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Further analysis of the British Chinese Adoption Study (BCAS): Adult life events and experiences after international adoption

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Abstract
This paper seeks to contribute to debates about how people's adult lives unfold after experiencing childhood adversity. It presents analysis from the British Chinese Adoption Study: a mixed methods follow-up study of women, now aged in their 40s and early 50s, who spent their infant lives in Hong Kong orphanages and were then adopted by families in the UK in the 1960s.

Sixty-eight women participated via questionnaires and face-to-face interviews. The paper draws on both quantitative analysis (using standardised measures and systematically coded data on adult life events) and qualitative analysis of interview data to identify the context and subjective meaning of the quantitative findings.

We found that most of the women lived largely positive, stable, well-supported lives although punctuated by challenging periods. Using regression analysis, two variables were significantly associated with poorer mid-life functioning over and above other potential influences: a) feeling unhappy about being adopted, and b) partnership adversity after age 25. No associations were found between childhood experiences and patterns of adult adversity. Illustrations are given, based on the interviews, of the women's multi-faceted perspectives on the long-term impact of being internationally adopted and on professional support.

We conclude that when early orphanage care (of reasonable quality) was followed by a good quality adoption, most women were able to negotiate the majority of later difficulties successfully. The findings suggest two important implications for understanding mid-life outcomes: a) that experiences in both childhood and adulthood should be taken into account and b) individuals' subjective views on being internationally adopted may help explain divergent outcomes within groups with similar early experiences.

1. Introduction

This paper examines how women's adult lives unfold after an atypical start in life: early separation from birth parents and care in Hong Kong orphanages, followed by international adoption to the UK. Although adoption usually occurs during early childhood, by permanently altering the child's family relationships it is an intervention with lifelong implications. Adoption legislation in the UK reflects the need for a lifelong view, for example in England and Wales: '*the paramount consideration of the court or adoption agency must be the child's welfare, **throughout his life***' (Adoption and Children Act 2002, part 1, section 1 (2), emphasis added). For services involved in placing or supporting children and young people in alternative family care, understanding how adopted adults look back on their lives can help illuminate the long-term impact on individuals of practice and policy.

Early experience of orphanage care reduces the opportunities for a child to benefit from one-to-one care attuned to their individual needs. This form of early adversity differs from others such as child abuse that are commonly used to measure adverse childhood experiences (ACEs, Hughes et al, 2017). The majority of previous research on ex-orphanage international adoption has been limited to the impact on childhood and adolescence (Juffer and van IJzendoorn 2005; McCall, 2011; van IJzendoorn et al, 2011). Those follow-ups that have extended into early adulthood have mostly, but not all, shown a raised rate of poor mental health for a minority (for example, for contrasting results see Cederblad et al, 1999 and Hjern et al, 2002). Mental health problems, such as anxiety and mood disorders, have been found in a rare longitudinal study to occur *de novo* in early adulthood, suggesting that the consequences of childhood adversity can appear many years later (van der Vegt et al, 2009).

The more limited number of follow-up studies carried out *beyond* early adulthood to mid-life have identified increased risks for poor mental health

(von Borczyskowski et al, 2006), but one study has shown comparable outcomes to non-orphanage samples (Storsbergen et al, 2010). Very poor outcomes have been found for a small minority across most samples. However, differences in sampling, in the extent of exposure to adversity, in follow-up timings and in outcome measures, combined with the myriad potential influences on individuals over time, leave many questions open.

Among those studies that have extended to mid-life, most have examined psycho-social outcomes with little data on the intervening years, or have focused in depth on important but relatively narrow areas of adult experiences such as dealing with racism (Grant, Rushton and Simmonds, 2016). This leaves a gap in understanding the influence of other events in adult life. In this retrospective follow-up study of women in their 40s and 50s, we argue that to gain a long-term perspective on international adoption requires not only exploring childhood experiences and mid-life outcomes but also how people deal with challenges and how their perspectives change in adulthood.

1.1 The British Chinese Adoption Study: background to the adoptions

In the late 1950s and 1960s a large number of migrants from the People's Republic of China entered Hong Kong and numerous children were 'abandoned' (perhaps better described as 'left to be found'). According to contemporaneously recorded files for each child, the children were admitted to residential institutions, sometimes following hospital admission. The smallest institution cared for 65 children and the largest had capacity for 450 children. The conditions were materially adequate, including medical care, but the diet was restricted and repetitive. Inevitably a lack of personalised care and stimulation from a consistent caregiver was lacking and this was likely to be a barrier to the development of secure, selective attachments. The orphanage environment was not regarded as global deprivation according to Gunnar's (2001) rating of children's health, nutrition, stimulation and relationship needs in contrast, for example to cohorts such as the English Romanian Adoption Study (Rutter et al, 2007). The lack of pre-orphanage information on the children's records means that only very rarely was anything known of the pregnancy and birth, or family genetic factors.

Intercountry adoption was put forward as a solution for children who could not be looked after in Hong Kong. Consequently 106 children were brought to the UK via the Hong Kong Adoption Project of International Social Service. The prospective adoptive parents were recruited and assessed by the National Children's Homes (NCH, now Action for Children) or Barnardo's. All were married couples and although the majority were white British, a minority had one parent of Chinese heritage. Mean age of the adoptive mothers at the date

of adoption was 33 years and fathers 35 years. The children were received into socially and materially advantaged homes: mothers identified themselves currently as housewives and fathers' occupations ranged from business and professional to skilled workers.

1.2 British Chinese Adoption Study: previous findings

The British Chinese Adoption Study was a follow-up into mid-life of a sample of girls raised in orphanages in Hong Kong and subsequently transferred in infancy to adoptive family homes in the UK in the 1960s (Rushton et al, 2012; Feast et al, 2013; Rushton et al, 2013). The early phases of the study focused on the links between childhood experiences and outcomes in mid-life (aged in their 40s and 50s). On measures of psychological adjustment, self-esteem and general physical health, their outcomes were comparable with age-matched non-adopted and domestically adopted peers drawn from the 1958 UK National Child Development Study (NCDS; see Elliott and Vaitilingam, 2008). At the time of participating in the study, 55 women (76%) were in relationships (no significant differences were found on comparisons of current marital/cohabiting status with the two NCDS groups) and 51 women (71%) had at least one child; the average age at first becoming a parent was 31 years.

Within the group, differences in pre-adoption experiences were not found to be associated with mid-life functioning as variations in duration of orphanage experience were small across the group. Women with poorer mid-life functioning were more likely to report poorer quality adoptive parental care and/or more negative feelings about adoption (Rushton et al, 2013). One in four of the BCAS women sought professional help at some stage for depression, anxiety or similar problems. This, however, was no greater than for the comparison group women.

The women mostly recalled their adoptive experience positively: 86% said they felt loved by their adoptive mother and the same proportion felt wanted by their adoptive family. This was not true for all however. One in five women (20%; n = 14) felt unhappy or very unhappy about being adopted. The interview data also identified that among women who on balance reported their adoptions positively, struggles related to identity or previous incidents of race-based mistreatment were not uncommon (Rushton et al, 2012). Where women recalled 'low care' (Parental Bonding Instrument: Parker, Tupling and Brown, 1979; Todd, Boyce, Heath and Martin, 1994) by both adoptive parents or feeling unhappy about being adopted, these factors were statistically associated with poorer outcome (difference in means = 0.76, 95% CI 1.33 to

0.19, p=0.01; difference in means = 1.2, 95% CI 0.68 to 1.73, p=0.01 respectively) (Rushton et al, 2013).

The findings, which overall were more favourable than many would have predicted given their early experiences, led to the consequent question of how the women arrived at these outcomes in mid-life. Were adverse adult life events associated with mid-life functioning? What proportions had or had not experienced adversity, of what type and how did they respond? The current paper presents newly anaylsed data on adverse life events from age 17 onwards and the women's perspectives on adoption and professional support.

1.3 Theory

Many aspects of functioning have been found to be negatively affected by early institutional care (Bos et al, 2011). If caregiving is unavailable, inconsistent and insensitive, or even abusive, this is likely to affect a young child's stress levels which may alter psychological and neuro-biological functioning. In line with the evidence of *de novo* onset of problems in adulthood cited earlier (van der Vegt et al, 2009), 'latent vulnerability theory' suggests that children may react to early adverse environments in ways that are potentially adaptive in the short term, but create vulnerability to future mental health problems (McCrory, Gerin & Viding, 2017).

However, following adversity and when placed in a good adoptive home, various restorative processes may potentially take place due to the greatly increased availability of nurturing and personalised care and greater predictability of everyday life (Woodhouse, Miah and Rutter, 2018). This may support the forming of fresh attachments, building trust and self-esteem. Beneficial effects may also derive from beyond the adoptive parents to positive relationships with other family members and the school environment (Brodzinsky, 1990). Conversely, a poor quality adoptive environment may compound any risks related to early adversity.

In examining mid-life functioning, we were influenced by theories of life span development (Sroufe, 2005), especially conceptualisations of mid-life as a 'pivotal period' (Lachman, Teshale and Agrigoroaei, 2015), indicating that at this life stage the women in our sample could be expected to have experienced a range of adverse life events: breakdowns of significant relationships, death or ill health of adoptive parents and parenting challenges. Life events research suggests that exposure to difficult relationships (Brown and Harris, 1989) and stressful life events (Paykel, 2003) in adulthood are both associated with poorer psychological functioning. We questioned whether such experiences would lead to worse outcomes among the ex-

orphanage women. However, we also appreciated that the vulnerable individual can act upon the environment. They may learn to avoid stressors and possibly adopt a defensive stance against the challenges and demands of adult life (Rushton, 2014).

1.4 The aims of the present study

Substantial research has focused on a risk and resilience model following orphanage care and international adoption. Examining processes of positive adaptation in the face of adversity is as important as describing trajectories towards maladaptation. Given the relatively positive outcomes for this group of internationally adopted women in mid-life found previously (Rushton et al, 2013), here we explore the prevalence of adversity in adult life, whether this is associated with childhood experiences and the women's interpretation of the impact of their early experiences across the lifespan. We raise questions about the links between childhood experiences, adult life events and mid-life functioning in the context of international adoption following orphanage care.

1. Method

2.1 Participants

The sample was derived from the International Social Service (ISS) records for 100 girls of Chinese heritage raised in orphanages in Hong Kong and subsequently transferred in infancy to adoptive family homes in the UK in the 1960s (Feast et al, 2013). Sixty-eight women participated via both questionnaire and face-to-face interviews. (Data from the previous analysis reported above includes an additional four women who completed questionnaires only, and is based on n = 72; all analysis reported below is n = 68). Mean age was 48 years (SD=2.4) at time of the interviews.

The study was approved by the Research Ethics Committee at King's College, London (PNM 08/0927) and written informed consent was obtained from participants.

2. Measures

For this paper, qualitative data and resulting quantitative ratings on adult life events (see 2.2.2) were newly analysed, then used in conjunction with quantitative scales (2.2.1) analysed previously. Qualitative data on feelings about adoption and perspectives on professional support were also newly analysed (2.2.3).

2.2.1 Quantitative scales

Orphanage care and adoption

Variables related to orphanage care – duration of orphanage care and age at adoptive placement – were based on contemporaneously recorded information in adoption files held by International Social Service UK (now Children and Families Across Borders).

For adoptive family care, we used the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979), which records parental style during childhood and adolescence as recollected by the participant. We selected a shortened 7-item version, which correlates highly with the original scale (r >.90; Todd et al, 1994). Following Collishaw et al (2007), we used a definition of 'low care' from adoptive parents (defined as any score of 5 or below on the care subscale, range 0 – 9) to dichotomise the results.

Mid-life functioning

A composite outcome index of mid-life (current) functioning had previously been constructed based on four continuous measures: life satisfaction (a 10-point scale from NCDS), self-esteem (Rosenberg Self-esteem Questionnaire; Rosenberg, 1965), psychological distress (Malaise Inventory; Rutter, Tizard and Whitmore, 1970) and state of mental health (GHQ12; Goldberg, McDowell and Newell, 1996). We standardised the four selected scales, combined them and then standardised the resulting composite to yield a z-score, with lower scores representing fewer problems (internal consistency = 0.76 Cronbach's alpha).

Feelings about adoption

Following a UK study of adopted adults of varying ages, we selected a short series of six questions related to adoption, including whether they loved and felt loved by each of their adoptive parents (Triseliotis, Feast and Kyle, 2005). Due to high overlap between items, we selected the item 'I feel happy about being adopted' to represent feelings about adoption (Feast et al, 2013). Responses on a 5-point Likert scale were dichotomised into happy/very happy or unhappy/ambivalent.

2.2.2 Adult life events

Interviews

Our aim here was to select an established method for describing and coding adult life events and experiences, including detailed examples of specific adversities, their level and duration and individual responses to such stresses. The Adult Life Phase Interview (ALPHI), derived originally from a study of

adult life events and depression (Bifulco et al, 2000), enabled us to explore events and changes systematically across five domains: partnerships; relationships with adoptive family members and close friends; parenting (where relevant); education/employment and a general life events domain including health.

The interview starts by establishing the participant's age at major changes during adult life: significant moves, start and end of partnerships, birth/adoption of children, or deaths of loved ones. These events are used to define adult life phases and as 'anchor points' throughout the interview to work out whether other experiences occurred before, during or after these changes. The length and detail of any adversity is also explored, for example, how long before and/or after a relationship breakup the person experienced stress and in what form. Chronic stressors are recorded systematically by domain for each adult life phase as well as at points of major transitions. Adversity is rated on a 4-point scale within each domain (from 1 for marked adversity to 4 for little/no adversity) by trained interviewers using a standardised manual (www.lifespancollection.org.uk/ALPHI%20measure.html).

Ratings and consistency checks

Following training with the ALPHI's originator (Bifulco et al, 2000), each interviewer (including the first author of this paper) completed detailed ratings for their own interviews. They alerted the research team at an early stage to any events/experiences that did not fit into a typical pattern. Initial queries were discussed with the full research team to ensure consistency in relation to common and unusual life events. Each set of ratings was screened on submission by the first author and any queries were resolved via discussion with a second research team interviewer, with reference to the verbatim interview transcripts. Further information was sought from the original interviewer if necessary. After the first author cleaned and entered the data, the ratings and queries were reviewed by the second author. The two authors agreed a small number of changes (less than 4%) to the original interviewer ratings to ensure consistency, in line with the ALPHI manual. All changes involved increasing the adversity rating, for example to reflect an accumulation of events occurring in quick succession. Table 1 shows examples of marked/moderate adversity and lower-level adversity for each domain.

Table 1 Examples of marked/moderate and lower-level adversity

Domain	**Marked/moderate adversity (examples)**	**Some, little or no adversity (examples)**

Partnerships: relationship with current partner whether or not cohabiting/sexual	Abuse; infidelity of partner; conflict or severe tension in relationship lasting more than six months; break-up of relationship accompanied by serious distress or unhappiness.	Break-up of a relationship without serious distress; shorter periods of dissatisfaction in relationship caused by lack of intimacy or support.
Social: interpersonal relationships (adoptive family, friends and ex-partners)	Death or serious physical or psychiatric ill-health of family or close friends; crisis breakdown or severe tension in relationships; harassment or serious disputes with ex-partners.	Less severe tension, relationship distress or effects of loss that are temporary and / or resolved without leading to serious distress or unhappiness.
Parenthood: Birth/adopted children (whether or not currently living with participant)	Infertility or major difficulties related to pregnancy or birth; serious difficulties with parenting or behaviour of child; death or serious ill health of child.	Difficulties in conceiving, pregnancy or birth that are temporary and without serious consequences; less severe distress caused by children's behaviour, ill health or interaction problems.
Material: Education and work	Problems at work or with finding work; difficult work environment including discrimination; difficulties with finance or housing; struggles with education.	Less severe problems in same categories: at work or with finding work; difficult work environment including discrimination; difficulties with finance or housing; struggles with education.
Miscellaneous	Serious/long term health difficulties or consequences of disability.	Health difficulties or consequences of disability that are less severe and / or short-lived.

2.2.3 Adult perspectives on early experiences, adoption and professional support

In addition to the ALPHI, the semi-structured interviews included two sections about adoption, including questions on: being internationally and transracially adopted, birth family, racism or negative stereotyping, talking about adoption to others, the impact of early experiences, and the types of support adopted children might need. Examples include: *'Can I start by asking, is being adopted something you feel comfortable talking about to other people?';* and *'Can you tell me about the positive aspects of being adopted from Hong*

Kong?' and *'Have there been any difficult aspects related to being adopted from Hong Kong?'.*

2.2.4 Analytic procedures

The study aimed to investigate the relative influence of adult life events and experiences on mid-life functioning alongside other childhood influences. We used a mixed methods approach, involving two main stages.

Statistical analysis

First, by quantifying the number and severity of adverse adult life events, we examined whether within-group differences show any association with:

a) recollections of childhood experiences
b) mid-life functioning

Binary variables (*did* versus *did not* experience marked or moderate adversity) were created from the ALPHI data for adversity in each domain. Chi-squared and independent samples t-tests (with the unequal variance assumption where appropriate) were used to test for associations between variables related to orphanage and adoptive family care, adverse adult life events and mid-life functioning. On the basis of these tests, potential independent variables were chosen for entry in a linear multivariable regression model. (An inclusive cut-off univariate p-value of 0.07 was used at this stage in order to avoid missing any important relationships in the multivariable model). The residuals from the fitted model were examined for approximate normality and, as a sensitivity analysis, the regression was refitted with the 'robust' standard errors option in Stata; this allows for unmet distributional assumptions. All statistical analyses were conducted using Stata version 14 (StataCorp, 2015).

Qualitative analysis

Next, we used the results of the quantitative analysis to identify gaps in the findings for further exploration via qualitative analysis (further details described in Section 3.5). The qualitative data enabled us to investigate the process and context of these results as well as the women's perspectives on key areas (Palinkas, 2014). We explored adverse events in two domains identified in the quantitative analysis as potential influences on psychological functioning. We also examined and give illustrations from the interview data on the women's feelings about adoption and perspectives on professional support. We used a combination of frequency counting, thematic analysis and identification of diverse cases to demonstrate the breadth of experiences.

3. Results

3.1 Prevalence of adversity in adult life

In the analysis presented in this paper, adversity means marked or moderate levels of difficulties or challenges (as per Table 1). We started by checking for prevalence of adversity in each domain at any point in adult life (Table 2).

Table 2 Prevalence of different types of adversity reported by adopted women across all adult life phases

Domain	Marked or moderate adversity n (%)	None, little or mild adversity n (%)
Partnerships	26 (38)	42 (62)
Social	52 (76)	16 (24)
Parenthood	19 (28)	49 (72)
Material	12 (18)	56 (82)
Miscellaneous	21 (31)	47 (69)

Although the majority of the sample did not report major adversity, elevated rates were found in the social domain (76%). This figure includes adverse life events or experiences related to adoptive family members, friends and ex-partners: in other words, any social relationships except with their current partners or children (see Table 1 for examples).

Based on the work undertaken in preparing and checking the ALPHI quantitative ratings, we had detected a potential difference between how adversity in early adulthood was reported from later adversity. We divided the adversity ratings for each domain into difficulties experienced between age 17 (or earlier if the women left home earlier) and age 25 – a period defined as 'emerging adulthood' (Arnett, 2007) – and later. We created new binary variables for early adulthood (up to and including age 25) and mid-adulthood (age 26 and over) for each domain. In addition, we considered the potential for testing the effects of proximal adversity (i.e. recent events, in the past year or so) but found too few cases across the group for testing. Table 3 shows the patterns across domains.

Table 3 Prevalence of different types of moderate or marked adversity reported by adopted women in early adulthood and mid-adulthood

Domain	Marked or moderate adversity in *early adulthood* n (%)	Marked or moderate adversity in *mid-adulthood* n (%)
Partnerships	7 (10)	19 (28)
Social (adoptive family, friends and ex-partners)	16 (24)	49 (72)
Parenthood	1 (1)	19 (28)
Material (education and work)	4 (6)	8 (12)
Miscellaneous	6 (9)	18 (26)

The higher level of adversity experienced in mid-adulthood compared to earlier adulthood may be explained by two factors. First, mid-adulthood covered a much longer period: on average 22 years (as mean age of participants was 48 years). Second, some forms of adversity were more likely to occur later: for example, ill health or death of parents, the breakdown of partnerships or marriages, or difficulties associated with fertility or parenthood.

3.2 Early experiences and adult adversity

Having assessed the extent of adult adversity in the sample, we then explored whether childhood experiences were associated with patterns of adult adversity in each domain. We had two sources of data: variables related to orphanage care (extracted from the original ISS files) and variables related to growing up in their adoptive families (based on questionnaires completed by participants prior to the interviews).

Orphanage care

We tested whether the orphanage variables (duration and age at exit in days) were associated with later adversity, using our binary adversity variables for early adulthood and mid-adulthood for each domain. No significant results at $p<0.05$ were found using independent samples t-tests.

This finding followed the pattern of our previous analysis, which had identified no associations between age at adoption or duration of orphanage care against a range of adult mental or physical health outcomes (Rushton et al, 2013*)*. One likely explanation is that lack of variation in duration of orphanage care (compared to other studies) weakened the probability of finding an effect. The majority of our sample were adopted close to the age of two (Rushton et al, 2013).

Adoptive care and feelings about adoption
Then we tested whether a) feeling unhappy about being adopted or b) low parental care during childhood were associated with later adversity. Our previous analysis had identified that these two variables were associated with psychological functioning in mid-life (Rushton et al, 2013). Among the 68 participants in the current analysis, 13 women (19%) reported low care from adoptive parents (i.e. care lacking in warmth, understanding and acceptance) and 14 women (21%) reported feeling unhappy about being adopted. Eight women (12% of the sample) reported both.

Using chi-squared tests, no significant associations were found between our adoption-related variables and the presence of adversity in early or mid-adulthood across each of the five domains.

3.3 Adult adversity and mid-life psychological functioning
For each adult life domain, we used independent sample t-tests to check whether marked/moderate adversity at any time, in early adulthood or in mid-adulthood were associated with scores on our mid-life psychological functioning index.

Partnership domain
First we tested whether women who experienced partnership adversity at any point had poorer current well-being, and found no significant association. Next we used our early adulthood and mid-adulthood adversity variables. Although early adulthood partner adversity did not reach conventional levels of statistical significance, there was some evidence that more recent difficulties appeared to be associated with outcome (b = 0.52, 95% CI -0.01 to 1.05, p = 0.053).

Social domain
Ratings in the social domain in ALPHI take into account adversity related to (adoptive) family members, friends and ex-partners. In contrast to the partner adversity results, in the social domain there was some evidence that *early* adulthood adversity appeared to be associated with mid-life functioning (b = 0.55, 95% CI -0.02 to 1.11, p = 0.057) while adversity in mid-adulthood was not found to be related.

Parenthood, material and miscellaneous domains
Variables on adversity in each of the remaining three domains (parenthood, material and miscellaneous) were also tested. No significant associations with

mid-life functioning were identified. For parenthood, early adulthood adversity was discounted due to having only one case by age 25.

3.4 Regression analyses: early experiences, adult events and mid-life functioning

Of the five adult life events domains, only social adversity in early adulthood and partnership adversity in mid-adulthood produced a trend for statistical significance with mid-life functioning. Our next step was to examine together all associations identified from the data extracted from adoption files, the questionnaire pack data and the interview data.

We had previously found that low care from adoptive parents, based on the 7-item Parental Bonding Instrument scores (Parker, Tupling and Brown, 1979; Collishaw et al, 2007*)*, was associated with poorer functioning in mid-life. Participants with 'low care' scores reported their adoptive parents' care during childhood and adolescence as lacking warmth, understanding and/or acceptance. Some parents' attitudes or behaviour were recalled as denigrating or humiliating the child. In addition, feeling unhappy about being adopted was also associated with poorer functioning. No evidence was found that orphanage care variables (duration of care, age at entry or exit from orphanage care and quality of orphanage care) predicted current functioning in mid-life.

In sum, across all the analyses, four binary independent variables held up as individually associated with outcome: low adoptive care, feeling unhappy about being adopted, social adversity in early adulthood and partner adversity in mid-adulthood. These four variables were entered into a regression analysis, using our psychological functioning index as the (continuous) dependent outcome variable. Results are provided in Table 4.

Of the four independent variables, the significance held for two associations with outcome: feeling unhappy (versus happy/ambivalent) about being adopted (b = 1.02, 95% CI 0.43 to 1.61, p = 0.001) and partnership adversity since age 26 (b = 0.48, 95% CI 0.01 to 0.95, p = 0.043). Low care from adoptive parents and social adversity by age 25 were no longer significantly associated with outcome in this model.

Table 4 Regression results for mid-life functioning

	Coefficient	95% CI	P
Low care from adoptive parents	0.26	-0.33 to 0.86	0.378
Feeling unhappy to be adopted	1.02	0.43 to 1.61	**0.001**

Social adversity in early adulthood	0.30	0.21 to 0.81	0.243
Partner adversity in mid-adulthood	0.48	0.01 to 0.95	**0.043**

N = 68; R-squared = 0.35; range of mid-life functioning index = -1.2 to 3.7 with higher numbers indicating poorer functioning.

The histogram of residuals from the model gave no indication of major departure from normality and re-fitting the regression with robust option, the p-value for feeling unhappy about adoption remained 0.01 (*b* =1.02, 95% CI 0.41 to 1.64) and p-value for partner adversity in mid-adulthood increased to 0.1 (*b* = 0.48, 95% CI -0.9 to 1.05).

3.5 Qualitative analysis

The regression analysis had identified two particular areas for further exploration via the qualitative data: 1) relationships with partners and/or family and friends in adulthood; and 2) feelings about adoption. To help understand the process of recovery from adverse events, we added a third area: perspectives on professional support.

We approached the qualitative analysis with the following questions in mind. First, in the ‘partnership’ and ‘social’ domains, what type of adverse events occurred, and how severe were these events? We used the qualitative data from the relevant sections of our semi-structured interviews and the interviewers’ quantitative ALPHI ratings of ‘sub-categories’ of adversity. We integrated and summarised the data from these two sources, with a focus on documenting frequencies of shared experiences across the group.

Second, what contributed to the women’s ‘feelings about adoption’? For this question, we analysed data from two further sections of the interview where the women reflected on various aspects of being internationally adopted. As this question required a more exploratory method, we used an inductive approach to code the data and develop themes reflecting influences on feelings about adoption.

Third, in the context of relatively positive mid-life outcomes, what role (if any) did professional support play? For this question, we selected a sub-sample of three women who *had* and three women who *had not* sought professional help as examples to illustrate divergent experiences. This method was in line with our aim of investigating processes of adaptation as well as maladaptation.

By using the full range of data available, the qualitative analysis helped to provide context for a more rounded interpretation and elaboration of the quantitative findings (Fetters, Curry and Creswell, 2013).

3.5.1 Adverse events in adult life: types and severity

Partnerships

In total, 26 women experienced marked or moderate partner-related adversity lasting a minimum of six months (Table 1), while 42 women reported no such experiences. Within the former group, shorter-term adversity tended to reflect divorces or relationship breakdowns following overt conflict, sometimes involving disputes over children or finances, or infidelity. Six women described longer-term problems in interacting with former partners, mostly in relation to parenting arrangements.

The narrative data indicated that support from family and friends helped women to manage challenges following the breakdown of long term or meaningful partnerships. There were a small number of exceptions, including two women who reported severe tension and conflict with partners lasting several years. Both had voluntarily sought mental health care.

Social relationships

The ALPHI 'social domain' includes relationships with family members (parents and siblings) and friends. By separating out the ratings, we found that 51 women reported family-related adversity, of whom 18 women also reported friends-related adversity.

We identified two main patterns in the women's descriptions. The first was a reduction over time in family relationship functioning stressors, reflecting either improved relationships or cutting-off of high-stress relationships. In the other direction, as participants entered mid-life there was an increase in adversity in the form of losing parents or dealing with other family/close friends' illnesses or health difficulties.

After removing all ratings based on bereavement or ill health of others, we found that the overall level of adversity reduced substantially: family-related adversity decreased from n=51 to n=34 and friends-related adversity decreased from n=19 to n=14.

3.5.2 Feelings about adoption

In our regression analysis, the women's feelings about adoption remained associated with outcome, even after adult life events and experiences were taken into account. By coding the interview data, three key themes were identified that related to the women's feelings about adoption.

First, although the majority of women indicated via the quantitative variable (see 2.2.1) that they viewed their adoptions positively or very positively, there was a wide range of viewpoints and attendant emotional responses. The diversity was much more notable in examining the narrative data than in looking at quantitative variables in isolation. Women who had, on the surface, similar experiences differed in whether they viewed their adoption largely positively, negatively or with some ambivalence.

Second, feelings about adoption were multi-faceted, and related to a large number of factors. These included relationships with adoptive parents, the alternative life the person imagined if they had not been adopted, the lack of information about their birth parents (and therefore lack of opportunities to search for and meet with birth family members), the loss of connection with Hong Kong, the perceived benefits of being raised in the UK, or any combinations of these factors. Some had faced incidents of racism, prejudice or stereotyping and their views on the impact of such experiences varied (see Rushton et al, 2012). Each participant's feelings about adoption involved a process of weighing up such factors in relation to each other.

One participant description neatly captured the contradictions that make forming a singular view difficult:

> *Sometimes I do wonder what life would have been like [if I wasn't adopted], would it have been better? But then you sort of say to yourself, well rather than saying that you have got to think on the positive side. I feel very eternally grateful to my parents for having got me out of that home, but then I think to myself, why do I have to feel this feeling that I have got to be very grateful?*

Third, over time, the women in our study had experienced a number of important transitions, not least from dependent child of their adoptive parents to adults with independent lives and perspectives. At this point in mid-life, their views on adoption were influenced by a range of other experiences, including, for many, having children of their own, as well as the events related to partners and other relationships described in the previous section.

When asked about the positive and negative aspects of being adopted, another participant described life as a 'learning curve' and concluded:

> *You change – what you will think at one stage in your life, when you look back on it you get it all into perspective, so...what I might have thought was negative when I was younger I see as positive now, 'cause I think well, Mum and Dad had difficulties parenting, I've had*

difficulties parenting, none of us are perfect. It's not a negative I don't suppose, but it's just life isn't it?

Feelings about adoption were often fluid. For some, troubling questions had arisen or persisted in adulthood, related to missing connections with birth family or Hong Kong, feelings about growing up in their adoptive family, or a combination of both. Conversely, other women who reported having struggled during childhood, adolescence or early adulthood had come to a more positive view over time.

3.5.3 Perspectives on professional support

We explored individual decisions about and experiences of seeking professional help, such as counselling, therapy or specialist adoption support services. We selected six contrasting examples that highlight the broad range of perspectives within the group. Three women were from among the 75% who reported they *had not* sought professional support; three women were from among the 25% who reported they *had* sought professional support for problems such as anxiety or depression.

Among the three women who had not sought professional help, the first participant had never felt concerned about her own mental health but did speculate on whether a early lack of consistent, one-to-one parental care left a legacy. She thought, generally, people with such experience might need support as a result. She explained:

> *I do think that having children or you look at other people's children you do wonder about the first 15 months of the child's life not having much of a family home - not attaching to a mother and all that kind of thing so I wonder if that's made me a slightly detached person in some ways or able to detach from people rather too easily.*

A second participant described her attitude towards her adoption as quite mixed, although her life in adulthood was settled and for the most part enjoyable. She reflected on the experience of growing up visibly and transracially adopted, and how her perspective had changed since childhood:

> *[As a child] I often wished I didn't look Chinese and as I got older I just accepted it I suppose. … I didn't want to be Michael Jackson - you just accept yourself I think. I think that's my nature, I'm a very contented person and I'm not curious. I accept things, that's why I think I managed to get on so well, if you like.*

In contrast, the third woman in this group stressed that her approach had always been to view any difficulties in life as unrelated to being adopted.

> *I haven't ever felt it to be a problem because the way I've been brought up - I've never had any problems and I've never, ever thought problems have been to do with my adoption. I've totally separated it … I thought anything that's happened it's just been because of the life I am leading not because of adoption.*

Among the three women who *had* sought professional support, all reported that experiences during childhood were a catalyst for seeking support, but in different ways. The first participant had suffered from depression in early adulthood, which she described as linked to her feelings about being abandoned. With her adoptive parents' help, she had sought professional counselling, and she had no subsequent experiences of poor mental health. While she still wondered about her origins, this was more 'curiosity' than an on-going preoccupation:

> *As I am getting older I keep thinking … you know…when somebody says you are getting like your mother, physically, I think I don't know what my mum would have looked like and what I will be like. … So every now and again I think that through, I guess in a light hearted way.*

The second participant recalled that her adoptive parents had struggled to manage their own emotions and that this affected their parenting abilities, although she was quick to point out that her (non-adopted) siblings also shared this perspective. Having sought counselling during two particularly stressful periods in her personal and work life, she concluded:

> *[C]ounselling is bloody brilliant for me! I know people talk about it, pooh-pooh it, and say 'oh come and see me, pay me this much money and I'll talk to you', but they don't understand the complexity of it, and I think you have to be tuned into it.*

The third participant had received extensive previous professional support for poor mental health over a number of years, including parenting support and, more recently, attending an adoption support group. Discussing her current feelings and whether she would ever seek access to her adoption records, she concluded:

> *It's hard to describe to you really – I've basically been there, done that – I've closed the safe door on it now and it's just locked away and I'm not interested in it anymore.*

Looking beyond these six examples, completely contrasting views were not uncommon. For example, one woman felt that a counsellor who was not adopted could never understand her, while another described her frustration with professionals' assumptions that any later difficulties stemmed from her adoption. Although only a quarter of the women had sought professional help, there was a broad consensus across the group that a) support should be available when needed and b) the need might arise at any point, not only during childhood. Potential triggers to seek support included fraught relationships with adoptive family members and emotions related to their own experiences of being a parent, but also non adoption-specific experiences: divorce, bereavement, problems at work or in friendships.

4. Discussion

What has been learned about adult life events and experiences in this sample of internationally adopted women? Our mixed methods analysis identified three main findings. First, adversity in adulthood mostly occurred in the relationship domains, including relationship functioning and dealing with death/ill health of family and friends. Second, although there was not widespread evidence of difficulties in forming or maintaining partnerships, adversity in this domain after age 25 was associated with poorer mid-life functioning. Finally, feelings about adoption were multi-faceted and dynamic, and negative feelings about adoption remained associated with poorer mid-life functioning after other potential influences were taken into account.

4.1 Adversity in adulthood

Both social adversity in early adulthood (ages 17 – 25 years) and partner adversity in mid-adulthood (ages 26 – present) showed some evidence of association with poorer current functioning as individual independent variables, but only partner adversity remained significant in our regression model. Although relationship problems with adoptive parents and friends in early adulthood were reported as stressful, more recent adversity in partnerships appeared to have a greater impact on functioning in mid-life. This trend may reflect a general shift from growing up in one family to establishing a new family (of whatever form) in adulthood, rather than a specific pattern for this adopted group.

