Mental health and psychological adjustment in adults who were adopted during their childhood: A systematic review

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ABSTRACT
In the last two decades, research on the psychosocial needs of adopted children and adolescents has advanced dramatically. Nevertheless, less is known about their mental health when they reach adulthood. The aim of this paper is to systematically review the evidence about mental health and psychological adjustment in adult adoptees. A systematic search was conducted on Web of Science and PsycInfo. The review includes 27 studies that fulfilled the selection criteria (ages between 20 and 40, domestic adoptions and articles published since 1995). Evidence suggests that psychological adjustment in adult adoptees is more unfavourable (with higher levels of depression, anxiety, personality and behavioural disorders and neuroticism) than in non-adoptees. A small group of studies shows similar psychological adjustment of adoptees and non-adoptees. Moreover, there is evidence that the adopted population is quite heterogeneous, involving individual and contextual variables. There are clear diagnostic differences when gender is taken into account. Some family variables (e.g., attachment, parenting styles) emerge as mediating factors of the effects of the adoptive status on psychological adjustment. Other risk and protective factors have been insufficiently studied (e.g., age at the time of adoption), so additional research is needed.

1. Introduction
Research on adopted people suggests which their main needs are at early ages and during adolescence. Although research has demonstrated that adoption is a measure to protect childhood that interferes on a positive way on children's development and adjustment (Nickman et al., 2005), some adopted children are at risk for some negative outcomes, among which are mental health, psychological and neurobiological difficulties (Fisher, 2015). However, little is known about the psychosocial needs of these people when they reach adulthood. This article provides a systematic review of the research on mental health and psychological adjustment of adults who were adopted during childhood.

During the two last decades, there have been notable advances in the study of the psychosocial needs of adopted children and adolescents. Many studies have analysed whether adopted children have more emotional, social, behavioural or intellectual problems. Empirical research has confirmed a trend among adoptees of having more psychological difficulties, and being overrepresented in mental health services (Juffer & van IJzendoorn, 2005; Juffer, van IJzendoorn, & Palacios, 2011). Research has found that adopted children have higher rates of psychopathology and maladjustment (Burns et al., 2004; Gagnon-Oosterwaal et al., 2012). The meta-analysis performed by Juffer and van IJzendoorn (2005) showed that, although adopted children have more emotional and behavioural problems than their non-adopted peers, the effect sizes were small (d = 0.16–0.24). This means that most adoptees are well adjusted, although they are referred to mental health services more often than non-adoptees. Other studies analysing indicators of psychological adjustment have shown that, albeit somewhat lower, adoptees' self-esteem levels are similar to those of their peers and higher than those of residential care adolescents (Sánchez-Sandoval, 2015).

Why may adopted children and adolescents be at greater risk for impaired mental health? Contemporary hypotheses about the reasons for these problems follow multidimensional models: stress and resources models; Sánchez-Sandoval and Palacios (2012) and models of risk and protective factors; Del Pozo de Bolger, Dunstan, and Kalnter (2016). Adoptees have had more life stressors during their early childhood (e.g., exposure to substances in the prenatal period, subsequent neglect or abuse, inadequate nutrition, poor stimulation, separation and broken bonds because of numerous transitions among caregivers). Early life stress may shape the development of brain areas...
involved in socioemotional functioning (Hanson et al., 2015). Pre-adoptive factors play an important role in a child’s risk for developing these problems. Some pre-adoptive risk factors are strongly related to worse outcomes for adopted children (Wind, Brooks, & Barth, 2007). Herrenkohl et al. (2016) have related mistreatment and abuse prior to adoption to a higher risk of having mental health problems, although some factors, such as social support, mediate that relationship. Significantly, children who were adopted at older ages and those who spent more time in institutions show more problems (Palacios, Sánchez-Sandoval, & León, 2005b). However, children who were adopted at an early age and those who had shorter institutionalizations prior to adoption did not show significant differences with non-adoptees (Rutter, Kreppner, & Connor, 2001). In conclusion, later adoptions may imply the existence of more pre-adoptive risk factors and, therefore, a worse adjustment in those children.

It has been confirmed that the developmental levels of children at the time of their adoption may be quite lower than expected according to their biological age. Palacios, Sánchez-Sandoval, and León (2005a), using Battelle’s Developmental Inventory with a sample of 181 internationally adopted children, found that a high percentage (52.4%) of those children showed serious developmental delay at the time of their adoption. These results suggest that pre-adoptive risk factors and childhood behaviour problems are salient predictors of some, but not all, indicators of mental health in childhood and adolescence.

