N=786) =13.7$ $p<.0005$). 24% of PDs had experienced financial difficulties since September 2000 compared to only 10% of NPDs (13%), a difference which was significant ($\chi^2 (2, N=1,097) =25$, $p<.0005$).

4.4 Child alcohol use from 15-21 years old

AUDIT scores¹ for the child (which are an indicator of problem alcohol use) are highlighted in table 6. (N.B. child numbers decrease each year due to study attrition). Average child AUDIT scores across all sweeps (for the total sample) were above the threshold for possible problem alcohol use, peaking at 16-17 years old, showing a slight reduction at 21-22 years old. Those children who had a carer identified as a ‘problem drinker’ show a similar pattern. However, their average AUDIT scores were higher than those whose parents were not problem drinkers (and across the whole sample). In addition, children of non-problem drinkers at 15/16 years reported AUDIT scores that fell slightly below the threshold for possible problem alcohol use (mean = 7.6).

Table 6 - Mean AUDIT scores for total sample, CNPD’s and CPD’s (2005-2011)

Sweep (childs age)		N	Mean AUDIT score	Std. Dev	Min	Max
Sweep 5 (15-16 years)	All children	877	8.0	7.0	0	32
	CNPD	748	7.6	6.9	0	32
	CPD	129	9.8	7.5	0	30
Sweep 6 (16-17 years)	All children	551	9.7	6.7	0	35
	CNPD	472	9.4	6.7	0	35
	CPD	79	11.5	6.5	0	27
Sweep 7 (21-22 years)	All children	477	9.4	6.4	0	33
	CNPD	413	9.1	6.3	0	33
	CPD	64	11.3	6.9	0	33

As might be expected a child’s drinking at 15 years of age was significantly related to their drinking in subsequent years. If a child was drinking at 15 years old, they were .59 times more likely to be drinking at 16-17 years of age reducing to .34 times as likely at 21-22 years old (see table 7).

¹ Item 7 ‘how often during the last year have you had a feeling of guilt or remorse after drinking?’ was missing in the year 5 AUDIT scale.

Table 7 - Association between Childs AUDIT at 15, 16, & 21 years

Childs age	Childs Drinking		
	15 years	16-17 years	20-21 years
15 years	/	.59** (n=478)	.34** (n=424)
16-17 years	.59** (n=478)	/	.58** (n=374)
20-21 years	.34** (n=424)	.58** (n=374)	/

* $p < 0.05$ ** $p < 0.01$

AUDIT scores for male and female carers were associated with child AUDIT score across each sweep. For male carers the relationship became stronger over the years of the study, levelling off at 20-21 years of age. If the male carer was a drinker when the child was 15 years of age, the child was .24 times more likely to be a drinker at 21-22 years of age. A female carers drinking was also a risk factor for child's drinking throughout the years of the study, peaking at 16-17 years and reducing by 20/21 years (see table 8). The relationship between parent and child AUDIT score was significant for both boys: $r=.15$ (age 15), $r=.20$ (age 16-17), $r=.20$ (age 20-21) and girls: $r=.17$ (age 15), $r=.21$ (age 16-17), $r=.19$ (age 20-21).

Table 8 - Association between carers (male and female) and child's AUDIT (15-21 yrs)

Carers AUDIT	Childs AUDIT		
	15 years	16-17 years	20-21 years
All carers	.16** (n=877)	.22** (n=551)	.21** (n=477)
Male carers	.16** (n=346)	.24** (n=232)	.24** (n=198)
Female carers	.17** (n=531)	.20** (n=319)	.18** (n=279)

* $p < 0.05$ ** $p < 0.01$

4.4.1 Carers reports of child alcohol use, attitudes and sanctions

Carers were asked to indicate how much they disapproved of young people the same age as their child engaging in a range of activities. 51% of problem drinkers stated they did not disapprove of children drinking occasionally compared to 36 per cent of NPDs (χ^2 (3, $N=921$) =14.9, $p < .0005$). There were no differences between the two groups in relation to 'getting drunk at a family party.' The majority of problem drinkers (63%) disapproved strongly of 'a young person getting drunk once a week with a friend' (χ^2 (2, $N=648$) =11.2, $p < .005$) compared to 75% of non-problem drinkers. Carers were asked whether they would permit their child to consume alcohol. Seven per cent of all carers reported they would allow their child to drink alcohol (without stipulations such as special occasions or having to accept that the child may drink anyway etc). Twice as many parents classed as problem drinkers (12 per cent) indicated they

would allow their child to drink compared to non-problem drinking parents (5.5 per cent of non-problem drinkers). A quarter of the problem drinking parents reported they would not permit their child to drink compared to 39 per cent of non-problem drinking parents (χ^2 (4, $N=921$) =18.9, $p<.0005$). The majority of problem drinkers (77%) reported that they knew their child had definitely drunk alcohol in their lifetime (compared to 58 per cent of NPDs) (χ^2 (3, $N=921$) =20.8, $p<.0005$).

4.4.2 Child reports of alcohol use, parental attitudes and sanctions

During the same year as the family survey, the majority of children ($n=876$, 90%) (then aged 14 years old) reported having tried alcohol in their lifetime and 812 (84 per cent) reported trying alcohol in the previous 12 months. Fifteen per cent ($n=147$) of children reported their parents allowed them to use alcohol and a further 37 per cent ($n=355$) were permitted to use alcohol while supervised by their parents. Although a greater proportion of CPDs were permitted to use alcohol (20 per cent) compared to 17 per cent of CNPDs (43 per cent of CPDs were permitted to use alcohol when supervised compared to around 37 per cent of CNPDs) there were no statistically significant differences between the groups. Twenty-five per cent of those who drank ($n=243$) reported they usually sourced alcohol from their parents and sixteen per cent ($n=155$) indicated they sourced alcohol from the home. Twenty-six per cent of CPDs accessed alcohol via the home compared to sixteen per cent of CNPDs, a difference which was statistically significant, χ^2 (1, $N=820$) =7.64, $p<.05$. Forty-one per cent ($n=394$) of children reported they usually drank alcohol at home; 46 per cent of CPDs drank at home compared to 44 per cent of CNPDs (however there was no significant difference between the two groups). Sixty-six per cent of CPDs usually drank alcohol at a party compared to fifty-three per cent of CNPDs, a difference that was significant, χ^2 (1, $N=820$) =7.81, $p<.005$. Five per cent of CPDs drank alcohol in a youth club/community centre compared to 2 per cent of CNPDs, χ^2 (1, $N=820$) =5.2, $p<.05$. Fifty-three per cent of CPDs drank alcohol outside (park, street, town centre) compared to 44 per cent of CNPDs, χ^2 (1, $N=820$) =4.4, $p<.05$. Chi-square analyses revealed significant differences in the location where children got drunk depending on their parents drinking status. Twenty-one per cent of CPDs usually got drunk at home compared to 11 per cent of CNPDs, χ^2 (1, $N=820$) =10.6, $p<.005$. Five per cent of CPDs got drunk at a youth club/community centre compared to 1 per cent of CNPDs, χ^2 (1, $N=820$) =13.02, $p<.0005$.

Aged 15 years, 92 per cent of participants ($n=854$) reported lifetime use of alcohol and 86 per cent ($n=799$) had consumed alcohol in the previous 12 months. Thirty-two per cent ($n=300$) reported having parental permission to consume alcohol and a further 29 per cent had permission only when under the supervision of their parents ($n=269$). Chi-square analysis

revealed a significant difference in parental permission to use alcohol depending on the parents drinking status: almost half the CPDS (49 per cent) reported their parents allow them to drink alcohol (without supervision) compared to 33 per cent of CNPDs, $\chi^2 (3, N=780) = 15.67, p < .005$. However, when supervised, 32 per cent of CNPDs were permitted to drink compared to 27 per cent of CPDs. Twenty-nine per cent (n=266) sourced alcohol from their parents; 16 per cent got alcohol from their home (n=148). Twenty-six per cent of CPDs sourced alcohol from the home compared to 17 per cent of CNPDs, $\chi^2 (1, N=780) = 6.32, p < .05$.

4.5 Child reports of taking on caring responsibilities in the home

A greater proportion of children whose parents were non-problem drinkers (87 per cent) reported that they 'often' help out around the house compared to children of problem drinkers, $\chi^2 (4, N=780) = 11.17, p < .05$.

4.6 Sibling alcohol use

All siblings (n=211) were questioned on their use of alcohol in the previous 12 months. The majority of siblings had consumed alcohol in the previous year (n=183; 87 per cent) and most of those who had were female (n=99). Mean AUDIT scores for siblings are outlined in table 9 below. Average AUDIT scores for all siblings met the threshold for problem drinking. When gender differences were investigated, older brothers were above the threshold for 'problem drinking' while older sisters were not.

Table 9 - Sibling gender by AUDIT score (excludes abstainers)

	<i>N</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Min</i>	<i>Max</i>
Siblings who drank (previous 12 months)	183	8	5.06	1	26
Brothers	84	9.2	5.32	1	26
Sisters	99	6.9	4.61	1	22

Forty-three per cent of all siblings (n=91) were classified as problem drinkers. The majority of problem drinking siblings were male (n=50) (*see table 10*). Around seven per cent (n=14) of siblings who consumed alcohol reported high levels of alcohol problems associated with their drinking (an AUDIT score of 16 or more). A further, 36 per cent of siblings (n=77) reported medium levels of alcohol problems in the previous year (AUDIT = 8-15).

Table 10 - Sibling gender by AUDIT zone

AUDIT Zone	Zone 1 (0-7)	Zone 2 (8-15)	Zone 3 (16-19)	Zone 4 (20-40)	Total
Male	34 (40%)	40 (48%)	8 (10%)	2 (2.4%)	84
Female	58 (59%)	37 (37%)	1 (1%)	3 (3%)	99
Total	92 (50.27%)	77 (42.08%)	9 (4.92%)	5 (2.73%)	183

The association between siblings AUDIT (for both male and female siblings) and the child's AUDIT from 15-20/21 years of age are outlined in table 11. When gender differences were examined, those who had older male siblings who drank alcohol were at greater risk of higher AUDIT scores at age 15 and 20/21 years old compared to those who had female siblings.

Table 11 - Association between siblings and BYDS AUDIT scores from 15-20/21 years of age

Sibling AUDIT	Child AUDIT		
	15 years	16-17 years	20-21 yrs
All siblings	.21* (n=144)	.16 (n=93)	.28* (n=72)
Male siblings	.33** (n=69)	.21 (n=45)	.35* (n=39)
Female siblings	.15 (n=75)	.11 (n=48)	.22 (n=33)

* $p < 0.05$ ** $p < 0.01$

4.6.1 Sibling reports of child's alcohol use, attitudes & sanctions (and time spent together)

Siblings were questioned on how frequently they attended pubs or clubs: while the majority attended once or twice a month (n=60, 28 per cent); others reported they attended once a week (n=58, 27 per cent), rarely or never (n=54, 26 per cent) or more than once a week (n=39, 18 per cent). The majority stated that they never/almost never (n=187, 89%) go to a pub or a nightclub with their sibling. They also provided information on their knowledge of the BYDS participant's use of alcohol. The majority reported that their sibling did not use alcohol (n=95, 45 per cent), fifty-three (25 per cent) indicated that their sibling definitely used alcohol, while thirty-nine (18 per cent) stated that they probably use alcohol. The remaining twenty-four (11 per cent) did not know if their sibling used alcohol. Siblings also reported on how much they disapprove of the BYDS participant's alcohol use behaviours (see table 12 below).

Table 12 - Siblings approval of child's alcohol use n (%)

	<i>Disapprove strongly</i>	<i>Disapprove</i>	<i>Don't disapprove</i>	<i>Don't know</i>
Drinking occasionally	42 (20%)	50 (24%)	107 (51%)	12 (6%)
Getting drunk at a family party	27 (17%)	64 (40%)	63 (39%)	7 (4%)
Getting drunk once a week with friends	32 (20%)	59 (37%)	63 (39%)	7 (4%)

The majority of siblings (n=139, 66 per cent) had spoken to their younger siblings about alcohol or drugs, on average when their sibling was 13.5 years old (range 5-17 years). Participants were questioned on the frequency of being offered alcohol by the BYDS participant, offering alcohol to the BYDS participant and friends offering alcohol to the BYDS participant (see table 13 below).

Table 13 - Frequency of being offered alcohol n (%)

	Never	Once or twice	3-5 times	6-10 times	More than 10 times
BYDS to Sibling	164 (78%)	30 (14%)	8 (4%)	3 (1%)	6 (3%)
Sibling to BYDS	133 (63%)	49 (23%)	17 (8%)	3 (1%)	9 (4%)
Friends to BYDS	140 (66%)	46 (22%)	10 (5%)	5 (2%)	10 (5%)

4.7 Family processes in the context of a carers drinking

The following sections investigate family dynamics and processes within the context of parental drinking (maternal & paternal) and identify outcomes for children and protective factors which contribute to building resilience. *Table 14* below outlines the family variables measured during the family survey.

4.7.1 Parental monitoring

Mean parent monitoring scores (reported by male and female carers) are reported in table 14 below. In addition, their children/BYDS participants responded to a number of additional items including whether they had ever run away from home for one or more nights without their parents knowing or without telling them where they were going. At 14 years of age, twice as many CPDs had run away from home compared to CNPDs (12 per cent compared to 6 per cent) (χ^2 (1, $N=918$) =9.1, $p<.005$). This was significant for boys (13 per cent compared to 4 per cent) (χ^2 (1, $N=585$) =10.41, $p<.005$) but not for girls (12 per cent compared to 8 per cent) (χ^2 (1,

$\underline{N}=333$) =0.93, $p=.335$). At 15 years old, twice as many CPDs had run away from home (13% vs 6%), (χ^2 (1, $\underline{N}=912$) =7.9, $p<.005$). Again this was significant for boys (14% vs 7%) (χ^2 (1, $\underline{N}=575$) =6.03, $p<.05$) but not for girls (11 vs 6%) (χ^2 (1, $\underline{N}=337$) =1.49, $p=.22$).

4.7.2 Parent attachment

Mean child reports of parental attachment (at 14 years of age) and each of the three sub-scales (degree of mutual trust, quality of communication and extent of anger and alienation) are outlined in table 14. Parental attachment measured the overall level of attachment to parents/carers. Participants were not given the option to differentiate between attachment to male or female carers.

4.7.3 Conflict between carers (marital satisfaction & parent-child conflict)

Over half of carers (54 per cent, $n=499$) reported that they hardly ever or never argue. Sixteen per cent argued at least once a week ($n=146$) while three per cent indicated they argue with their partner most days ($n=23$). Carers also reported on how often their arguments were caused or made worse as a result of alcohol. There was a significant relationship between the carers AUDIT and reporting that arguments were caused by drink ($r=.36$, $n=747$, $p<.00005$). While the majority indicated this was almost never, never or not very often (79 cent, $n=691$), the remaining stated alcohol was sometimes ($n=116$, 13 per cent), often ($n=36$, 4 per cent) or almost always/always ($n=37$, 4 per cent) either the cause of the argument or made an argument worse. Only twenty-one problem drinkers felt that arguments were often/almost always caused or made worse by drinking compared to thirty-nine non-problem drinkers. In terms of reasons for arguments, there was a significant difference between PDs and NPDs in relation to 'often' fighting over the children (12% vs 6%), (χ^2 (4, $\underline{N}=747$) =13.0, $p<.05$) and money (14% vs 4%) (χ^2 (4, $\underline{N}=747$) =25.7, $p<.0005$). Problem drinkers were also more likely to stop talking for prolonged periods of time compared to non-problem drinkers (16% vs 10%) (χ^2 (4, $\underline{N}=747$) =16.0, $p<.005$). There was also a significant relationship between frequency of arguments between parents and their AUDIT scores ($r=.14$, $n=921$, $p<.001$). Marital satisfaction was also related to parental drinking; as levels of marital satisfaction increased, AUDIT scores decreased ($r=-.09$, $n=918$, $p<.01$). Parents also completed measures on conflict with their child. Parents AUDIT scores were associated with: frequency of conflict with child ($r=.14$, $n=1,097$, $p<.01$); conflict intensity ($r=.19$, $n=921$, $p<.01$), and conflict resolution ($r=.07$, $n=921$, $p<.05$).

Table 14 – Descriptive statistics family variables.

	<i>Mean</i>	<i>n</i>	<i>std</i>	<i>Min</i>	<i>Max</i>	<i>N items</i>	<i>Source</i>
PARENTAL MONITORING	35.81	1,097	5.16	9	45	9	Parents
<i>Female carers</i>	36.3	679	5	9	45	9	Parents
<i>Male carers</i>	35.1	418	5.3	17	45	9	Parents
ATTACHMENT	104	868	20.6	32	140	28	Child Y4
<i>Trust</i>	39.4	907	7.9	12	50	10	Child Y4
<i>Communication</i>	34	919	8.2	11	50	10	Child Y4
<i>Anger & Alienation</i>	30.5	925	7.0	8	40	8	Child Y4
ARGUMENTS	2.6	921	.89	1	5	1	Parents
<i>Female carer</i>	2.7	528	.90	1	5	1	Parents
<i>Male carer</i>	2.5	393	.87	1	5	1	Parents

4.8 Associations between family variables and child outcomes

The extant literature has identified child alcohol use and child mental health as the primary outcomes of parental alcohol use in the context of family processes. The primary alcohol use and mental health outcomes for the BYDS children/participants used in these analyses are outlined in table 15.

Table 15 - Summary of outcome variables

	<i>Mean</i>	<i>n</i>	<i>std</i>	<i>Min</i>	<i>Max</i>	<i>N items</i>	<i>Source</i>
AUDIT (15 years)	8.0	877	7.0	0	32	10	YR5
AUDIT (16-17 YEARS)	9.7	551	6.7	0	35	10	YR6
AUDIT (20-21 yrs)	9.4	477	6.4	0	33	10	YR7
MFQ	5.4	918	5.1	0	26	13	YR5
PHQ-9	4.4	468	5.3	0	26	9	YR7
Anxiety	51	512	20.2	18	114	18	YR6
Avoidance	54.3	517	22.1	18	126	18	YR6

AUDIT=Alcohol Use Disorder Identification Test; MFQ=Moods & Feelings Questionnaire; PHQ-9=Patient Health Questionnaire; Anxiety= Anxiety sub-scale of ECR-R; Avoidance= Avoidance sub-scale of ECR-R

The correlations in table 16 report the associations between parental drinking, parental monitoring, parent-child attachment and parental arguments and child outcomes (from sweeps 5 to 7). As previously highlighted, parents drinking was associated with their child’s drinking at 15, 16/17 and 20/21 years of age. Parental monitoring was negatively associated with child AUDIT scores at 15 and 16/17 years of age, whereby the higher their levels of monitoring, the lower the child’s AUDIT score. Parent-child attachment was negatively associated with child drinking during all three sweeps (although decreasing overtime), whereby the more secure the

attachment between the parent and child at 14 years old, the lower their reported AUDIT scores over respective sweeps. Parent-child attachment was also negatively associated with depressive scores on the moods and feelings questionnaire (MFQ), the patient health questionnaire (PHQ) and reported anxiety on the ECR-R, whereby higher levels of attachment were related to lower levels of depression and anxiety reports by BYDS participants. Exposure to frequent arguments between parents was not associated with any of the child outcome variables.

Table 16 - Associations between family variables and child outcomes

	AUD (15)	AUD (16)	AUD (20)	MFQ	PHQ	ANX	AVO
P_AUD	.16** (n=877)	.22** (n=551)	.21** (n=477)	-.02 (n=918)	.02 (n=468)	.07 (512)	-.01 (n=517)
MON	-.25** (n=877)	-.18** (n=551)	-.09 (n=477)	-.04 (n=918)	.01 (n=468)	.02 (n=512)	-.03 (n=517)
IPPA	-.30** (n=717)	-.24** (n=456)	-.13** (n=401)	-.34** (n=756)	-.21** (n=396)	-.12* (n=429)	-.03 (n=436)
ARGUE	.05 (n=750)	.08 (n=501)	.06 (n=421)	.01 (n=789)	.00 (n=413)	.01 (n=465)	.00 (n=469)

* $p < 0.05$ ** $p < 0.01$, Note. AUD= Parent/Carers Alcohol Use Disorder Identification Test (AUDIT) score; MON= Parental Monitoring; IPPA= Inventory of Parent & Peer Attachment; ANX= Anxiety sub-scale of ECR-R; AVOID= Avoidance sub-scale of ECR-R; PHQ-9= depression module of the PHQ; MFQ=Moods and Feelings Questionnaire

4.9 Models predicting child alcohol use at 15, 16/17 and 20/21 years of age

A series of multiple linear regression models were conducted to investigate parental AUDIT score, parental monitoring, parent-child attachment and frequency of parental arguments as predictors of child alcohol use at 15 years of age (controlled for child gender). The five predictor model for male children accounted for 14 per cent of the variance in their AUDIT score at 15 years of age, $F(5, 372) = 12.11, p < 0.01, R^2 = 0.14$ (see table 17 below). In comparison, for female children, the same five predictor model accounted for 21 per cent of the variance in their AUDIT score when aged 15, $F(5, 238) = 12.51, p < 0.01, R^2 = 0.21$ (see table 18 below).

Table 17 - Parental drinking and family variables as predictors of MALE alcohol use at 15 years (n=378)

Predictor	B	SE	t	p	95% CI
P_AUD	0.43	0.11	3.91	0.000	0.21-0.64
MON	-0.26	0.08	-3.37	0.001	-0.41--0.11
IPPA	-0.09	0.02	-4.74	0.000	-0.12-0.05
ARGUE	-0.23	0.41	-0.57	0.572	-1.05-0.58
GENDER (Carer)	1.47	0.72	2.06	0.004	0.06-2.88

Table 18 - Parental drinking and family variables as predictors of FEMALE alcohol use at 15 years (n=244)

Predictor	B	SE	t	p	95% CI
P_AUD	0.18	0.11	1.71	0.088	-0.03-0.39
MON	-0.16	0.79	-2.06	0.040	-0.32-0.01
IPPA	-0.11	0.16	-6.97	0.000	-0.14-.079
ARGUE	-0.75	0.42	-0.18	0.857	-0.89-0.75
GENDER (Carer)	0.66	0.77	0.86	0.389	-0.85-2.17

At 16/17 years of age the five predictor model for male children accounted for 12 per cent of the variance in their AUDIT score (a reduction of 2 per cent), $F(5, 229) = 6.02, p < 0.01, R^2 = 0.12$ (see table 19 below) while for female children, the same five predictor model accounted for 19 per cent of the variance in their AUDIT score (a reduction of 2 per cent), $F(5, 175) = 8.07, p < 0.01, R^2 = 0.19$ (see table 20 below).

Table 19 - Parental drinking and family variables as predictors of MALE alcohol use at 16/17 years (n=235)

Predictor	B	SE	t	p	95% CI
P_AUD	0.50	0.15	3.38	0.001	0.21-0.79
MON	-0.17	0.09	-1.74	0.083	-0.36-0.02
IPPA	-0.08	0.02	-3.22	0.001	-0.13-0.03
ARGUE	0.05	0.49	0.10	0.919	-0.93-1.03
GENDER (Carer)	0.94	0.89	1.06	0.290	-0.81-2.69

Table 20 - Parental drinking and family variables as predictors of FEMALE alcohol use at 16/17 years (n=181)

Predictor	B	SE	t	p	95% CI
P_AUD	0.44	0.13	3.38	0.001	-0.18-0.70
MON	-0.15	0.10	-1.45	0.148	-0.35-0.52
IPPA	-0.09	0.02	-4.71	0.000	-0.13-.052
ARGUE	-0.59	0.49	-1.19	0.235	-1.56-0.39
GENDER (Carer)	0.95	0.89	1.07	0.288	-0.80-2.69

At 20/21 years of age the five predictor model for male children accounted for 9 per cent of the variance in their AUDIT score (a further reduction of 3 per cent), $F(5, 183) = 3.72, p < 0.01, R^2 = 0.09$ (see table 21 below) while for female children, the same five predictor model accounted for 8 per cent of the variance in their AUDIT score (a further reduction of 11 per cent), $F(5, 160) = 2.96, p < 0.05, R^2 = 0.08$ (see table 22 below) (the model was not significant).

Table 21 - Parental drinking and family variables as predictors of MALE alcohol use at 20/21 years (n=189)

Predictor	B	SE	t	P	95% CI
P_AUD	0.50	0.14	3.50	0.001	0.22-0.79
MON	-0.03	0.09	-0.36	0.716	-0.21-0.15
IPPA	-0.05	0.03	-1.92	0.057	-0.11-0.00
ARGUE	0.43	0.48	0.90	0.370	-0.51-1.37
GENDER (Carer)	0.78	0.91	0.86	0.393	-1.01-2.56

Table 22 - Parental drinking and family variables as predictors of FEMALE alcohol use at 20/21 years (n=166)

Predictor	B	SE	t	P	95% CI
P_AUD	0.21	0.12	1.82	0.071	-0.18-0.44
MON	0.15	0.10	1.49	0.139	-0.05-0.34
IPPA	-0.06	0.02	-3.20	0.002	-0.10- -.024
ARGUE	-0.31	0.50	-0.62	0.539	-1.30-0.68
GENDER (Carer)	0.01	0.90	0.01	0.994	-1.76-1.78

4.10 Models predicting child mental health at 15 and 20/21 years of age

Symptoms of depression were measured among BYDS participants when aged 15 years old (using the MFQ) and at 20/21 years of age (PHQ-9). The five predictor model for male children accounted for 12 per cent of the variance in their MFQ score at 15 years of age, $F(5, 392) = 10.24, p < 0.01, R^2 = 0.12$ (see table 23 below). In comparison, for female children, the same five predictor model accounted for 16 per cent of the variance in their MFQ score, $F(5, 256) = 9.76, p < 0.01, R^2 = 0.16$ (see table 24 below).

Table 23 - Parental drinking and family variables as predictors of MALE depressive symptomology at 15 years (n=398)

Predictor	B	SE	t	p	95% CI
P_AUD	-0.32	0.06	-0.52	0.604	-0.16-0.09
MON	-0.04	0.04	-0.82	0.413	-0.12-0.05
IPPA	-0.07	0.01	-6.65	0.000	-0.09- -0.05
ARGUE	-0.01	0.24	-0.03	0.976	-0.48-0.46
GENDER (Carer)	0.03	0.42	0.06	0.952	-0.79-0.84

Table 24 - Parental drinking and family variables as predictors of FEMALE depressive symptomology at 15 years (n=262)

Predictor	B	SE	t	P	95% CI
P_AUD	0.01	0.09	1.13	0.896	-0.17-0.19
MON	0.09	0.07	1.26	0.210	-0.05-0.23
IPPA	-0.09	0.01	-6.88	0.000	-0.12- -0.07
ARGUE	-0.16	0.36	-0.43	0.668	-0.88-0.56
GENDER (Carer)	0.68	0.67	-1.02	0.311	-1.99-0.64

The five predictor model for male children accounted for 13 per cent of the variance in their PHQ score at 20/21 years of age, $F(5, 179) = 5.54, p < 0.01, R^2 = 0.13$ (see table 25 below). In comparison, for female children, the same five predictor model accounted for 9 per cent of the variance in their PHQ score, $F(5, 160) = 2.99, p < 0.05, R^2 = 0.09$ (see table 26 below).

Table 25 - Parental drinking and family variables as predictors of MALE depressive symptomology at 20/21 years (n=185)

Predictor	B	SE	t	p	95% CI
P_AUD	0.23	0.12	1.85	0.066	-0.02-0.47
MON	-0.03	0.08	-0.41	0.686	-0.18-0.12
IPPA	-0.10	0.02	-4.53	0.000	-0.15- -0.06
ARGUE	-0.24	0.41	0.59	0.556	-0.57-1.05
GENDER (Carer)	-0.06	0.76	-0.08	0.937	-1.57-1.45

Table 26 - Parental drinking and family variables as predictors of FEMALE depressive symptomology at 20/21 years (n=166)

Predictor	B	SE	t	P	95% CI
P_AUD	-0.08	0.11	-0.73	0.468	-0.31-0.14
MON	0.21	0.10	2.18	0.030	0.02-0.40
IPPA	-0.06	0.02	-3.10	0.002	-0.09- -0.02
ARGUE	-0.08	0.49	-0.17	0.869	-1.05-0.89
GENDER(Carer)	-1.06	0.88	-1.21	0.228	-2.80-0.67

4.11 Path Models

The protocol indicated we would investigate resilience using latent variable models; however, once analyses were underway it became evident that path models would be more appropriate as they primarily examine the comparative strength of direct and indirect relationships among variables. In addition path analysis helps to disentangle the various causal processes underlying the particular outcome by estimating both the magnitude and effects with the hypothesised causal system. As highlighted earlier (see literature review), parental drinking may impact negatively on family dynamics and processes. For example, parental drinking may act as a stressor leading to decreased parenting or it may spill over into the parent child relationship which may result in poor outcomes for their children (with the evidence suggesting it impacts primarily on child substance use and mental health outcomes).

4.11.1 Model descriptions & hypotheses

We ran a series of observed variable, theoretical path models using a Structural Equation Modelling (SEM) approach for parental drinking and family processes to investigate the pathways to a series of outcomes for offspring during adolescence and emerging adulthood. Across all models, we delineated the effects of maternal and paternal drinking variations in outcomes for same sex and opposite sex offspring.

The alcohol use outcome models specify:

1. Paternal drinking predicts maternal drinking;
2. Paternal and maternal drinking predict parent-child attachment, parental monitoring, child alcohol use (at 15, 16/17 and 20/21 years of age);
3. Parent-child attachment predicts level of parental monitoring within the home;
4. Parental monitoring predicts child alcohol use (across the three-time points).

The mental health outcome models specify:

5. Paternal drinking predicts maternal drinking;
6. Paternal and maternal drinking predict parent-child attachment and depressive symptomology (15 years, 20/21 years);
7. Parent-child attachment predicts depressive symptomology;

4.11.2 Modelling strategy and results

Path models were conducted using STATA version 13 (StataCorp, 2013). Models were estimated using maximum likelihood with missing values. Table 27 lists the coefficients for each path across the three hypothesised models (for child alcohol use). Figure 4 displays the significant path coefficients for child alcohol use at 15 years, hypothesised model.

In Model 1, as hypothesised, paternal alcohol use predicted maternal alcohol use. Maternal alcohol use was positively associated with child alcohol use (fathers alcohol use was not); (maternal and paternal drinking were not associated with parent-child attachment) and both maternal and paternal drinking were associated with decreased levels of maternal and parental monitoring. The overall level of parent-child attachment in the household was associated with maternal and paternal monitoring. High levels of both maternal and paternal monitoring were associated with lower AUDIT scores among their offspring. Model 1 demonstrated a non-significant chi-square ($\chi^2 = 95.29$, $p=0.000$) indicating good model fit, however the other goodness of fit statistics were not significant, CFI=.64, TLI=-0.341, RMSEA=0.178, RMSEA 90%

CI[0.148, 0.210], (SRMR was not reported due to missing values), indicating overall poor fit to the data.

Model 2, displayed similar significant path coefficients with two exceptions: the degree of maternal monitoring experienced at 14 years old was no longer associated with child alcohol use at 16/17 years; similarly, the path from parent-child attachment to maternal monitoring was no longer significant. The direct path from exposure to fathers alcohol use at 14 years of age to child alcohol use at 16/17 years was now significant. Model 2 demonstrated a non-significant chi-square ($\chi^2 = 88.15$, $p = 0.000$) indicating good model fit, however the other goodness of fit statistics were not significant, CFI=.62, TLI=-0.410, RMSEA=0.171, RMSEA 90% CI[0.141, 0.203], (SRMR was not reported due to missing values), indicating overall poor fit to the data.

In Model 3, similar paths (across all three models) were displayed from fathers alcohol use to mothers alcohol use, parent-child attachment to fathers monitoring, fathers drinking to fathers monitoring and mothers drinking to mothers monitoring. Alcohol use at age 20/21 was no longer predicted by exposure to mothers drinking and levels of paternal monitoring at 14 years old. As with Model 2, mothers monitoring was no longer associated with child drinking. However, (as with model 2) paternal drinking at 14 years old was associated with child drinking at 20/21 years, increasing in size from 16/17 years old. Model 3 demonstrated a non-significant chi-square ($\chi^2 = 76.50$, $p = 0.000$) indicating good model fit, however the other goodness of fit statistics were not significant, CFI=.63, TLI=-0.393, RMSEA=0.159, RMSEA 90% CI[0.129, 0.191], (SRMR was not reported due to missing values), indicating overall poor fit to the data.

Table 27 - Standardised coefficients, SE and significance level for Models 1-5 (male and female children)

Paths (to)	(from)	<i>Model 1</i> <i>AUDIT</i> <i>15 years</i>	<i>Model 2</i> <i>AUDIT</i> <i>16/17 years</i>	<i>Model 3</i> <i>AUDIT</i> <i>20/21 years</i>
N		721	720	721
mdrink	fdrink	0.45 (0.04)**	0.45 (0.04)**	0.46 (0.04)**
ippa	mdrink	-0.01 (0.52)	-0.01 (0.05)	-0.01 (0.05)
	fdrink	-0.00 (0.06)	-0.00 (0.06)	-0.00 (0.06)
fmon	Ippa	0.20 (0.05)**	0.19 (0.05)**	0.19 (0.05)**
	fdrink	-0.14 (0.05)**	-0.14 (0.05)**	-0.15 (0.05)**
Audit	mdrink	0.11 (0.05)*	0.13(0.07)*	0.08 (0.07)
	fmon	-0.25 (0.05)**	-0.26 (0.07)**	-0.09 (0.07)
	mmon	-0.17 (0.05)**	-0.05 (0.07)	-0.03 (0.06)
	fdrink	0.04 (0.06)	0.14 (0.07)*	0.18 (0.07)*
mmon	mdrink	-0.13 (0.04)**	-0.13 (0.04)**	-0.13 (0.04)**
	ippa	0.16 (0.04)**	0.16 (0.04)**	0.16 (0.04)**

* $p < 0.05$ ** $p < 0.01$; *mdrink*=mothers drinking; *fdrink*=fathers drinking; *ippa*=parent-child attachment; *fmon*=fathers monitoring; *mmon*=mothers monitoring.

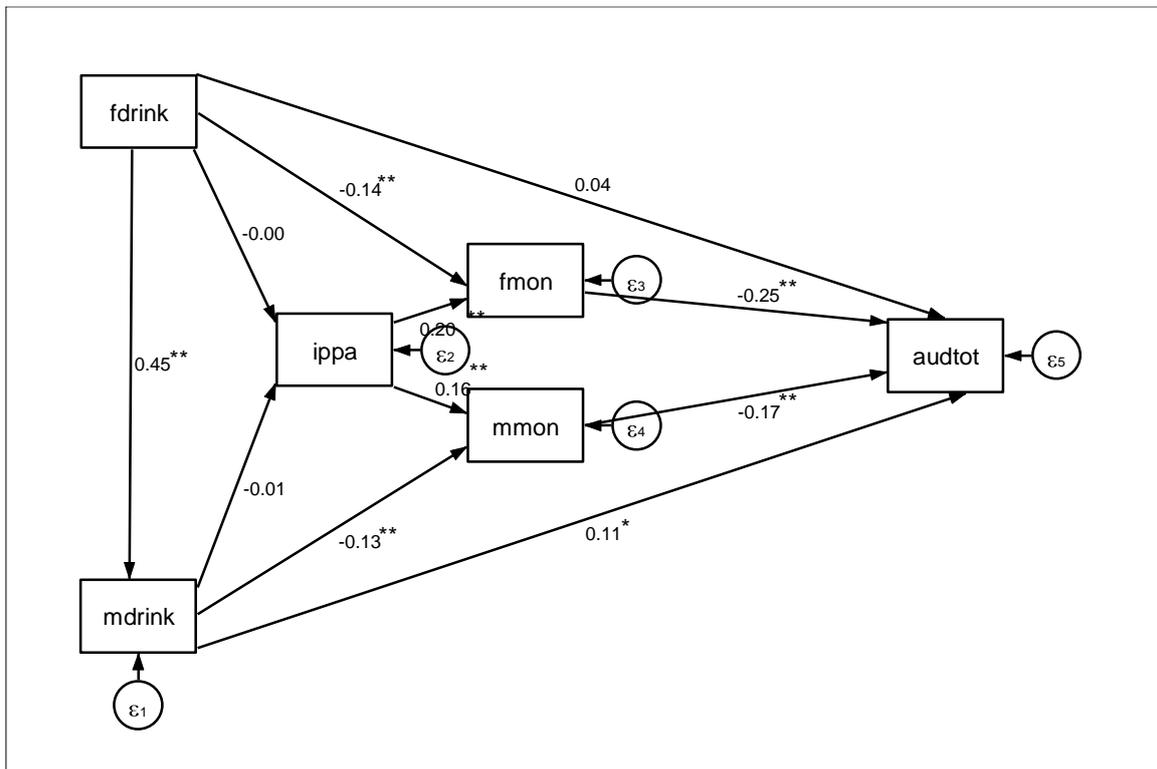


Figure 4 - Path model showing paths from male carer (fdrink) and female carer (mdrink) drinking to child's drinking at 15 years old (audtot) via parent-child attachment (ippa) and male (mmon) and female carer (fmon) monitoring (n=721)

Models 4 (see figure 5) & 5 investigated depressive symptomology as outcomes of parental drinking and family processes. Both models support similar pathways: As hypothesised paternal drinking predicted maternal drinking. However, maternal and paternal drinking were not associated with child reports of attachment or depressive symptomology (at age 15 and age 20/21) as hypothesised. Parent child attachment did predict depressive symptomology, as hypothesised. Model 4 demonstrated a non-significant chi-square ($\chi^2 = 5.01$, $p=0.080$), CFI=.98, TLI=.96, RMSEA=0.037, RMSEA 90% CI[0.000, 0.079], (SRMR was not reported due to missing values). Model 5 demonstrated a non-significant chi-square ($\chi^2 = 0.882$, $p=0.644$), CFI=1.00, TLI=1.02, RMSEA=0.000, RMSEA 90% CI[0.000, 0.047], (SRMR was not reported due to missing values).

Table 28 - Standardised coefficients, SE and significance level for Models 1-5 (male and female children).

Paths (to)	(from)	Model 4 MFQ 15 years	Model 5 PHQ_9 16/17 years
N		721	721
mdrink	fdrink	0.44 (0.03)**	0.44 (0.03)**
ippa	mdrink	-0.02 (0.04)	-0.02 (0.04)
	fdrink	0.00 (0.04)	-0.01 (0.04)
Depress	ippa	-0.35 (0.03)**	-0.21 (0.05)**

* $p < 0.05$ ** $p < 0.01$

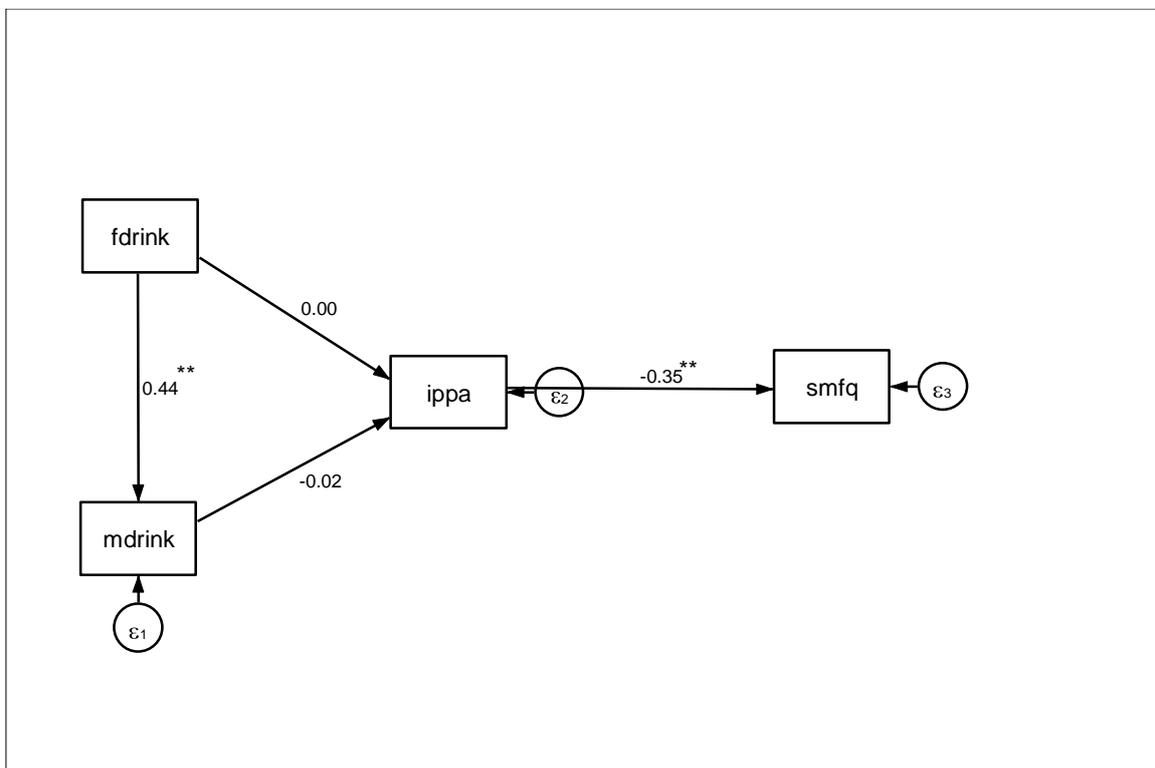


Figure 5 - Path model showing paths from fathers drinking (fdrink) to mothers drinking (mdrink) and depressive symptomology (smfq) via parent-child attachment (ippa)

4.12 Summary of key results

- The majority of parents had consumed alcohol in the previous 12 months (84%).
- Male carers had slightly higher AUDIT scores than female carers but on average fell below the threshold for problem drinking.
- 164 caregivers (1/5 of those who drank alcohol) were classified as problem drinkers.
- The majority of problem drinkers were male (59%)
- 2% of carers (n=19) reported high levels of alcohol problems; a further 16% (n=145) reported medium levels of problem alcohol use.
- Maternal drinking was associated with paternal drinking (across all mother-father dyads). In investigating *problem drinkers only*, in 16 households, both parents were problem drinkers; in 59 households, the father was a problem drinker and the mother was not.
- The majority of children exposed to problem drinking were male (n=114); 72 were living with a problem drinking father.
- Problem drinking parents reported more separations and divorces; they were more likely to have been involved in two or more serious relationships since their child was born; and their child was more likely to have lived with a previous partner at some point.
- A greater proportion of problem drinkers were from middle class families; they tended to be the chief income earner; in full-time employment and had experienced financial difficulties in the past.
- Child alcohol use was associated with drinking in subsequent years (16-17 years, 20-21 years).
- Maternal and Paternal AUDIT scores were (positively) associated with child AUDIT scores over three time-points. The influence of a fathers drinking gradually increased over time while the impact of the mothers drinking peaked when the child was 16-17 years old. There was no association with child depressive symptomology at 15 and 20/21 years and anxiety and avoidance in romantic relationships at 16/17 years. When investigated further in the path analyses, maternal drinking was related to child drinking at 15 and 16/17 years; whereas fathers drinking had more of an impact on child's AUDIT score in later years (16/17 and 20/21 years).
- Just over half (51%) of problem drinkers did not disapprove of the child drinking occasionally although the majority did disapprove of their child getting drunk with a friend (63%). The majority of problem drinkers (77%) reported they knew their child had drunk alcohol in their lifetime.

- 90% of 14 year olds and 92% of 15 year olds reported they had tried alcohol in their lifetime; 26% of 14 year old CPDs accessed alcohol via the home. Half of 15 year old CPDs said their parents allow them to drink without supervision.
- Children who had older male siblings who consumed alcohol were more likely to have higher AUDIT scores at 15 and 20/21 years of age.
- Twice as many CPDs had run away from home by 14 (and 15) years of age; boys were particularly at risk.
- Parental monitoring was associated with lower AUDIT scores at 15 and 16/17 years old.
- Parent-child attachment was associated with lower child AUDIT scores across all three time-points; it was also associated with lower depressive symptomology at 15 and 20/21 years and anxiety (and avoidance) in romantic relationships at 16/17 years. Parent-child attachment was more detrimental to child mental health than parental alcohol use.
- There was an association between frequency of parental arguments and parents AUDIT scores; however there was no association with other family variables or child outcomes.
- Both mothers and fathers drinking impacted on their levels of parental monitoring; fathers monitoring was associated with reduced child AUDIT scores at 15 and 16/17 years whereas mothers monitoring was associated with reduced AUDIT scores at 15 years.
- Parent-child attachment influenced male carers levels of parental monitoring (across all time points) and mothers parental monitoring at 15 & 21 years.

5. Protective effects of peers & leisure activities (as coping strategies), romantic relationships & sexual behaviours

The previous section outlined the role of parents, siblings and family processes in child alcohol use and mental health outcomes within the context of parental drinking. Evidence suggests that resilient young people living with 'hidden harm' may seek to develop stable relationships with others outside the home environment. Engaging with stabilising people outside the family can be a positive factor in the development of resilience among children and young people. The following sections investigate the coping strategies used by BYDS participants particularly the role of friends/peers and investigate the engagement of resilient young people in leisure and extracurricular activities. This section also investigates the development of romantic relationships among children of problem drinkers/non-problem drinkers, sexual behaviour and reported levels of anxiety and avoidance in romantic relationships in late adolescence.

5.1 Spending time with friends

In the participatory workshops (outlined in section 2) service users discussed the importance of spending time with friends with whom they can share their problems, help to take their mind off (distract from) their home environment and provide support when dealing with a parent who is an alcoholic. As previously discussed, these qualitative findings support the previous literature in relation to parental alcohol misuse, for example, Bancroft et al. (2004) identified spending time with friends and going to visit friends as an effective method for coping with parental alcohol misuse.

BYDS participants reported which evenings of the week (defined as after 6:30pm) they usually went out with their friends at 14, 15 and 16-17 years of age. At 14 years and 16-17 years old, there was a significant, albeit small relationship between the number of evenings spent with friends and their parents AUDIT score ($r=.11$, $n=970$, $p<0.01$ and; $r=0.10$, $n=551$, $p<0.05$, respectively), whereby the higher the parents AUDIT score the greater the number of evenings the young person spent with their friends. There was no significant relationship observed at 15 years old ($r=.04$, $n=925$, $p=.21$). Associations between the number of evenings spent with friends at 14, 15 and 16/17 years of age based on child gender and parents alcohol use are outlined in table 29. A greater number of associations were observed between a child spending evenings with their friends and their fathers drinking compared to their mothers drinking.

Table 29 – Associations between mother and fathers AUDIT and evenings spent with friends (based on child's age and gender).

Child gender & age	Fathers AUDIT	Mothers AUDIT
Males and females (14 yrs)	r=.14* (n=374)	r=.12* (n=596)
Males and females (15 yrs)	r=.06 (n=365)	r=.05 (n=560)
Males and females (16-17yrs)	r=.19** (n=232)	r=.02 (n=319)
Males (age 14 yrs)	r=.15* (n=246)	r=.09 (n=375)
Males (age 15yrs)	r=.07 (n=237)	r=.06 (n=349)
Males (age 16/17yrs)	r=.21* (n=144)	r=-.008 (n=18)
Females (age 14 yrs)	r=.12 (n=128)	r=.16* (n=221)
Females (age 15 yrs)	r=.02 (n=128)	r=.02 (n=211)
Females (age 16/17 yrs)	r=.23* (n=88)	r=.06 (n=133)

* $p < 0.05$ ** $p < 0.01$

Aged 14, only a small minority of respondents stated they don't go out in the evenings (n=46, 5 per cent) and most of these were males (n=30) and children of non-problem drinkers (n=41). On average, participants spent 4 evenings a week with friends (n=970, std=2.19) and given this, analyses were run to ascertain which group of children (CPD vs CNPD) were most likely to spend 5 or more evenings out with friends. Chi-square analysis revealed a significant difference in those who spent five evenings or more with their friends according to whether their parent was a problem drinker or not, $\chi^2 (1, N=929) = 11.53, p < .005$, with a higher proportion of the children of problem drinkers (61 per cent) spending five or more evenings with friends compared to children of non-problem drinkers (45 per cent). We also looked at the levels of alcohol use by their parents. There was a significant difference in evenings spent with friends (1-4 or 5-7) based on the 4 categories of AUDIT scale (zone 1= 0-7; zone 2= 8-15; zone 3= 16-19; zone 4= 20-40), $\chi^2 (3, N=929) = 13.72, p < .005$, whereby a higher proportion of children whose parent/s fell into Zone 2 category (61 per cent, n=78) and the vast majority of those whose parents fell into the Zone 4 category (more severe drinking) (83 per cent, n=5) spent five evenings or more with friends. Interestingly, a smaller proportion of children whose parents belonged to the zone 3 category (44 per cent, n=4) spent five or more evenings away from home. As part of the leisure items, participants were also asked how often they spend time with friends. There was a significant relationship between parents AUDIT score and how often they went to a friend's house (r=.11, n=961, $p < 0.005$). This relationship was significant for girls (r=.15, n=341, $p < .05$) but not for boys (r=.08, n=620, $p = .054$). There was also an association

between a parents AUDIT score and the frequency with which a child had friends around to their house ($r=.15$, $n=968$, $p<.00005$); in this instance, this was also the case for both girls ($r=.17$, $n=349$, $p<.005$) and boys ($r=.14$, $n=619$, $p<.0005$).

As previously highlighted, there was no significant relationship between the number of evenings spent with friends and parents drinking. By age 15, once again, only a small proportion of participants stated they don't go out in the evenings ($n=38$, 4 per cent) and most of these were males ($n=30$) and children of non-problem drinkers ($n=31$). On average, participants ($n=925$, $std=2.03$) spent 4 evenings a week with their friends. Although a greater proportion of CPDs (43 per cent, $n=56$) spent five evenings or more with friends compared to CNPD's (35 per cent, $n=274$), there was no statistically significant difference between the two groups, χ^2 (1, $N=924$) =3.29, $p= .07$. There was also no significant difference between those who spend 1-4 evenings or five evenings or more with friends based on the parents AUDIT category (1-4), χ^2 (3, $N=924$) =4.56, $p=0.207$.

At age 15, participants were asked to respond to additional items about their friends. There was no significant relationship between parents AUDIT score and how often they go out to places with their friends ($r=.06$, $n=925$, $p=0.09$). However, this was significant for boys, ($r=.09$, $n=586$, $p<.05$), particularly within the context of a mothers drinking, $r=.11$, $n=349$, $p<.05$). For girls, how often they hung around with friends of the opposite sex was also associated with parental drinking ($r=.12$, $n=339$, $p<.05$).

As highlighted earlier, there was a significant relationship between parents AUDIT and number of evenings spent with friends. At 16 years of age, only 21 participants (4 per cent) stated they do not go out in the evenings and most of these were males ($n=14$) and CNPDs ($n=16$). Participants spent an average of three evenings a week with their friends ($n=551$, $std=1.76$). Although a greater proportion of CPDs spent five or more evenings with friends compared to CNPDs (31 and 22 per cent respectively), there was no significant difference between the two groups (χ^2 (1, $N=528$) =3.25, $p=0.07$).

5.1.1 Isolation and friendship difficulties

A pattern of coping or a consequence of living with parental alcohol misuse which may emerge among adolescents living with parental alcohol misuse is increased introspection, social isolation and friendship difficulties. Those living with a problem drinking parent may be unlikely to visit friends or to invite friends to their home. Strategies for dealing with parental alcohol misuse have been identified in the literature, such as spending time in their room

(Bancroft et al., 2004). While the support of friends appears to be an important protective factor for young people, others suggest many young children may find it difficult to make friends (Werner, 1993).

When aged 14, participants reported on peer problems (a sub-scale of the SDQ) by responding to items eliciting information such as ‘I am usually good on my own’, ‘I have one good friend or more’, ‘other people my age generally like me’, ‘other children or young people pick on me’, and ‘I get on better with adults than with people my age’. Items were summed to give an overall measure of peer problems. There was no significant relationship between parental drinking and peer problems ($r=-.014$, $n=955$, $p=.67$). This was the case for both boys ($r= -.02$, $n=611$, $p=.64$) and girls ($r= -.025$, $n=344$, $p=.65$). BYDS participants (aged 15) also responded to items on spending time alone and difficulty making friends. There was no significant relationship between their parents AUDIT score and how often they spent a lot of spare time alone ($r=-.001$, $n=925$, $p=.98$); had difficulty making friends ($r=.01$, $n=925$, $p=.68$); or whether they had at least one or two close friends ($r=-.01$, $n=925$, $p=.83$). This applied to both sons and daughters of male and female problem drinkers.

There were no significant differences between the CPD and non-CPD groups in relation to whether they had any friends in school who were in a different year group with similar proportions (84 per cent & 85 per cent, respectively) having friends in another year group (χ^2 (1, $N=953$) =.19, $p=0.67$). There was no difference between the two groups based on whether their friends not in their year group were older, younger or both older and younger (χ^2 (2, $N=823$) =1.17, $p=0.57$). There were also no differences between groups based on the gender of these friends (χ^2 (2, $N=786$) =3.03, $p=0.22$). Participants were asked if they had any friends who did not attend their school: again there were no differences between these groups (χ^2 (1, $N=951$) =.005, $p=0.95$). This applied to friends not at this school being older, younger, same age, the friend’s gender and whether they hung out with school or non-school friends at the weekend.

5.2 Leisure activities

The children in the qualitative study (reported in section 2) discussed the importance of a wide range of leisure activities, many of which were used as a method of distraction from issues within the family and as a method of relieving stress and anger. When aged 14, BYDS participants were asked to respond to a range of items ($n=21$) on how they spend their spare time ranging from staying at home to watching TV, reading books, playing computer games etc. Parental drinking was significantly associated with increased frequency/involvement in a

number of activities at 14 years of age including: hanging around on the street, going to a cafe/chippy with friends, shopping with friends, going to a disco or party and baby-sitting for their family (see table 30 for gender differences). The higher the parents AUDIT score, the less likely their children were to engage in the following activities: going to a youth club, going to an after schools club or homework club or attending a church or place of worship.

Table 30 – Associations between recreational activities and parental drinking (only significant relationships reported)

Activity	All children	Girls	Boys
Hanging around on the street	r=.16** (n=965)	r=.22** (n=349)	r=.10* (n=616)
Going to a cafe/chippy with friends	r=.11** (n=968)	r=.11* (n=348)	r=.10* (n=620)
Shopping with friends	r=.07* (n=968)	NS	r=.11* (n=619)
Going to a disco or party	r=.07* (n=969)	NS	NS
Baby-sit for your family	r=.08* (n=969)	NS	NS
Negative associations:			
Going to a youth club	r=-.13** (n=965)	r=-.22** (n=349)	r=-.09* (n=616)
Going to an after schools club or homework club	r=-.08* (n=967)	r=-.15* (n=349)	
Church or place of worship	r=-.18** (n=964)	r=-.29** (n=347)	r=-.10* (n=617)

* $p < 0.05$ ** $p < 0.01$

In addition to the above, a number of activities were significantly associated with a parents drinking, for girls only. These included: listening to cds ($r=.11$, $n=347$, $p<.05$), going to a park or playground ($r=.13$, $n=349$, $p<.05$), going to a sports club or team (including training) ($r=-.14$, $n=347$, $p<.05$), playing sports but not with a club ($r=-.11$, $n=346$, $p<.05$) and going to a local leisure centre ($r=-.16$, $n=347$, $p<.005$). Parental drinking was not associated with watching tv ($r=.03$, $n=968$, $p=.34$), reading books or magazines ($r=-.02$, $n=961$, $p=.45$), playing on computer or games consoles ($r=.04$, $n=964$, $p=.20$), going to the cinema with friends ($r=-.01$, $n=969$, $p=.83$), going to an amusement arcade ($r=.04$, $n=967$, $p=.21$) or doing homework ($r=-.03$, $n=969$, $p=.38$).

5.2.1 Issues which may impact on a child's ability to access social support

Evidence suggests it may be more difficult for some to seek external support due to reasons such as transportation, money, parent's permission (Velleman & Templeton, 2007) or location. At age 14, participants responded to a number of items including how much pocket money they got each week from their parents ($r=.03$, $n=970$, $p=.28$), receipt of money for jobs (e.g. baby sitting, paper round, jobs around the house, other work) ($r=.03$, $n=970$, $p=.31$) and other sources of income (e.g. selling things or stealing) ($r=-.03$, $n=970$, $p=.28$), none of which were significantly related to their parents AUDIT score.

5.3 Romantic relationships

Evidence suggests exposure to parental alcohol abuse in childhood may lead to issues of trust and reliance on others and fears of abandonment (Kelley et al., 2010). While strategies of detachment, avoidance and withdrawal (Werner & Johnson, 1999) in dealing with a parent can be very effective, it can result in attachment and relationship difficulties later in life (Harwin et al., 2010), particularly romantic relationships. At 15 years of age, a similar proportion of young people from both groups (CPDs & CNPDs) reported having a boyfriend or girlfriend (38% and 37%, respectively), $\chi^2(1, N=849) = 0.012$, $p=.911$ (there were no significant differences for boys or girls). In a similar vein, by 16 years old, similar proportions across groups (91 and 89 per cent) reported they had 'gone out with' or had a special romantic relationship (in their lifetime) $\chi^2(1, N=543) = 0.384$, $p=.54$ (no gender differences). This was also the case for having had a romantic relationship in the previous 12 months (82% CPDS & 75% of CNPDS), $\chi^2(1, N=542) = 1.78$, $p=.18$ (no gender differences) and currently being in a relationship, 40% of CPDS and 44% of CNPDS, $\chi^2(1, N=487) = 0.41$, $p=.52$ (no gender differences). There was no significant relationship between parents AUDIT score (when child aged 14) and the age of their current (or last) boyfriend/girlfriend when the participant was 16/17 years old ($r=-.01$, $n=381$, $p=.81$). However, this relationship was significant for females ($r=.16$, $n=163$, $p<.05$) but not males ($r=-.11$, $n=218$, $p=.11$). Table 31 below outlines age of boyfriend/girlfriend based on sub-groups.

Table 31 – Mean age of current (or last) boyfriend/girlfriend at 16/17 years of age

	N	Mean age of boyfriend/girlfriend	Std dev	Min	Max
All participants	381	18.2	2.2	14	32
Males	218	17.3	1.4	14	27
Females	163	19.5	2.5	17	32
All CPDS	62	18.1	1.8	14	23
Male CPDS	43	17.3	1.2	14	21
Female CPDS	19	19.8	1.9	17	23
All CNPDS	319	18.3	2.3	14	32
Male CNPDS	175	17.3	1.5	14	27
Female CNPDS	144	19.4	2.6	17	32

Evidence suggests that often children of alcoholics/problem drinkers may become involved with substance abusing partners. The BYDS participants responded to ten items on their boyfriend or girlfriends involvement in substance use and delinquent activities (see table 32 below). There were no significant differences between the two groups in relation to the items with the exception of two: smoking cannabis and cocaine use. A greater proportion of CPDs (21%) had a boyfriend/girlfriend who used cannabis compared to CNPDS (10%); likewise a greater proportion of CPDs (9%) had a boyfriend/girlfriend who used cocaine compared to CNPDS (3%).

Table 32 – Results of chi-square test between CPD/CNPD and current (or last) girlfriend/ boyfriend substance use (& offending behaviour) at 16-17 years of age.

Item	χ^2	n	df	p
1.Smoke cigarettes	1.19	409	1	0.28
2.Drink alcohol regularly (at least once a week)	0.57	405	1	0.45
3.Smoke cannabis	5.74	401	1	0.02**
4.Use drugs such as ecstasy or amphetamines	1.05	404	1	0.30
5.Use cocaine	5.10	406	1	0.02**
6.Use heroin	/	/	/	/
7.Fight or get into trouble with other people	0.51	404	1	0.47
8.Commit crimes to get money or other things (shop lifts or steals things)	0.23	409	1	0.63
9.Been in trouble with the police	0.30	390	1	0.58
10.Been in court for something they did	0.26	397	1	0.61

***p<0.05, Note -there were no reported heroin users*

Items 1-6 above were summed to give an overall measure of their boyfriend/girlfriends involvement in/use of substances with higher scores indicating use across a variety of substances/poly substance use (M=1.06, n=389, std=1.13, range=0-5). There was a significant positive correlation between parents AUDIT score (when child aged 14 years) and being in a relationship with a substance using boyfriend/girlfriend when aged 16/17 years old (r=.14, n=389, p<0.01). When gender differences were investigated, this relationship was significant for girls (r=.23, n=229, p<.001) but not for boys (r=-.002, n=219, p=.97).

Items 7-10 were also summed giving an indication of boyfriend/girlfriends involvement in delinquent activities (M=.18, N=384, std=.55, range =0-4). As above, the higher the parents AUDIT score, the more likely their daughter was to be in a relationship at 16/17 years of age with someone who was currently involved in delinquent activities (r=.28, n=158, p<.001). This relationship was significant for the overall sample (r=.14, n=384, p<.05) but not for boys (r=.09, n=226, p=.18).

5.4 Attachment related anxiety and avoidance

Research indicates that children raised in alcoholic families may carry the problematic effects of their early family environment into their adult romantic relationships (Kearns-Bodkin & Leonard, 2008). The home environment may promote concerns about being able to trust and rely on others, resulting in difficulty becoming close to others and fears of abandonment (Kelley et al., 2010). People who fearfully avoid intimacy view themselves as undeserving of the love and support of others (Bartholomew, 1990) and have a negative perception of themselves and others (Bartholomew & Horowitz, 1991). As highlighted earlier in the measures section (see section 3), participants completed the Experiences in Close Relationships-Revised (ECR-R) in sweep 6 (when aged 16-17 years), a measure of adult romantic attachment which consists of two subscales: attachment-related anxiety and attachment-related avoidance. As expected, both anxiety and avoidance were significantly associated ($r=.28$, $n=493$, $p<.01$). Table 33 below outlines gender differences in associations between anxiety and avoidance scores based on the parents AUDIT score. Overall, there were no significant associations between parents AUDIT score and child reports of anxiety and avoidance at 16/17 years of age.

Table 33 - Association between male and female anxiety and avoidance scores and parents AUDIT.

<i>Parent AUDIT</i>	<i>Anxiety</i>	<i>Avoidance</i>
All participants	.07 ($p=.12$) $n=512$	-.01 ($p=.80$, $n=517$)
Males	.05 ($p=.37$) $n=302$	-.07 ($p=.25$) ($n=307$)
Females	.08 ($p=.26$) $n=210$.06 ($p=.41$) ($n=210$)

Two-sample t-tests were conducted to compare anxiety and avoidance scores for males and females. Although males reported (slightly) higher mean anxiety scores than females, there was no significant difference in scores: males ($M=52.04$, $SD=20.15$) and females ($M=49.25$, $SD=20.05$; $t(532)=1.5717$, $p=0.1166$). This was also the case with avoidance scores ($M=55.22$, $SD=22.14$; $t(523)=1.1029$, $p=0.2706$).

Children of problem drinkers reported higher mean anxiety scores ($M=53$) than children of non-problem drinkers ($M=51$) (see table 34). A two-sample t-test was performed to compare anxiety scores for the two groups (equal variances assumed). There was no significant difference in anxiety scores for CPD and CNPD ($t(279)=0.6441$, $p=0.52$). There was very little difference between the groups in relation to avoidance scores. A two-sample t-test was also performed to compare avoidance scores for CPDs and CNPDs. There was no significant difference in scores for CPD and CNPD ($t(273)=0.2077$, $p=0.84$). Daughters of problem drinking fathers reported the

highest mean anxiety scores ($M=58.7$), however, this was not statistically different from sons of problem drinking fathers. Sons of problem drinking mothers reported the lowest anxiety scores ($M=49.9$), even when compared to the total sample ($M=50.9$), however, again there was no statistically significant difference between sons and daughters of problem drinking mothers. Furthermore, daughters of problem drinking mothers had the highest average avoidance score ($M=60.6$) across subgroups (there was no statistically significant difference between sons and daughters of problem drinking mothers).

Table 34 - Attachment related anxiety & avoidance scores by child gender, parent gender and parent drinking status

	N	Mean	Std dev	min	Max
ANXIETY					
<i>Whole sample</i>	534	50.9	20.1	18	114
<i>Males</i>	317	52.0	20.1	18	114
<i>Females</i>	217	49.2	20.1	18	98
Children of Problem Drinkers (All)	77	53.2	20.9	18	114
<i>Sons of Problem Drinker</i>	52	52.6	20.9	18	114
<i>Daughters of Problem Drinker</i>	25	54.3	21.3	21	98
<i>Sons of Problem Drinking Mothers</i>	15	49.9	16.5	27	74
<i>Sons of Problem Drinking Fathers</i>	37	53.7	22.7	18	114
<i>Daughters of Problem Drinking Mothers</i>	13	50.3	19.3	21	77
<i>Daughters of Problem Drinking Fathers</i>	12	58.7	23.3	22	98
Children of Non-Problem Drinkers	382	50.5	20.2	18	114
AVOIDANCE					
<i>Whole sample</i>	525	54.4	21.9	18	126
<i>Males</i>	313	55.2	22.1	18	126
<i>Females</i>	212	53.1	21.8	18	120

Children of Problem Drinkers (All)	76	54.7	21.7	18	100
<i>Sons of Problem Drinker</i>	51	53.7	22.1	18	100
<i>Daughters of Problem Drinker</i>	25	56.8	21.1	18	96
<i>Sons of Problem Drinking Mothers</i>	14	53.7	25.8	18	100
<i>Sons of Problem Drinking Fathers</i>	37	53.7	20.9	18	100
<i>Daughters of Problem Drinking Mothers</i>	13	60.6	22.4	18	96
<i>Daughters of Problem Drinking Fathers</i>	12	52.7	19.7	25	82
Children of Non-Problem Drinkers	373	54.0	22.0	18	126

5.4.1 Models predicting anxiety and avoidance in romantic relationships at 16/17 years

The previous sections indicated there were no significant differences between children of problem drinkers and children of non-problem drinkers in relation to their anxiety and avoidance scores. As highlighted earlier (in the literature review; section 1) parental drinking may lead to issues of trust and reliance on others which may be characterised by poor parent-child attachments. These poor attachments may inform a pattern for the development of attachments later on in life, for example, attachments in romantic relationships. A series of multiple linear regression models were conducted to investigate parental AUDIT, parental monitoring, parent-child attachment and frequency of parental arguments as predictors of child anxiety in romantic relationships at 16/17 years old (controlling for child gender). The five predictor model (non-significant) for male children accounted for 4 per cent of the variance in their anxiety score, $F(5, 209) = 1.58, p = 0.17, R^2 = 0.04$ (see table 35 below). In comparison, for female children, the same five predictor model (non-significant) accounted for 3.2 per cent of the variance in their anxiety score, $F(5, 170) = 1.12, p = 0.35, R^2 = 0.03$ (see table 36 below).

Table 35 - Parental drinking and family variables as predictors of MALE anxiety use at 16/17 years n=215).

Predictor	B	SE	t	p	95% CI
P_AUD	-0.06	0.51	-0.12	0.906	-1.07-0.95
MON	-0.03	0.33	-0.09	0.930	-0.68-0.62
IPPA	-0.22	0.08	-2.71	0.007	-0.39-0.06
ARGUE	0.09	1.71	0.05	0.957	-3.29-3.47
GENDER (Carer)	-1.59	3.02	-0.53	0.598	-7.55-4.36

Table 36- Parental drinking and family variables as predictors of FEMALE anxiety use at 16/17 years (n=176).

Predictor	B	SE	t	p	95% CI
P_AUD	0.54	0.47	1.14	0.254	-0.39-1.47
MON	0.55	0.37	1.49	0.138	-0.18-1.28
IPPA	-0.11	0.07	-1.58	0.116	-0.25-0.03
ARGUE	0.83	1.82	0.46	0.648	-2.76-4.42
GENDER (Carer)	0.03	3.23	0.01	0.994	-6.35-6.40

The five predictor model for male children (non-significant) accounted for 3 per cent of the variance in their avoidance score, $F(5, 217) = 1.12, p = 0.35, R^2 = 0.03$ (see table 37 below). In comparison, for female children, the model (non-significant) accounted for 2 per cent of the variance in their avoidance score, $F(5, 169) = 0.58, p = 0.71, R^2 = 0.02$ (see table 38 below).

Table 37 - Parental drinking and family variables as predictors of MALE avoidance use at 16/17 years (n=223).

Predictor	B	SE	t	p	95% CI
P_AUD	-0.01	0.55	-0.02	0.985	-1.09-1.07
MON	-0.03	0.35	-0.09	0.925	-0.73-0.66
IPPA	-0.19	0.09	-2.12	0.035	-0.37- -0.01
ARGUE	1.56	1.82	0.81	0.420	-2.11-5.05
GENDER (Carer)	-2.13	3.27	-0.65	0.515	-8.57-4.31

Table 38 - Parental drinking and family variables as predictors of FEMALE avoidance use at 16/17 years (n=175)

Predictor	B	SE	t	P	95% CI
P_AUD	0.28	0.51	0.55	0.582	-0.72-1.29
MON	-0.31	0.40	-0.75	0.432	-1.10-0.47
IPPA	-0.07	0.08	0.90	0.368	-0.08-0.21
ARGUE	-2.12	1.93	-1.10	0.274	-5.94-1.70
GENDER (Carer)	0.47	3.47	0.13	0.893	-6.38-7.31

5.5 Path Models: Maternal and paternal drinking, parent-child attachment and experiences in close relationships (anxiety and avoidance)

In this section we investigate the pathways from maternal and parental drinking to parent-child attachment and anxiety and avoidance in romantic relationships.

5.5.1 Model descriptions and hypotheses

We ran a series of path analyses (an extension of multiple regression models, using a SEM approach) to investigate causal pathways from fathers drinking, mothers drinking, parent-child attachment to anxiety and avoidance outcomes in late adolescence (16-17 years old). The model specifies:

1. Fathers drinking predicts mothers drinking;
2. Both mother and fathers drinking predict child reports of parent-child attachment;
3. Parent-child attachment predicts child reports of anxiety and avoidance at 16/17 years of age.

5.5.2 Modelling strategy and results

Path models were conducted using STATA version 13 (StataCorp, 2013). Models were estimated using maximum likelihood with missing values. Table 39 lists the coefficients for each path across the two hypothesised models (both anxiety and avoidance). Figure 6 displays the significant path coefficients for child anxiety at 16-17 years of age. In Model 1 (anxiety), as hypothesised, fathers drinking predicted mothers drinking, however mother and fathers drinking did not predict reports of parent-child attachment. Reports of parent-child attachment did predict anxiety levels (in romantic relationships) at 16-17 years of age. For Model 1, there was a non-significant chi-square ($\chi^2 = 2.75$, $p = 0.253$) indicating good model fit; the other goodness of fit statistics were also significant, CFI=.99, TLI=.98, RMSEA=0.019, RMSEA 90% CI[0.000, 0.066], (SRMR was not reported due to missing values), indicating good fit to the data. In Model 2 (avoidance), as hypothesised fathers drinking predicted mothers drinking, however mother and fathers drinking did not predict reports of parent-child attachment. Reports of parent-child attachment did not predict avoidance levels (in romantic relationships) at 16-17 years of age. For Model 2, there was a non-significant chi-square ($\chi^2 = 3.47$, $p = 0.176$) indicating good model fit; the other goodness of fit statistics were also significant, CFI=.98, TLI=.96, RMSEA=0.026, RMSEA 90% CI[0.000, 0.071], (SRMR was not reported due to missing values), indicating good fit to the data.

Path Model

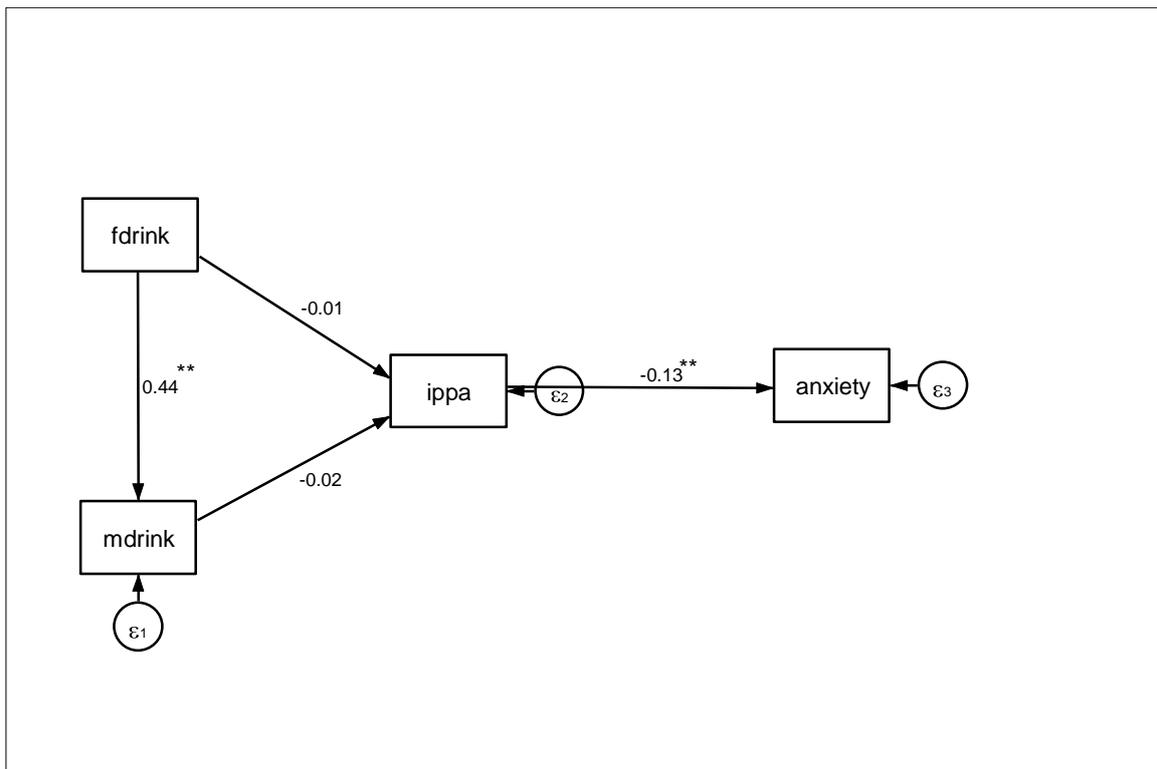


Figure 6 - Path model showing associations between mothers (mdrink) and fathers (fdrink) drinking, parent-child attachment (ippa) and anxiety at 16/17 years of age (both males and females).

Table 39 - Standardised coefficients, SE and significance level for anxiety and avoidance models at 16/17 years of age (male and female children).

Paths (to)	(from)	Model 1 Anxiety	Model 2 Avoidance
mdrink	fdrink	0.44 (0.03) **	0.44 (0.03)**
ippa	mdrink	-0.02 (0.04)	-0.02 (0.04)
	fdrink	-0.12 (0.04)	-0.01 (0.04)
anxiety	ippa	-0.13 (0.05)**	-0.03 (0.05)

*p<0.05, **p<0.01

5.6 Sexual activity

In sweep 6, the majority of participants described themselves as heterosexual (n=509, 94 per cent). Smaller proportions described themselves as bisexual (n=14, 3 per cent), homosexual (n=8, 1.5%) or were uncertain (1.5%). At 16 years old, a greater proportion of those who ever had sexual intercourse were CNPDs (82% compared to 18% of CPDs), a difference which was statistically significant ($\chi^2 (1, N=543) = 7.51, p < .05$). However (when viewed in terms of numbers per sub-group), a greater proportion of CPDs had sexual intercourse by 16 years old (64 %) compared to 47% of the CNPD group ($\chi^2 (1, N=543) = 7.51, p < .05$). Differences between the two groups were significant for males ($\chi^2 (1, N=324) = 7.07, p < .05$; 63% of the CPD males had had sex compared to only 43% of the CNPDs). There was no significant difference between female CPDs and CNPDs. For all participants the average age when they first had sexual intercourse was 16 years old (n=263, std=1.4, range=12-18 years) (the mean age was only slightly higher for CNPDs = 15.8, compared to CPDs = 15.5). While there was no significant relationship between a parents AUDIT score and age when their child first had sex for all participants (r=-.08, n=263, p=.19) and males (r=-.01, n=147, p=.93), there was a significant negative relationship between parents AUDIT score and daughters age when she first had sex (r=-.19, n=116, p<.05).

A greater proportion of CPDs (42%) reported having a one-night stand (defined as a non-romantic sexual relationship) in the previous 12 months compared to CNPDs (36%), however, there was no significant difference between the two groups ($\chi^2 (1, N=329) = 0.70, p = .41$). These findings were similar for males ($\chi^2 (1, N=194) = 0.41, p = .53$) and females ($\chi^2 (1, N=135) = 0.14, p = .71$). On average, the last person a BYDS participant had a one night stand with was 19 years old (n=124, std=2.2, range 16-25). For boys, the age of the person they had their last one night stand with was 18 years (n=78, std=2.12, range=16-25); for girls they were 20 years old (n=46, std=2.01, range =16-25).

On average participants had sexual intercourse with two partners in their lifetime (n=551, std=2.4, range 0-13). This was similar for males (n=330, std=1.4, range=0-13) and females (n=221, std=2.5, range=0-11). CPDs on average had two sexual partners in their lifetime (n=79, std=3.2, range=0-12); this was the case for both males (n=54, std=3.2, range=0-12) and females (n=25, std=3.1, range=0-11). CNPDs had sex with on average one partner in their lifetime (n=472, std=2.3, range=0-13). Males CNPDs had on average one sexual partner in their lifetime (n=276, std=2.2, range=0-13) whereas female CNPDs had sex with two partners in their lifetime (n=196, std=2.4, range=0-9).

5.7 Escaping the family home/setting up own family home/having children

Attempts to escape the family home such as leaving home at an early age or entering into a long term relationship have been identified in the literature on children of alcoholics (Velleman & Templeton, 2007). At 16/17 years of age the majority of participants were single (n=500, 95%), living with a partner (not married) (n=24, 4.6%) or widowed (n=2, 0.4 per cent). While a greater proportion of CPDs were living with a partner (7%) compared to CNPDs (4%), the difference between the two groups was not statistically significant (χ^2 (1, $N=524$) =0.93, p=.33). By 20/21 years the majority were single (never married) (n=449, 92%). Others described themselves as married (n=8, 1.6%), single but used to be married (n=3, .06 per cent), living with partner (not married) (n=24, 4.9%) or civil partnership (n=3, 0.6 per cent). Again, while a higher proportion of CPDs were in a relationship i.e. married, living with partner, civil partnership, (11%) compared to CNPDs (7%), there was no significant difference between the two groups (χ^2 (1, $N=487$) =1.44, p=.23). At age 16/17 years, eleven female participants reported they had been pregnant at some point in their lives. Three were CPDs (14 per cent of female CPDs who responded to the item) and 8 CNPDs (7 per cent of female CNPDs). There was no significant difference between the two groups (χ^2 (1, $N=143$) =1.51, p=.22). Six participants (5%) reported that they currently had children ranging in age from 0-3 years old. Of the six participants who had become parents, all were female and had one child each. Two of these mothers were CPDs (both had mothers who were problem drinkers: scores of 9 and 28 on the AUDIT). By age 20/21 years, 24 participants were parents (of one child). A greater proportion of the CPDs (11%) were parents compared to the CNPD group (4%), a difference which was statistically significant (χ^2 (1, $N=489$) =5.52, p<.05).

5.8 Summary of key results

- Children of problem drinkers demonstrated resilience via engagement in activities and relationships outside the family environment. At 14 years of age, the higher the parents AUDIT score, the greater the number of evenings their children spent outside the home (particularly when the father was a drinker).
- By 15 years of age, there was an association between increased number of evenings spent at a friends house and mothers drinking for boys. The likelihood of spending time with members of the opposite sex was increased for girls whose parents had higher AUDIT scores.
- There was no association between parent AUDIT and child reports of peer problems (e.g. difficulties in making friends, spending time alone).
- Parent AUDIT score was (positively) associated with their children hanging around on the streets, going to a café/shopping with friends, going to discos/parties and baby-sitting for their family. Parental drinking was negatively associated with going to a youth club, going to afterschools/homework clubs and attending a place of worship. A number of activities were positively associated with parental drinking for girls: listening to cds, going to the park/playground, going to a sports club or team or leisure centre. Parental drinking was not associated with watching tv, reading books or magazines or playing computer/game consoles or doing homework.
- There were no differences between CPDs and CNPDs in relation to having a boyfriend or girlfriend.
- Children of problem drinkers were more likely to have a boyfriend/girlfriend who used cannabis or cocaine. Parent AUDIT score was associated with girls having a substance using and delinquent boyfriend/girlfriend at 16/17 years old.
- There was no association between parent AUDIT and child anxiety or avoidance of romantic relationships. Children of problem drinkers reported higher anxiety scores (particularly daughters of problem drinking fathers) but this was not significant.
- A greater proportion of male CPDs had sex in their lifetime compared to CNPDs by 16 years old.
- There was a significant (negative) relationship between parent AUDIT and a daughters age when she first had sex.
- By 20/21 years of age, a greater proportion of daughters of problem drinkers were parents compared to CNPDs.

6. School & Education

6.1 School commitment, aspirations, relationship and problem behaviours

In years 4 & 5 participants responded to a range of items on school commitment, educational aspirations, teacher-pupil relationships and school problem behaviour (see methods for full description). Subscales included school attachment (feelings of belonging to the school, feelings about the school, nature of the relationship established between teacher and pupil), school commitment (students personal effort and investment in school), education aspirations and school safety. Multiple linear regression analyses were conducted to develop a series of models for predicting school attachment, school commitment, education aspirations and school safety in years 4 and 5 based on parental audit scores and gender.

Table 40 - Unstandardised Regression Coefficients (B) and Standard Errors (S.E) for school attachment Y4 and Y5 with parental audit scores and gender as predictors

Predictor	B	S.E	t	P	95% CI
Parental Audit Scores Y4	-0.02	0.02	-0.93	0.35	-0.05 – 0.02
Gender Y4	0.63	0.21	3.02	<0.05	0.22 – 1.04
Parental Audit Scores Y5	0.01	0.03	0.52	0.60	-0.04 – 0.07
Gender Y5	1.08	0.33	3.30	<0.05	0.44 – 1.72

Multiple regression analyses were conducted to examine the relationship between school attachment in years 4 and years 5 and two potential predictors (parental audit scores, gender). The two predictor model was able to account for 1.1% of the variance in attachment in year 4, $F(2, 937) = 5.34, p < 0.05, R^2 = 0.011$, while in year 5, the two predictor model was able to account for 1.2% of the variance in attachment, $F(2, 887) = 5.45, p < 0.05, R^2 = 0.012$. Overall, the linear combination of parental audit scores and gender were significantly related to school attachment. In observing the individual predictor variables however, only gender was independently related to school attachment in year 4 and year 5. Based on these results, gender appears to be a better predictor of school attachment than parental problem drinking.

Table 41 - Unstandardised Regression Coefficients (B) and Standard Errors (S.E) for school commitment Y4 and Y5 with parental audit scores and gender as predictors.

Predictor	B	S.E	t	P	95% CI
Parental Audit Scores Y4	0.02	0.01	1.77	0.08	-0.00 – 0.04
Gender Y4	-0.22	0.11	-1.93	0.05	-0.44 – 0.00
Parental Audit Scores Y5	0.01	0.01	1.14	0.26	-0.01 – 0.03
Gender Y5	-0.34	0.12	-2.86	<0.05	4.08 – 4.92

Further multiple linear regression analyses were conducted to examine the relationship between school commitment in years 4 and years 5 and the potential predictors (parental audit scores, gender). The two predictor model was able to account for 0.8% of the variance in commitment in year 4, $F(2, 947) = 3.82, p < 0.05, R^2 = 0.008$ and was statistically significant. However, in year 5 this model was not significant $F(2, 828) = 5.13, p > 0.05, R^2 = 0.012$. Overall, the linear combination of parental audit scores and gender were significantly related to commitment in year 4 but not in year 5. Conversely, only gender in year 5 was independently related to commitment whilst controlling for parental audit scores, this association was negative, indicating that school commitment decreases as a function of gender. Once again these results indicate that there are gender differences in terms of school and educational outcomes in years 4 and years 5.

Table 42 - Unstandardised Regression Coefficients (B) and Standard Errors (S.E) for educational aspirations Y4 and Y5 with parental audit scores and gender as predictors Predictors.

Predictor	B	S.E	t	P	95% CI
Parental Audit Scores Y4	0.03	0.02	1.30	0.19	-0.01 – 0.07
Gender Y4	1.43	0.25	5.81	<0.05	0.94 – 1.91
Parental Audit Scores Y5	0.03	0.02	1.35	0.18	-0.01 – 0.07
Gender Y5	1.48	0.25	5.88	<0.05	0.99 – 1.98

Further multiple linear regression analyses were conducted to examine the relationship between educational aspirations in years 4 and years 5 and the potential predictors (parental audit scores, gender). In these analyses the two predictor model was able to account for 3.6% of the variance in aspirations in year 4, $F(2, 930) = 17.14, p < 0.05, R^2 = 0.035$, while in year 5, the two predictor model was able to account for 4.1% of the variance in aspirations, $F(2, 811) =$

17.54, $p < 0.05$, $R^2 = 0.041$. Overall, the linear combination of parental audit scores and gender were significantly related to educational aspirations. Once again, only gender was found to be independently related to educational aspirations in both years. Based on these results, gender differences again, appear to impact upon educational outcomes and aspirations in years 4 and years 5.

Table 43 - Unstandardised Regression Coefficients (B) and Standard Errors (S.E) for school safety Y4 and Y5 with parental audit scores and gender as predictors.

Predictor	B	S.E	t	P	95% CI
Parental Audit Scores Y4	0.00	0.00	1.37	0.17	-0.00 – 0.01
Gender Y4	-0.13	0.04	-3.30	<0.05	-0.20 – -0.05
Parental Audit Scores Y5	0.00	0.00	0.92	0.36	-0.00 – 0.01
Gender Y5	-0.15	0.04	-3.62	<0.05	-0.23 – -0.07

The final series of multiple regression analyses were conducted to examine the relationship between school safety in years 4 and years 5 and the potential predictors. The two predictor model was able to account for 1.4% of the variance in safety in year 4, $F(2, 967) = 6.93$, $p < 0.05$, $R^2 = 0.014$, while in year 5, the two predictor model was able to account for 1.7% of the variance in safety, $F(2, 840) = 17.54$, $p < 0.05$, $R^2 = 0.041$. The linear combination of parental audit scores and gender were significantly related to school safety. As expected gender differences appeared to predict school safety independently in years 4 and 5 with a negative association in both years indicating school safety decreases as a function of gender. Overall, these results indicate that there are significant gender differences in terms of school and educational outcomes in years 4 and years 5.

6.2 Parental drinking and school and educational outcomes

To further examine the association between parental drinking (gender) and school and educational outcomes in years 4 and 5, a series of simple linear regressions were conducted to determine if school attachment, school commitment, educational aspirations and school safety could be predicted discretely by either paternal drinking or maternal drinking. Maternal drinking scores significantly predicted school commitment in year 4, $B= 0.03$, $t(913) = 2.57$, $p < 0.05$. Maternal drinking also explained a small proportion of the variance in school commitment scores, $R^2 = 0.007$, $F(1, 913) = 6.63$, $p < 0.05$. In addition, maternal drinking scores also significantly predicted school safety in year 4, $B= 0.01$, $t(933) = 2.13$, $p < 0.05$. Maternal

drinking also explained a small proportion of the variance in school safety scores, $R^2 = 0.004$, $F(1, 933) = 4.53$, $p < 0.05$. These results suggest that increased maternal drinking lead to a decrease in school attachment and school safety. In particular, the effect of maternal drinking may manifest in reduced personal effort in school, frequent absenteeism, increased involvement in fights, getting into trouble with the principal and increased detentions and sanctions.

Multiple regression analyses were then conducted to ascertain if the school subscales (attachment, commitment, aspirations and safety) could be predicted by maternal or paternal drinking and by the gender of the child. As expected there were significant associations found between most of the subscales and maternal and paternal drinking when gender was added to the model. The largest contributing variable in these analyses was observed in the educational aspirations subscale with a beta value of ($B = 1.92$) for paternal drinking in year 5 and a beta value of ($B = 1.77$) for maternal drinking in year 5. In addition, these predictors explained the largest proportion of variance, accounting for around 3-4% of the variation in educational aspirations scores. When further examining the results the second largest effect was observed again in the educational aspirations with a beta value of ($B = 1.48$) for paternal drinking in year 4 and a beta value of ($B = 1.43$) for maternal drinking in year 4. Once again, these predictors explained the largest proportion of variance, accounting for around 3-4% of the variation in educational aspirations scores. This suggests a) that there are pronounced gender differences in educational aspirations and b) there is a relationship between lower educational aspirations and alcohol use-related problems in both mothers and fathers. Numerous differences also emerged when gender was added to the overall model, these were most clearly identifiable between paternal and maternal drinking on school attachment and school safety, explaining between 0.1 – 3% of the variation in both attachment and safety scores in years 4 and 5. Interestingly, only maternal drinking and gender significantly predicted school commitment in year 4 but, not for year 5 or, for paternal drinking. This suggests an important and unique influence of maternal drinking on lower school commitment and behaviour and particularly for boys (see figure 7)



Figure 7 - Associations between mothers drinking, parent-child attachment and anxiety at 16/17 years of age (both males and females).

6.3 Statements about school year 4

A series of two- sample t-tests were conducted in order to compare school statements between children of problem drinkers and children of non-problem drinkers in school year 4 and school year 5. In school year 4, only one of the thirteen statements about school was statistically significant. There was a significant difference in the scores for children of problem drinkers ($M = 2.87$, $SD = 1.15$) and children of non-problem drinkers ($M = 3.18$, $SD = 1.10$) in those who were quiet in class and got on with their work ($t(948) = -3.09$, $p < 0.05$). These results suggest that children of problem drinkers are less likely to be quiet in class and get on with their work in comparison to/with children of non-problem drinkers.

In school year 5, a number of statements about school emerged as noteworthy. Again, significant differences were found in the scores for children of problem drinkers ($M = 2.85$, $SD = 1.11$) and children of non-problem drinkers ($M = 3.17$, $SD = 1.11$) in those who were quiet in class and got on with their work ($t(900) = -2.98$, $p < 0.05$). Therefore, suggesting stability over time in problem behaviour. In addition, there was also significant differences found in the scores for children of problem drinkers ($M = 2.78$, $SD = 1.18$) and children of non-problem drinkers ($M = 3.02$, $SD = 1.10$) in those who were always willing to help the teachers ($t(901) = -2.22$, $p < 0.05$). These results suggest that children of problem drinkers are less likely to engage in helpful behaviour/help teachers in comparison to children of non-problem drinkers. Furthermore, significant differences were found in the scores for children of problem drinkers ($M = 4.29$, $SD = 1.19$) and children of non-problem drinkers ($M = 4.58$, $SD = 0.88$) in those who want to do GCSEs

($t(898) = -3.13, p < 0.05$). These results suggest that children of problem drinkers have lower educational aspirations in comparison to children of non-problem drinkers.

A series of chi-square tests of independence were conducted to test the association between children of problem drinkers and children of non-problem drinkers and the various statements about school. A number of significant relationships were identified. Chi-square analyses revealed a significant difference in those who were quiet in class and got on with their work in school year 4 according to whether their parent was a problem drinker or non-problem drinker, $\chi^2(4, N=950) = 14.10, p < .05$. Further analysis revealed a significant difference in those who never take school seriously in school year 4 according to whether their parent was a problem drinker or non-problem drinker, $\chi^2(5, N=970) = 11.24, p < .05$. In addition, a significant difference was observed in those who are fed up with school in year 4 according to whether their parent was a problem drinker or non-problem drinker $\chi^2(5, N=970) = 13.94, p < .05$. In school year 5 again significant differences emerged in those who were quiet in class and got on with their work according to whether their parent was a problem drinker or non-problem drinker, $\chi^2(4, N=902) = 10.09, p < .05$. In addition, a significant difference was observed in those who were willing to help the teacher according to whether their parent was a problem drinker or non-problem drinker $\chi^2(4, N=903) = 9.56, p < .05$. Lastly, a significant difference was revealed in those who wanted to do GCSEs in school year 5 according to whether their parent was a problem drinker or non-problem drinker, $\chi^2(4, N=900) = 10.80, p < .05$. Overall, children of problem drinkers were less likely to be quiet in class and get on with their work, less likely to take school seriously, less willing to help teachers and had lower educational aspirations when compared to children of non-problem drinkers.

6.4 Relationships with teachers or other significant adults

Engaging with stabilising people outside the family can be a positive factor in the development of resilience e.g. development of relationships with teachers...When aged 15 participants reported whether they had an adult they could talk to if they were having problems for example a parent, teacher or youth worker. There was no significant difference between the CPD and CNPD groups with 72 and 73 per cent, respectively, reporting they had someone they could speak to ($\chi^2(1, N=912) = .005, p = .94$).

6.5 Academic performance

At age 14, there was a significant negative correlation between the parents AUDIT score and child's report of being quiet in class and getting on with their work ($r = -0.09, n = 820, p < 0.05$) and liking school ($r = -0.08, n = 820, p < 0.05$). Chi-square analysis revealed a significant difference in those who were fed up with school according to whether their parent was a problem drinker

or non-problem drinker, $\chi^2 (2, N=804) = 9.44, p < .05$, with a higher proportion of children of non-problem drinkers (76 per cent) reporting they are often/almost always fed up with school compared to children of problem drinkers (24 per cent). A greater proportion of those who engaged in the following activities were also children of non-problem drinkers: skipping class/whole day (74 per cent), been in trouble with the principal (68 per cent), been in detention (76 per cent) or been in a fight in the school grounds (73 per cent), all of which were statistically significant (chi-square analyses not reported here).

6.5.1 Academic performance characteristics/outcomes of children of problem drinkers

In order to assess educational attainment and qualifications in the later years of the study (sweep 7) when participants were aged 20-21, a series of cross tabulations were conducted to ascertain differences in educational outcomes based on parental problem drinking. As can be observed from the figure below there were marked differences in academic achievement according to whether their parent was a problem drinker (CPD) or non-problem drinker (CNPD).

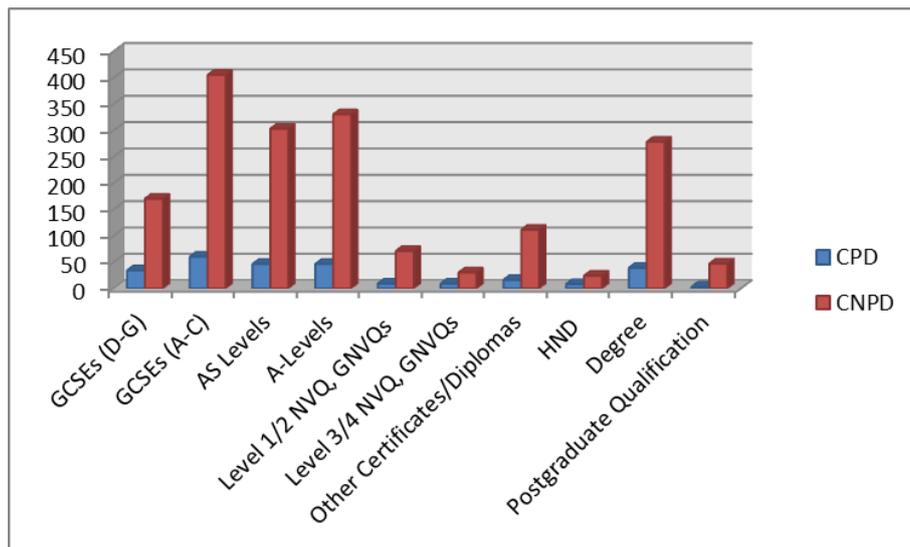


Figure 8 – Frequency of educational qualifications at age 20-21 of children of problem drinkers and children of non-problem drinkers.

Table 44 - Educational Qualifications/Academic Performance of children of problem and non-problem drinkers by age 20/21 (Sweep 7).

Educational Attainment	Children of Problem Drinkers Count (%)		Children of Non-Problem Drinkers Count (%)	
	Yes	No	Yes	No
GCSEs (Grades D-G)	34 (16.7%)	31 (11.1%)	170 (83.3%)	249 (88.9%)
GCSEs (Grades A-C)	60 (12.9%)	3 (20%)	405 (87.1%)	12 (80%)
AS Levels	46 (13.2%)	15 (12.3%)	303 (86.8%)	107 (87.7%)
A-Levels	46 (12.2%)	16 (15.4%)	330 (84.6%)	88 (87.8%)
Level 1/2 NVQ, Foundation/Intermediate GNVQs	9 (11.2%)	54 (13.6%)	71 (88.8%)	343 (86.4%)
Level 3/4 NVQ, Advanced GNVQs	9 (23.1%)	53 (12.3%)	30 (76.9%)	377 (87.7%)
Other Academic/Professional Certificates/Diplomas	16 (12.6%)	46 (13.2%)	111 (87.4%)	302 (86.8%)
HND (Studying for HND)	8 (25%)	56 (12.5%)	24 (75%)	393 (87.5%)
Degree (Studying for degree)	39 (12.3%)	25 (15.2%)	278 (87.7%)	140 (84.8%)
Postgraduate Qualification (Studying)	3 (6%)	56 (14.3%)	47 (94%)	335 (85.7%)

Consistently children of non-problem drinkers evidenced higher academic success when compared to children of problem drinkers. For example, secondary educational qualifications such as GCSEs, AS and A-levels ranged between 11-23 per cent for children of problem drinkers while for children of non-problem drinkers this ranged between 80-89 percent respectively. A similar trend was found when examining differences in tertiary education according to whether their parent was a problem drinker or non-problem drinker. In particular three quarters of the sample of children of non-problem drinkers had a HND (or were studying for one) in comparison to a quarter of the children of problem drinkers. In addition, a substantial proportion of children of non-problem drinkers had a degree (or were studying for one) in comparison to less than a quarter of the children of problem drinkers. This variation in degree attainment impacted upon later achievement and was evidenced in having a postgraduate qualification (or studying for one) where a deficit of 88 per cent was evidenced between children of problem drinkers (6 per cent) and children of non-problem drinkers (94%).

Participants were also asked if they had ever embarked upon a university course but dropped out/did not finish. Chi-square analysis revealed a significant difference in those who started a university course but did not complete according to whether their parent was a problem

drinker or non-problem drinker, $\chi^2 (1, N=481) = 4.06, p < 0.05$, with a higher proportion of children of non-problem drinkers (78 per cent) reporting they had started a university course but did not finish compared to children of problem drinkers (22 per cent).

In further analyses, educational qualifications were assessed in relation to full-time employment and parental problem drinking. Chi-square tests of independence were conducted to test the association between children of problem drinkers and children of non-problem drinkers and being in full-time employment. Although there were considerable differences in the frequency of being in full-time employment for children of problem drinkers (N=18, 14.5%) and children of non-problem drinkers (N=106, 85.5%) the relationship was not statistically significant $\chi^2 (1, N=484) = 0.17, p > .05$. Further analyses were conducted to ascertain if full-time employment at age 20-21 years could be predicted by educational aspirations in year 5 (age 15 years) and parental problem drinking. Parental drinking and educational aspirations significantly predicted being in full-time employment at age 20-21 years, explaining around 5.5 per cent of the variance in the full-time employment variable, $R^2 = 0.0556, F(2, 460) = 13.53, p < 0.01$.

6.6 Summary of key results

- School attachment was significantly predicted by both parental drinking and the gender of the child.
- Parental audit scores and gender were also significantly related to commitment in year 4 but not in year 5.
- Only gender in year 5 was independently related to commitment and the association was negative, indicating that school commitment decreases for boys of problem drinkers more than girls.
- Parental audit scores and gender were also significantly related to educational aspirations.
- The linear combination of parental audit scores and gender were significantly related to school safety. Gender differences appeared to predict school safety independently in years 4 and 5 with a negative association in both years indicating school safety decreases as a function of gender.
- These results suggest that increased maternal drinking lead to a decrease in school attachment and school safety.
- School aspirations demonstrated the biggest effect out of each of the subscales accounting for more variation than the others
- Only maternal drinking and gender significantly predicted school commitment in year 4 but, not for year 5 or, for paternal drinking. This suggests an important and unique influence of maternal drinking on lower school commitment and behaviour and particularly for boys.
- There was a significant difference in the scores for children of problem drinkers and children of non-problem drinkers in those Year 4 and 5 who were quiet in class and got on with their work.
- Children of problem drinkers are less likely to engage in helpful behaviour/help teachers in comparison to children of non-problem drinkers.
- Children of problem drinkers consistently had lower educational aspirations in comparison to children of non-problem drinkers, were more fed up with school and never took school seriously in comparison with children of non-problem drinkers.
- Significant differences were observed in those who were willing to help the teacher according to whether their parent was a problem drinker or non-problem drinker
- Consistently children of non-problem drinkers evidenced higher academic success when compared to children of problem drinkers.

- Significant differences emerged in those who started a university course but did not complete according to whether their parent was a problem drinker or non-problem drinker
- Considerable differences found in the frequency of being in full-time employment for children of problem drinkers and children of non-problem drinkers
- Parental drinking and educational aspirations significantly predicted being in full-time employment at age 20-21 years.

7. Participatory workshops with service users: Part 2

Over the years there has been a recognised need for consultation with children and young people on issues which affect their lives, particularly using participatory methods. At the start of the project we engaged with service users with a view to eliciting their experiences and views on building resilience in the context of parental drinking. Their accounts were used to inform the secondary analyses of the BYDS and family survey datasets (outlined in the previous few sections). The objective of the second set of workshops, held once the secondary analyses were complete, was to continue to engage service users in the research process, so that they might have a say on issues that affect their lives (in line with Article 12 of the UNCRC, 1989). An initial objective of these workshops was to feedback the results from the quantitative analyses. The research team had a number of discussions on how best to do this considering the children attending the Pharos service generally ranged in age from 7 to 14 years old. It was deemed inappropriate to feedback potential outcomes for children of alcoholics to children currently living with 'hidden harm.' For example, the results indicating a risk of higher AUDIT scores in adolescence and emerging adulthood. The research team took the decision to continue to engage with the children using participatory workshops and to use the discussions to give them an overview of the qualitative findings and to validate and elicit their views on the findings from the workshops facilitated with services users in the previous year. It also provided an opportunity to elicit their views on recommendations for practitioners and other professionals who work with children potentially affected by 'hidden harm' (and to inform policy) and potential routes of dissemination.

7.1 Methods

We used the same recruitment procedure as in the first set of workshops accessing the sample via gatekeepers at the Pharos service (see earlier sections for more details).

7.1.1 Sample

We facilitated one large group with eleven children, as opposed to two groups, due to time constraints and in an effort to not inconvenience the service providers. The group consisted of four boys and seven girls. Children were on average 11 years of age.

7.1.2 Procedure

At the start of the workshops, the researcher explained that she had spoken to children in the previous year (who received the same intervention) who had provided their opinions on factors that help to build resilience in children of alcoholics framed as *'who or what helps children to be happy and strong and to cope'* or *'what can protect children when they have a parent who uses alcohol?'* The research team prepared a number of flash cards (see image 4) depicting the factors that build resilience (as suggested by children the previous year) and these were shared among the group.



Image 4 Flash cards summarising themes which were highlighted in the first phase of workshops

Each child took it in turn to say what was on their card and the group discussed whether they agreed or disagreed with the statement and were probed further on each item (what they thought about it and how could they explain how these factors built resilience). They were also given the opportunity to discuss any other issues they felt were important that were not depicted on the flash cards. We used a *'postbox'* method (see image 5) whereby children could place sort the cards into either an *'agree'* or *'disagree'* box. We also asked the children what do those affected with *'hidden harm'* need most help with?



Image 5 Postbox method used for sorting cards

7.2 Findings

The children validated the findings from the previous year with discussion around the following key areas.

7.2.1 Support from others

The role of family members was discussed. Talking to parents often helped although it depended on whether they were currently drinking, 'my mummy and daddy don't drink anymore so it does' (female, age 9). Grandparents, aunts/uncles and siblings were suggested as helpful to children living with parental alcohol misuse. One girl (age 13) reported that her grandparents are like my mummy and daddy' and that they are very important in supporting her. They highlighted the importance of being able to trust and share their experiences with others. Older siblings in the groups spoke about what they do to help their younger siblings, 'I help my little sister and give her pocket money' (female, age 9). Some reported how their cousins had helped them e.g. 'Mines help me all the time' (female, age 13) and 'I agree they can be there for you' (male, age 14). However some exercised caution in case their family members spoke to other family members such as their aunts and their inability to trust other family members, 'I disagree because my cousin has ADHD and tells everybody' (female, age 11).

Best friends were also cited as sources of support. Two girls spoke about the support they received from the new friends they had made in the Pharos group, 'It's good because I can talk to people who I meet here (In group) (female, age 9); we do support each other (female, age 8). However, as in the previous year they spoke about the importance of trusting friends before disclosing any information to them, with participants suggesting 'you have to be careful who you tell (female, age 13); I don't even tell my best friend (female, age 11) and 'if you fall out then they will tell everyone' (female, age 11).

Beyond the home and peer environment, other professionals were discussed. The vast majority stated that teachers and school counsellors were important individuals who can help children as they are 'good to talk to, they listen' (male, age 14). However, this support is not always available to them, for example 'talking to my counsellor helped me, but my counsellor left me' (female, age 11). Children talked about the support they receive from Barnardo's and how 'they are good listeners' (female, age 13). Talking to principals and neighbours were generally not reported to be helpful 'because they don't know anything about you' (female, age 13). Opinions were divided on the level of support they receive from social workers. While some suggested 'they might understand, in a way that your family and friends cant' (female, age 9) others felt that 'because they only hear half the story, and might not understand' (female, age 13).

7.2.2 Activities that can act as a distraction

One of the activities discussed was 'going to bible club.' While some said 'I think it would help,' the majority disagreed stating 'because I'm not a Christian (female, age 11), 'it would be boring' and 'it takes out quality time like playing football' (male, age 9). Others stated 'it depends on the person if it would help (female, age 11). All of the children agreed that 'walking the dog' was a useful activity as 'it clears your mind (female, age 14), 'it would help take my mind off things' (female, age 13), 'because you get fresh air' (female, age 14) and 'you get to calm down' (male, age 10). Having fun with friends was cited as a good source of distraction: 'my friend does it all the time (female, age 9) but not all the time as 'friends can be boring and not play football' (male, age 9). These activities were cited as important because 'you get even more frustrated because you're thinking and thinking' (male, age 14).

7.2.3 Coping strategies

There were mixed opinions on 'hitting a pillow' as a method of alleviating the frustration they feel towards their parent. Some agreed suggesting 'it helps you from hitting someone else' (female, age 13) and 'It can stop you from taking your anger out on someone, it's better to hit the pillow' (female, age 13). Other disagreed stating 'hitting something ruins good furniture'

(male, age 9) and 'hitting the pillow would make you angry and want to hit someone' (male, age 9). Art classes, listening to music and jogging were cited as helpful, for example 'jogging- helps you to clear your head and not think about things' (female, age 14); while football helps as 'you're taking your anger out on the ball' (male, age 9). Talking to toys and teddies were deemed to be helpful for younger children but not older children, 'younger people might find it good because they think the toys are listening. As you get older you know the toys don't really hear' (female, age 14).

7.2.4 Children's recommendation for policy and practice

Children were asked to outline what they felt was good for helping children in similar situations. They stated that counsellors, grandparents, pets, Barnardo's, friends, social workers and aunties and uncles were the best forms of social support. Some of the children reported that it is important to let adults know how they are getting on and to tell them that they need help. The people who they felt should try to help other children and who need to listen included friends, family, teachers, social workers, grandparents and siblings. These findings are discussed in greater detail in the next section of the report along with the findings from the previous workshops and the analyses of the BYDS datasets.

8. Discussion and recommendations for policy and practice

The current study makes a valuable contribution to the international knowledge base on the impact of parental alcohol misuse on children's alcohol use, mental health and academic and vocational outcomes within the context of family dynamics and processes, peer and school effects. We also investigated 'risk' and 'protective' factors and particular domains of 'resilience' (including mental health and academic resilience) within these youth and their wider social context. This study is unique as it allowed us to investigate the nature and extent of 'hidden harm' in a number of ways including:

- the utilization of *longitudinal, prospective cohort data* with detailed information collected directly from a *community sample* of *parents/carers, siblings* and the Belfast Youth Development Study cohort members;
- the investigation of outcomes for the offspring of problem drinkers focusing on *adolescence* and *emerging adulthood*;
- the involvement of children currently living with 'hidden harm' (PPI) and an *expert advisory group* during the research process.

The aim of this section of the report is to discuss these research findings within the context of the extant literature, current service provision and policy with a view to outlining recommendations for practice and policy.

8.1 Alcohol use in the context of the family

Although levels of 'hidden harm' are difficult to determine, estimates suggest that a substantial proportion of young people in Northern Ireland are living in families with at least one heavy drinking parent or caregiver. Our findings indicated approximately 1/5 of caregivers were problem drinkers; 2 per cent (n=19) reported high levels of alcohol problems and a further 16% (n=145) reported medium levels of problem alcohol use (see Percy et al., 2008). However, it is important to acknowledge that the BYDS and family survey are not prevalence surveys; our family survey sample was slightly skewed (with more families from middle classes participating) and we used a broad definition of 'problem drinking' (AUDIT score = 8+). Nonetheless, the study makes a valuable contribution to understanding outcomes for children exposed to parental drinking during their adolescent years.

In line with Keller et al. (2008) & Keller et al. (2005), maternal drinking was associated with paternal drinking. The majority of problem drinkers were male (59%) and male carers had slightly higher AUDIT scores than female carers but on average fell below the threshold for

problem drinking. The majority of children exposed to problem drinking were male (n=114), 72 of these were living with a problem drinking father. There were higher percentages of separations and divorce among problem drinking parents (supporting previous studies such as Christoffersen & Soothill, 2003), they were more likely to have been involved in two or more serious relationships since their child was born; and their child was more likely to have lived with a previous partner at some point. Contrary to previous studies, a greater proportion of problem drinkers were from middle class families. Problem drinkers were also more likely to be the chief income earner and in full-time employment. This may indicate increased alcohol consumption due to poor work-life balance (there were no data in BYDS relating to this construct) or it may simply be a reflection of the BYDS family survey sample which was slightly skewed towards middle social classes. Problem drinkers also experienced financial difficulties in the past (in line with Girling et al., 2006).

To date, few studies have investigated the potentially different roles of maternal and paternal drinking (See Girling et al., 2006). This study sheds light on the role of maternal and paternal drinking on children's alcohol use and mental health outcomes. Child alcohol use was positively associated with maternal and paternal drinking over the three time points (15, 16-17, 20/21 years). However, in relation to which has the greater impact, the results of this study indicate that exposure to maternal drinking in early adolescence has a greater impact on child drinking in mid to late adolescence (aged 15, 16/17 years) whereas fathers drinking appears to have longer-term/delayed effects on their child's alcohol use displaying associations from late adolescence (16-17 years) and strengthening in emerging adulthood (20-21 years). The impact of maternal drinking in the early years may be due to increased exposure to a mothers drinking in the household (while fathers may drink outside the home). This has implications as child alcohol use was associated with their drinking in subsequent years (16-17yrs, 20-21 years). In total, 90% of 14 year olds and 92% of 15 year olds reported they had tried alcohol in their lifetime. In addition to parental alcohol misuse, having an older male sibling who consumed alcohol was also associated with higher child AUDIT scores at 15 and 20/21 years of age.

The influence of parental attitudes and sanctions were highlighted in the results. The majority of problem drinking parents (77%) were aware that their child had used alcohol in their lifetime and just over half (51%) did not disapprove of the child drinking occasionally although the majority did disapprove of their child getting drunk with a friend (63%). Problem drinking by parents also appeared to provide a mechanism for children to access alcohol via the home: 26% of 14 year old CPDs reported they had accessed alcohol via the home. The findings on parental monitoring also provide support for previous studies (see Beck et al., 2004), that is, parental

monitoring was associated with lower AUDIT scores at 15 and 16/17 years old. This finding highlights the importance of effective parenting in protecting children from excessive drinking. Both maternal and parental monitoring were influenced by maternal and paternal drinking; fathers monitoring was associated with lower child AUDIT scores at 15 and 16/17 years old whereas mothers monitoring was associated with reduced AUDIT scores at 15 years. Half of the 15 year old CPDs said their parents allowed them to drink without supervision. Twice as many CPDs had run away from home by 14 (and 15) years of age; particularly boys.

Contrary to the previous literature (see Serec et al., 2012; Balsa, Homer and French, 2009; Kelley et al., 2011), both maternal and paternal drinking appeared to have no association with child depressive symptomology (aged 15 and 20/21 years) and anxiety and avoidance in romantic relationships at 16/17 years of age. There may be a number of reasons why this study contradicts many of the previous studies. This finding raises questions surrounding the use of parent reports of alcohol use and child perceptions of parent's alcohol use and which of the two are most appropriate for use. Many previous studies reporting associations between child mental health, anxiety and avoidance and parental drinking, have drawn on child reports (usually retrospective accounts) of parental drinking using measures such as the CAST (Children of Alcoholics Screening Test) (Jones, 1983). We however, used direct reports of alcohol use from the parents or carers measured using the AUDIT (Babor et al., 2001). Therefore, the perception of the severity of parental drinking may be more damaging than the actual level of parental alcohol use. The retrospective nature of recalling parental alcohol use could be subject to memory deficits or biases. Indeed, much research has shown that mood affects recall. Individuals who are depressed or anxious may recall more negative affect from early life (Rholes & Simpson, 2004). Alternatively, the sample in the current analyses may not have been aware that their parents were drinking at problematic levels (i.e. it may have been hidden from the children). Future studies may benefit by investigating both parent and child reports of parental drinking.

Parent-child attachment was more detrimental to child mental health than parental alcohol use; it was also associated with lowered depressive symptomology at 15 and 20/21 years and anxiety (and avoidance) in romantic relationships at 16/17 years. However, it was also associated with lowered child AUDIT scores across all three time-points. In addition, parent-child attachment influenced males carers levels of parental monitoring (across all time points) and mothers parental monitoring at 15 & 21 years. This has important implications for parenting programmes aimed at improving parenting skills particularly parental monitoring as parent-child attachment appears to be a key component on effective monitoring (see later

sections on recommendations for practice). There was also an association between frequency of parental arguments and parents AUDIT scores; however there was no association with other family variables or child outcomes. This may be a limitation of the data as we only had one variable.

8.2 Protective effects of peers and leisure activities (as coping strategies), romantic relationships and sexual behaviours

In line with the existing literature, children displayed considerable resilience due to their ability to draw on resources and relationships outside the home environment. Children of parents with higher AUDIT scores spent more evenings away from their home, particularly if the father was a drinker (at 14 years). In addition, boys were more likely to spend more evenings away from home (at age 15) when their mother was a drinker. Children of problem drinkers had positive peer relations and did not demonstrate any difficulties in making friends. The higher the parents AUDIT score, the more likely the child was to spend time on activities outside the home such as hanging around on the streets, going to cafes/shopping with friends and going to discos/parties. They were also more likely to baby-sit for their families which may be reflective of the caring role some children may have to take on for their younger siblings. They were less likely to go to youth clubs, after school clubs or attend a place of worship which would be ideal sites for intervention. As a result, access to clubs which could help may have been hampered by their home situation. This has a number of implications for other sites of intervention, particularly schools (see recommendations). Interestingly, parental drinking was not associated with activities that tend to be carried out within the home (e.g. watching TV, playing video games and consoles, reading books or doing homework). Children of problem drinkers were equally as likely to be involved in romantic relationships in contrast to studies which indicate they are more likely to have issues of trust and reliance in romantic relationships (e.g. Kelley et al., 2004; Brennan, Shaver & Tobey, 1991).

There was no association between parents AUDIT and child's anxiety or avoidance of romantic relationships. Although children of problem drinkers reported higher anxiety scores (particularly daughters of problem drinking fathers) this was not significant. Children of problem drinkers were at risk of having a romantic partner who used cocaine or cannabis and a parents AUDIT score was associated with a daughter having a substance using and delinquent boyfriend/girlfriend at 16/17 years old which provides support for previous studies. A greater proportion of male CPDs had sex by 16 years old, there was a significant (negative) relationship between parents AUDIT and a daughter's age when she first had sex; and by 20/21 years of age, a greater proportion of daughters of problem drinkers were parents compared to CNPDs.

8.3 Schools and education

The school findings highlight the key role to be played by teachers and other professionals within the school environment. Aspects of maternal and paternal drinking were associated with decreased commitment and attachment to school among some youth and these patterns continued on to emerging adulthood whereby children of problem drinkers were more likely to start a university course but not complete it. The implications for schools and universities in supporting adolescents and young adults who have grown up with problem drinking parents will be discussed in the following sections on recommendations for policy and practice.

8.4 How can we help children living with 'hidden harm'?

Responding to 'hidden harm' is an extremely complex challenge to both public health policy and practice in the UK and further afield. Although we can't state with any degree of certainty, it is likely that many children affected by a parents drinking do not come to the attention of social services and we believe the findings from this study, using a non-clinical, community based sample will benefit this (sub) group of children in particular in addition to those whose parents drink at lower levels of harm. Overall, the findings allow us to make a number of recommendations on how we can effectively meet the needs of young people living with varying levels of parental drinking, informing the work of policy makers, practitioners and commissioners in health and social care services in Northern Ireland (and internationally). In particular, this research indicates where resources can be targeted to most effectively reduce the level of alcohol related harm. It is important to note, the impact of a parents drinking will vary from family to family but with the right support, the harm to the child can be significantly reduced. As with most health or social related issues affecting children and young people early intervention is key and services targeting these children will benefit from the collaboration of a number of agencies. In the following sections, we will suggest a number of other, more specific recommendations for policy, service provision and intervention design.

8.4.1 Policy

The findings allow us to target some of the issues outlined in the current policy and strategy documents. In recent years, the importance of addressing the needs of young people living with 'hidden harm' has made it on to policy agendas. In Northern Ireland, in particular, the Health and Social Care Board (HSCB) and Public Health Agency (PHA) brought forward the Regional Hidden Harm Action Plan (HSCB/PHA, 2009), developed as part of the New Strategic Direction For Alcohol and Drugs 2011-2016 (NSD) (DHSSPSNI, 2011), currently being implemented under NSD Phase 2. NSD-2 identified 'families and hidden harm' as an emerging issue requiring greater prominence and was outlined as a key priority under 'targeting those at risk and

vulnerable.’ The strategy also highlighted the importance of a continued focus on preventing and addressing ‘hidden harm.’ While this progress has been encouraging, policy must consider how best to support all children who may be affected by a range of patterns of alcohol consumption, including dependent drinking, binge drinking and harmful drinking (see Adamson & Templeton, 2012). The findings from our study, which were not skewed by a large numbers of parents with severe drinking problems, indicated associations between parents drinking and child’s alcohol use and educational outcomes. Therefore, policy needs to focus on the needs of all children exposed to parental drinking and not simply those most at risk or in need of immediate intervention.

In addition, to date, policy has tended to focus on children. While we recognise the importance of early intervention, a life-course perspective should be encouraged. This study, demonstrating the links between parental drinking and outcomes for their offspring during adolescence and emerging adulthood, highlights the importance of adopting such a perspective and addressing the needs of adolescents through to adulthood (and beyond if necessary).

Other strategies and reports, such as ACMD (2003, 2007) have focussed on children of problem drug users, with alcohol and tobacco considered as additional factors, but not the main consideration. The ACMD (2007) did acknowledge parental alcohol misuse was in need of separate and priority attention. Given the numbers of youth estimated to be affected by parental alcohol misuse (compared to other types of drugs) and given that children affected by alcohol misuse tend to come to the attention of social services later than children living with parental drug misuse (see Adamson & Templeton, 2012) it is essential that there is a greater policy focus on these children and young people affected by parental drinking.

Family and child wellbeing strategies may benefit from making specific reference to the harms associated with parental drinking. For example, ‘being healthy; enjoying, learning and achieving; living in safety and with stability; experiencing economic and environmental well-being; contributing positively to community and society; and living in a society which respects their rights,’ are outcomes for children outlined in ‘Our Children and Young People-Our Pledge, 2006-2016’ (OFMDFM, 2006), all of which can be undermined by parental alcohol misuse. However, any reference to alcohol use in the report refers to the child’s use of alcohol with no reference to ‘hidden harm’ or parental drinking. With this in mind, it would be encouraging to see further discussion around the impact of parental drinking on child outcomes in policy documents which focus on child and family wellbeing.

8.4.1.1. Recommendations:

- While those children exposed to extreme levels of parental alcohol misuse and in need of protection should be a priority, policy should also consider how best to support the needs of children and young people affected by varying patterns of parental drinking (including binge drinking and hazardous drinking).
- Policy should adopt a life-course perspective in considering how best to meet the diverse needs of children, teenagers and young adults (and beyond) who have been exposed to parental alcohol use.
- There is a need for policy to place greater emphasis on parental alcohol misuse as distinct from other types of substance use.
- Policy documents focusing on family and child related issues should make reference to the impact of 'hidden harm' on children and young people's outcomes.

8.4.2 Service provision: informing intervention development and current services for children

The Hidden Harm Action Plan (HSCB/PHA, 2009) states 'to effectively address 'Hidden Harm' it is essential that it be viewed firstly as a children and young people's issue,' (pg. 3). Despite this, many interventions focus on the parent or carer with the alcohol problem, neglecting to take into account the needs of the child. There are relatively few interventions (see Short et al., 1995) for children and young people affected by parental substance misuse, particularly those who do not come to the attention of social services; and of those services which do exist, many are in their infancy (Templeton, Novak & Wall, 2011). In line with this theme, the HSCB/PHA (2009) recommended the expansion/further development of existing services to meet the needs of children affected by Hidden Harm. Furthermore, it is essential that service development and delivery incorporate the views of children and their parents/carers in terms of what they say they need (HSCB/PHA, 2009; DHSSPS, 2008; Templeton et al., 2006).

Recent years have witnessed an increase in the development of a range of services and interventions which are showing signs of promise. Templeton & Sipler (2014) reported on the adaption of an existing adult intervention, the 5-Step Method (*'Steps to Cope'*), to children affected by parental substance misuse and/or parental mental illness; suggesting this brief psychosocial individual or group based intervention, has potential in an area where support for children in their own right is lacking. Interim results from the Family Environment: Drug Using Parents (FEDUP) programme, a family based intensive intervention, targeting both children and their parents- have reported promising evidence that FEDUP can help reduce the negative impact of parental drug and alcohol misuse on children (Cass & Fernandes, 2014).

Wider application and more rigorous evaluation of interventions (see Barnard & McKeganey, 2004; Templeton et al., 2006; HSCB/PHA, 2009; DHSSPS, 2008) is required providing evidence on the components of interventions which are most effective in building resilience in children of problem drinkers. While some steps have been taken to address this need there is plenty of scope for development. McLaughlin et al. (2014) are currently conducting a systematic review of 'interventions to build resilience in children of problem drinkers.' The review focuses on interventions delivered to children and young people aged 4-18 years old and outcome measures include: coping behaviours, social support, knowledge of alcohol use, self-esteem, emotional or behavioural problems, use of alcohol and/or drugs, self-efficacy, psychological wellbeing, high risk behaviour, quality of life; and social functioning. It is anticipated the findings from the review will make a valuable contribution via informing service provision.

A number of effective components have been highlighted in the literature including providing children with an opportunity to share difficulties in a safe setting, developing a sustainable relationship with a trusted adult (Houmoller et al., 2011); meeting other people, learning about addiction and understanding and controlling their emotions (Templeton, Novak & Wall, 2011) and building resilience to promote healthy behaviours. These findings were also highlighted in the second set of workshops outlined in this report

8.4.2.1 Recommendations:

- There is still a need for the development of interventions specifically targeting children affected by hidden harm. Effective components such as peer mentors, group based activities and opportunities for meeting others affected by 'hidden harm' should be considered in intervention design.
- Intervention design should include adequate levels of PPI from both children and their parents/carers/guardians/family members and service providers. They should be informed by the evidence base and the results from these longitudinal analyses will be particularly useful via knowledge transfer/exchange.
- Current interventions, many of which are in their infancy, need to be rigorously evaluated over time to assess the long-term benefits. These interventions should be subject to pilot/feasibility studies, (Quasi-) Randomised Controlled Trial's and cost-benefit analyses should be incorporated into the design. Systematic reviews of the current available evidence will also inform service design (e.g. drug misuse and dual diagnosis).

- Those responsible for the allocation of resources should consider the need for interventions for children and young people affected by 'hidden harm' and make provisions to fund effective programmes to reduce negative outcomes.

8.4.3 Supporting parents, carers and families

The revised NSD 2011-2016 contained greater emphasis on engaging with parents and carers, both in terms of prevention and education, and treatment and support. The views of service providers outlined in the Hidden Harm Action Plan (HSCB/PHA, 2009) suggested *'those who misuse alcohol and drugs are often unaware of the full impact of their behaviour on the health and wellbeing of their children'* (pg. 14) and recommended the availability of accessible information about the impact of 'hidden harm.' Our findings indicated parental drinking can lead to poorer substance use and educational outcomes for their children. Therefore, support for parents is vital in raising awareness of the impact of their drinking on their child's outcomes.

With this in mind, simply educating and increasing awareness among parents on the impact of their behaviour on their child's wellbeing will be of benefit. Providing parents with educational leaflets/flyers may help to increase awareness. Public health campaigns raising awareness of 'hidden harm' during times of the year when parents are more likely to consume alcohol in the home, may have some impact. Examples include the 'More Cheer, Less Beer' campaign by the Divert campaign which aimed to promote safe and responsible behaviour at times of the year when alcohol is increased (Derry City Council, 2011). The campaign consisted of postcards distributed to off-sales and organisations across Derry/Londonderry to highlight the potential dangers associated with consuming alcohol at home over the festive period. The message also appeared on billboards over the Christmas period in a bid to reach as many parents as possible.

Beyond simply providing basic advice on the effects of drinking, universal or generic parenting programmes could provide parents with the skills required to protect their children. Evidence suggests that programmes aimed at improving parenting and tackling parental alcohol abuse impact positively on children's wellbeing and behaviour (see Bartlett, Grist & Hahn, 2011). Many parents may not realise they are drinking at harmful levels and these programmes could raise awareness of the effects of moderate drinking on child outcomes (both short- and long-term outcomes). Programmes should increase awareness of the impact of parental attitudes and alcohol use sanctions on child's use of alcohol; supervising the child while drinking; limiting access to alcohol via the home; and monitoring their child's activities. It is vital that both mothers and fathers are engaged in the programmes (given the associations between child

drinking and both maternal and paternal drinking). These programmes can inform many aspects of parenting including the importance of parent-child attachments in protecting their child from poor mental health outcomes and the impact of positive relations with the child on the ability to effectively monitor their behaviour. Parents may also help their child by spending more quality time with them and getting involved in activities that their children enjoy. Family based interventions would also benefit by engaging with older siblings, particularly older siblings in promoting positive behaviours around children already exposed to parental alcohol misuse. By targeting these family processes it may be possible to build on family strengths and promote resilience.

Addressing the causes of parental drinking is also vital. Our findings indicated that parents who drank heavily tended to be the chief income earner, in fulltime employment and had financial difficulties in the past. Work place policies and interventions have a role to play in building resilience among staff and addressing stress and heavy workloads in the workplace. Workplace interventions should also educate parents on the impacts of stress and alcohol use and the potential effects on child outcomes.

8.4.3.1 Recommendations

- At a very basic, but nonetheless informative level, parents should be provided with literature advising on the effects of their drinking on child outcomes with a list of organisations that can provide support for families in difficulty (e.g. counselling services and family crisis interventions). These flyers could be distributed throughout the year or at times of the year when heavy drinking within the home is likely to peak (e.g. Christmas).
- Parenting programmes have a valuable role to play in targeting parents drinking at a range of levels of harm. Programmes should include both mothers and fathers; educate them on the impact of their drinking on their children and include components on attitudes to drinking; communication; monitoring and supervising their child; and parent-child attachments.
- Workplace policies and alcohol related interventions should target parents who may be stressed or under pressure at work. These interventions could provide alternative methods for dealing with stress (e.g. sports, work based counselling, mentoring, courses on building resilience) and make parents aware of the effects of drinking on their children's outcomes.

8.4.4 Supporting schools in helping children

While family-based interventions have a valuable role to play in protecting and helping children and addressing wider issues within their families; they do not address the issue of how to help children and young people who are exposed to lower (but nonetheless harmful) levels of parental alcohol use or simply haven't been detected. The findings from this study indicate that for these children in particular, the school environment plays a valuable role in building resilience and protecting them from harm. Furthermore, there are indications that family initiatives are most effective with younger children, compared to late childhood and adolescents (NACD, 2011).

Quite often the onus is on the child to seek help by speaking to a trustworthy adult. However, some children may be reluctant to talk about their parents alcohol use; they may be wary of the consequences of disclosing information to an adult such as stigma or fear of intervention from social services and they may feel like they are betraying their parent. The children in this study were aware that the school environment is a place where they can access help and support. Children in the participatory workshops were capable of identifying specific teachers within their school who were responsible for helping children with problems. They also spoke of the benefits of using the school counselling service in helping to devise strategies and coping skills to deal with parental drinking. Our findings highlighted the importance of listening to the child's concerns and addressing (or seeking advice to address) the problems they are having at home. Reaching out to an adult and confiding in them about difficulties can be a daunting and brave step for a child to take and young people need to be reassured/dealt with appropriately when they seek help from others. Training should be provided to teachers, counsellors or those responsible for pastoral care to ensure they can adequately deal with a child's concerns when approached (or to assist them in identifying children at risk). Training could consist of informing them of the impact of 'hidden harm' on children's needs, how to provide them with support and understanding (e.g. additional support with their school work), knowing when to inform other agencies and school staff, raising awareness of substance use in the curriculum and supporting involvement in extra-curricular activities. Such training could be provided as CPD training or delivered to those currently training to be teachers. These findings complement the ACMD (2003) who recommended the inclusion of 'impact of parental alcohol use' in general teacher training and CPD; having at least one trained member of staff in each school; and having clear links between early years education providers and schools and local services teams. It is important to note that this training should apply to all professions that come into contact with children and young people on a regular basis such as youth work, social work, youth justice and

probation, psychology, addiction support, guidance and counselling, childcare, speech and language therapy and GPs.

Our findings demonstrated the link between parent and child drinking across time-points. It is vital that substance misuse education in schools provide students with the knowledge to make the right choices about their own lives and break the cycle and ensure the cessation of dangerous patterns of behaviour. Substance misuse modules could contain some content on parental substance misuse and the impact this can have on young people's outcomes.

Children whose parents had higher AUDIT scores spent more evenings away from home, normally hanging around on the streets, going to cafes/shopping with friends, discos/parties and babysitting for families (i.e. taking on caring roles for younger siblings). They were less likely to attend after school/homework clubs, youth clubs or attend places of worship (perhaps due to the lack of support from the parents, chaotic home environments or being unable to access transport to and from activities). These are locations which would be ideal sites for intervention and as a result we believe that these children are most at risk as they are not coming into contact with stable adults, group activities that can distract from problems at home and social support from other youth. Overall, their situation at home is hampering their access to a range of coping activities. Furthermore, children whose parents had higher AUDIT scores also had decreased commitment and attachment to schools and were less likely to complete university courses. Both of these findings highlight the importance of schools as a site for intervention.

A number of school based programmes are currently underway in Northern Ireland. The HSCB/PHA (2009) referred to a model of school-based support for primary school children affected by 'Hidden Harm' to be piloted through the Extended Schools (ES) programme. This programme aimed to improve levels of educational achievement and longer term life chances of disadvantaged children and young people by providing the necessary additional support which can enable those children to reach their potential (Department of Education, 2012). Varied activities are offered through the programme including breakfast or homework clubs, sport, art, drama and other programmes, which aim to involve parents, families and wider community in the life of the school, to support learning and promote healthy lifestyles and raise school standards. Recent years have also witnessed the establishment of school 'nurture units' with 20 units launched in primary schools by the Department for Social Development and Department of Education in 2014 (BBC Northern Ireland, 2014). The units aim to benefit children who are at risk of falling behind in education in a bid to improve their social skills and school performance

and challenge some of the barriers that contribute to low educational attainment. The units provide a comfortable setting where the children can chat, learn to mix with others and express themselves and some have aromatherapy and soft lighting. The units aim to bridge the gap between home and school, build self-esteem and confidence in the child's abilities and build levels of resilience that will help them to cope with situations they may find difficult, not just in school but in later life. These initiatives are likely to benefit children currently living with 'hidden harm.'

While there is a growing policy and practice focus on 'hidden harm' in the UK, most is concerned with children of primary school age and younger; older children tend to be neglected in the debate and young people, aged 16 years and over, are mostly absent from it (Bancroft & Wilson, 2007). The above programmes highlight the focus on children of primary school age. This study, focusing on adolescent and early adulthood outcomes, highlights the need for school or third-level/university based initiatives to help youth within this age category. The adolescent, neither a child nor an adult, and more prone to impulsive actions and risky behaviours than either the child or the adult, may be especially vulnerable to the consequences of parental substance abuse (Fenster, 2011). Adolescents face distinct developmental challenges and placed alongside family stressors associated with parental drinking may have a more adverse impact on their outcomes. In addition, teenage children may have been exposed to parental drinking for longer periods of time than children. Schools are ideal settings for interventions with adolescents of problem drinkers because interventions can be provided without parental involvement, there is a "captive audience," there is minimal risk of stigmatization (Morehouse, 2011) and activities can provide 'children of problem drinkers'-specific information to all students that have the potential to benefit those affected at minimal cost (Morehouse, 2011). Programmes could provide information on core resilience factors to promote healthy behaviours and coping techniques. In addition to the type of educational intervention outlined above, teachers could monitor adolescent involvement in the afterschool activities and make arrangements for transport for those do not have access. As previously highlighted, built-in peer mentoring systems and involving older siblings would also benefit these adolescents (see also HSCB/PHA, 2009).

The findings from this study also highlighted the association between parental drinking and leaving university courses. Those making the transition to university may benefit from peer-mentoring or buddy systems, in the absence of the support systems they may have had access to while receiving second-level education. It is important to note that children of problem drinkers who are successful in securing a place at University may already display high levels of academic

resilience. Velleman & Orford (1999) suggest once children of alcoholics are adults, access to appropriate services may be somewhat easier for them, and the evidence seems to suggest that by then the proportion of the group at risk is much reduced. Nonetheless, it is important that a life-course perspective is applied in assisting these young people through major life transitions, ensuring that services are extended into young adulthood. Particularly in light of the current findings whereby the father's alcohol use was associated with child's alcohol use in their late teens and early adulthood. This has implications for substance use services targeting those at university.

Finally schools could provide educational leaflets to children. A campaign run by NSPCC, Public Health Agency & the Divert Alcohol and Drug Project in 2010 distributed leaflets and other visual materials aimed at helping some of Derrys most vulnerable children and containing very adult advice for children on what to do in an emergency and guidance for older children on keeping alcohol out of reach of younger siblings (Derry Journal, 2010).

8.4.4.1 Recommendations

- All early years education services and schools should have at least one trained person in 'hidden harm' to liaise/deal with children in the event of disclosure/identification.
- Substance misuse and sexual health education in schools is essential in assisting adolescents in making healthy choices. Substance use programmes would benefit by incorporating modules on 'hidden harm' into their programmes.
- There is a need for 'universal' post-primary school based interventions which can reach those affected by 'hidden harm' without identification or implicating problems in the home. These programmes could increase awareness of 'hidden harm'; promote school attachment, commitment and build educational aspirations; build resilience skills; support seeking skills and provide peer mentoring (e.g. older siblings).
- Teachers can play a valuable role in tracking involvement in afterschool activities and promoting engagement in such activities among those who have low involvement or experience high drop-out.
- There is also a need for interventions to assist young adults in making the transition to university to ensure high retention of youth affected by 'hidden harm.' Furthermore, substance use interventions should target this cohort to offset the effects of exposure to a male carer's drinking during their teenage years.

- Children and young people should be provided with literature outlining professional organisations that can provide a listening ear or advice and guidelines on how to keep themselves safe when their parents are drinking.

8.4.5 Study limitations

We used a broad definition of problem drinking as we were keen to investigate the impact of all levels of parental drinking on child outcomes. However, we do acknowledge that for some, this definition is too broad and not in line with ‘hidden harm’ definitions used by service providers. Future longitudinal studies may benefit from examining the severe impact of drinking among community samples in line with these ‘hidden harm’ definitions. The data were collected from a homogenous sample i.e. White Irish/British/Northern Irish. It would have been interesting to investigate resilience in youth from a range of ethnic groups (e.g. Black and Asian groups). Due to the constraints of the data used in the current study, it was not possible to investigate a number of other relevant variables in understanding the impact of parental problem drinking on child outcomes:

- Parents were not asked to respond to items relating to their mental health in the ‘family survey.’ Substance use is likely to exist co-morbidly with other mental health conditions that can impact the care givers ability to successfully parent, such as depression, anxiety, and other disorders (Testa & Smith, 2009; Wells, 2009). Future studies should attempt to address this gap using longitudinal data.
- The datasets did not contain information on parental personality impairments or characteristics which can impact on the ability to raise a child nor did they contain data on the temperament of the child. There were also limited data on conflict in the home.
- There were no data on the duration and severity of alcohol problems in the home and child’s age when parental drinking first began. The impact of length of exposure to parental drinking on child outcomes requires investigation.
- The datasets did not contain any genetic data and there were limited data on children in care and those exposed to other experiences (e.g. children of prisoners, whether they were bereaved as a result of substance misuse).

8.4.6 Recommendations for future work

There are still many more gaps in the literature in understanding how best to help children living with parental substance misuse. The authors of this report have explored ways in which longitudinal cohort data may be utilised to construct narratives of people’s lives (see Elliott, 2008). We have secured funding (from the Improving Children’s Lives Initiative at QUB) on the

back of this programme of work to run a pilot study which will allow us to build (six) narratives documenting in detail the lives of a sample of BYDS participants who grew up with the more severe problem drinking parents (there were 19 in the current study). These narratives, once constructed will be analysed using content analysis to explore similar themes/pathways to outcomes for these young people. The authors have also submitted an application for funding to conduct a study on building narratives to explore shared experiences of children of problem drinkers. This programme of work will make a valuable contribution not only to the literature on 'hidden harm' but will also contribute to methodological debates on qualitative secondary analyses of longitudinal cohort datasets.

There are a number of *recommendations* for future studies:

- There is a need for longitudinal studies to investigate child outcomes and exposure to alcohol in the early years. A number of other authors have also outlined the need for more longitudinal work in this area (e.g. Park & Schepp, 2014). Future studies may benefit from exploring undiagnosed learning disabilities and childhood traumas and specific mental health problems (bi-polar disorders, anxiety, depression) using reports from both parent and child.
- Some studies (including the present study) have investigated the role of fathers, particularly the importance of fathers and the fathering role in parenting and the specific support needs that problem drinking fathers may have, in addition to non-problem drinking fathers where the children's mother is a drinker (See Zohhadi, 2006). However, further research is required to investigate fathering within the context of maternal and paternal drinking, family dynamics and child outcomes.
- The role of parental employment, work-life balance and work related stress on parental drinking requires further investigation.
- Future studies may benefit by investigating both parent and child reports of their parent/carers alcohol use, providing insight into which has the greatest impact on child outcomes.
- Some of the BYDS participants are now parents themselves. Future work using these particular datasets could investigate the impact of exposure to parental alcohol use during their adolescent years on their role as parents later in life.
- As highlighted by strategy documents, there is a need for routine data to be collected to properly estimate the number of children living with parents with alcohol/substance misuse problems.

- Adamson & Templeton (2012) report little research has been carried out on different levels of consumption and styles of drinking by parents and associated harm. While this study used a broad definition of problem drinking, it was not possible to investigate each of these styles of drinking individually due to limited numbers within sub-groups.

8.4.7 Conclusion

Overall there are a number of areas which display considerable potential for helping young children affected by parental drinking. Of utmost importance is the development and evaluation and provision of services directly targeting young people where they can share their experiences and seek support from other children or young people who are experiencing the same problems in their family lives. Parenting programmes can play a valuable role in providing parents with the parenting skills and knowledge necessary to protect their children. Finally, schools and universities have a valuable role to play in building resilience in adolescents and young adults to ensure they are provided with opportunities to attain positive health and educational outcomes.

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