Our findings highlight that the influence of experiences in adulthood, as well as childhood, should be considered when examining mid-life outcomes for internationally adopted adults. This is in line with broader work on lifespan development that emphasises that psychological growth in adulthood can compensate for the negative effects of childhood adversity on well-being in later life (Landes et al, 2014). More specifically, in relation to children who

have spent time in orphanage care, it adds to the evidence of changes continuing well beyond childhood (Woodhouse, Miah and Rutter, 2018).

4.2 Pre-adoption and adoptive experiences

As with other studies of international adoption, we considered the potential influence of orphanage care and/or age at adoption, but found no association with prevalence of adversity in adult life. This adds to our earlier analysis which found no association between differences in orphanage experiences and mid-life functioning (Rushton et al, 2013). One likely explanation is that lack of variation in orphanage care (compared to other studies, e.g. Rutter et al, 2007) weakened the probability of finding an effect. The majority of our sample were adopted close to the age of two (mean age 23 months, SD 14 months, range 8 to 82 months).

While low care from adoptive parents and feeling unhappy about being adopted were both found to be independently associated with poor mid-life functioning, only the latter remained significant in the final regression model. In other words, those women who reported low care, yet on overall reflection at this point in time felt happy (or at least not unhappy) about being adopted did not show raised risk for poor functioning in mid-life in this model. It is not possible to determine direction of causality, but we found previously that women who reported low parental care gave specific and detailed descriptions of hostile and negative parental behavior in their interviews (as opposed to the broader items in the Parental Bonding Instrument on warmth, acceptance and understanding). Our view, therefore, is it was not simply a factor of their current mood driving their feelings about adoption.

A conclusion from our previous analysis was that a good adoption was associated with positive outcomes in most cases, whereas an unsatisfactory or unhappy adoption was associated with poorer mid-life functioning. The current analysis has provided a more nuanced perspective. The findings suggest that when examining outcomes, alongside externally measurable variables such as age at adoption, people's perceptions of their adoptive experiences should be taken into account.

Implications for practice

There has been a long-standing concern about the risks for long-term mental health problems for children who were disadvantaged in their early years. A central conclusion of the study is that, as a group, these women had not suffered excessive risk for serious adverse consequences. This echoes the findings for women in a Dutch study of internationally adopted adults who experienced early orphanage care in Greece, also described as not severely depriving (Storsbergen et al, 2010).

The qualitative analysis underlined the value some women placed on counselling and psychological support. Help to understand and come to terms with negative experiences, specifically within the context of international and transracial adoption, should be made available. Counsellors need to take into account, when support is requested, the ways people have found to negotiate some of the complexities related to their early experiences and adoption using their own strengths and personal support networks.

Although the majority of the women had not sought professional support, many had questioned how their pre-adoption and adoptive experiences might have affected them. An alternative model to therapeutic interventions is the provision of peer support via networks or groups that offer the opportunity to meet other people who share the experience of being internationally adopted. Since the completion of this research, participants from this study, alongside others also adopted from Hong Kong, have been active in setting up their own network.

Strengths and limitations

The sample was fairly homogenous in that the girls were born on a similar date, shared the same location in their early lives and had a limited span of ages at adoptive placement into the UK. Baseline data were compared for women who participated in this study and women who did not; no issues of concern were identified (Feast et al, 2013; Rushton et al, 2013).

A mid-life adoption follow-up is rare and a relatively high participation rate was achieved over a 50-year follow-up period (68% for this analysis). However, the reasonably small sample size restricts the ability to detect possibly important differences in statistical tests (Type II error).

Although it is usually quite difficult to generalise from qualitative work, the data from these face-to-face interviews adds depth to understanding. By combining methods, we were able to test for statistical associations and then further explore the context and subjective meaning of our initial results.

As with all studies that rely primarily on one main source of data and retrospective assessment of experiences, direction of effect and causality cannot be definitively determined. Moreover, the findings cannot necessarily be generalised to males or to children who have experienced more seriously depriving orphanage care, and only with caution to other international adoption samples.

Conclusions

These data help to adjudicate on questions of life span experiences and the effect on long-term outcomes by exploring the lives of adult women of

Chinese heritage, spent largely in the UK in the past five decades following early orphanage care in Hong Kong. The follow-up data did not identify numerous chains of negative experiences: many of the women lived largely positive, stable, well-supported lives punctuated by challenging periods. However, the regression analysis showed that feeling unhappy about being adopted and partnership adversity since age 26 were both significantly associated with poorer mid-life functioning over and above other potential influences. Our best interpretation is that when early orphanage care is of reasonable quality, and followed by a good (or mainly good) adoptive experience, adopted women are able to negotiate the majority of adult life events successfully and to draw on the social and financial resources available to them in adult life.

These findings underline that to understand long-term experiences following international adoption, it is important to consider not only childhood experiences but events in adulthood too. In addition, exploring individuals' subjective views on being internationally adopted may help explain divergent outcomes within groups with similar early experiences.

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Highlights

- We explored adverse events in adulthood for women adopted as infants from Hong Kong to the UK.
- Partnership adversity and feeling unhappy to be adopted were associated with poorer outcomes.
- Feelings about adoption were varied, multi-faceted and often changed over time.

• Research on adopted adults’' outcomes should consider both childhood and adulthood events.