Cross-sectional studies have shown some disadvantage in adoptees’ psychological adjustment (somewhat worse results than their non-adopted peers). However, adopted children show better adjustment that those who remain in foster care. Moreover, longitudinal research has shown that cohabitation in adoptive homes reduces difficulties in adopted children. According to Juffer et al. (2011) an important recovery takes place in these children’s development, decreasing the initial delay indexes. Some factors may have influenced that improvement. Firstly, it is known that children can develop multiple attachments to alternative caregivers (Cassidy, 1999). Accordingly, a good relationship with adoptive parents can make attachment styles more beneficial. Secondly, parental responsiveness and support are important to restore an emotional context for children to learn to regulate their affects (Simmel, 2007). Finally, parenting styles seem to explain the different levels of resilience to the effects of their early negative experiences (Simmel, 2007). According to Palacios et al. (2005a), those adoptees with initial developmental problems, experimented an important recovery at the beginning of cohabitation with adoptive family. However, that problems can still influence subsequent development.

Less is known about adoptees’ psychosocial needs when they reach adulthood. Research on this is more limited and less conclusive but it is nonetheless important. These people, in addition to the new challenges of becoming an adult, must solve added tasks due to the fact of being adoptees (Brodzinsky, Schechter, & Henig, 2002).

The main purpose of this work is to perform a systematic review of psychological adjustment and mental health in adults who were adopted during childhood.

2. Method

To perform this systematic review, we followed the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, also known as PRISMA. PRISMA is an evidence-based method that includes different aspects related to conceptualization and methodology for systematic reviews and meta-analyses (Utütüa & Bonfill, 2010). PRISMA has some resources for orienting authors of systematic reviews, for example a checklist to evaluate manuscripts and a flow diagram to include on them to show information about the selection of included articles graphically.

### 2.1. Formulation of the problem

In the first phase, the research question was adequately formulated following PICO protocol (Participants, Intervention, Comparisons, Outcomes and Study design) recommended by PRISMA. It was drafted as follows: How is the psychological adjustment (O) of adult people (P) who were adopted during their childhood (I) in comparison to their non-adopted peers and/or other adult adoptees (C), according to studies with experimental and correlational designs (S)?

### 2.2. Search strategy

A search of articles was carried out in the database PsycINFO and in those included in the Web of Science. Those search engines were chosen because of their relevance in psychological research, and in the case of Web of Science in other sciences. In addition, a specialized journal, Adoption Quarterly (not included in the Journal Citation Report), was also searched. For this purpose, we selected some keywords related to the fields which are included in our research question. Those keywords are presented in Table 1.

### 2.3. Selection criteria

All the studies that presented results related to mental health and psychological adjustment in an adult population with a previous history of adoption and that fulfilled the following conditions were included: (i) sample aged between 20 and 40 years, (ii) sample from national adoption (adopted in their own country of origin) and (iii) articles published since 1995. Systematic Reviews and Meta-Analyses were excluded.

### 2.4. Assessment of bias

In order to prevent bias during the elaboration process of the systematic review, the following actions were performed:

The search was done in English and in Spanish in order to prevent language bias. Studies were reviewed independently by two different people and subsequently shared, as recommended by Sánchez-Meca and Botella (2010) and Perestelo-Pérez (2013). Our first step was to select articles based on the titles. Next, we reviewed abstracts. Then we read each article to resolve any disagreements about inclusion. The last phase, the complete reading of all the pre-selected articles, was also done by two independent reviewers.

The quality of evidence of the included studies was assessed using the method created by the Scottish Intercollegiate Guidelines Network (SIGN 50: A guideline developer’s handbook., 2015). This method scores every paper, from one (best score) to four (worst score), depending on its evidence level (level 1 is for meta-analyses and systematic reviews, level 2 is for case control or cohort studies, level 3 is for non-analytic studies, and level 4 is for experts’ opinions). In addition, a symbol “-, + or ++” is given to each study according to the risk of bias (“-” means a high risk of bias, “+” means low risk of bias, and “++” means very low risk of bias). All the articles included have an evidence level of 2 (well conducted case control or cohort studies with a low risk of confounding or bias and a significant risk that the

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امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
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امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات