Family-focused prevention to improve cognitive, educational, and social-emotional development of immigrant children and adolescents: a systematic review

Louisa S. Arnold, Andreas Beelmann, and Douglas Coatsworth

Submitted to the Coordinating Group of:

- Crime and Justice
- Education
- Disability
- International Development
- Nutrition
- Social Welfare
- Other:

Plans to co-register:

- No
- Yes
- Cochrane
- Other
- Maybe

Date Submitted: 16 June 2016
Date Revision Submitted: 1 December 2016
Approval Date: 29 January 2017
Publication Date: 6 February 2017
TITLE OF THE REVIEW

Family-focused prevention to improve cognitive, educational, and social-emotional development of immigrant children and adolescents: a systematic review

BACKGROUND

In most Western-industrialized countries international migration has become a topic of great economic and social importance. In recent decades populations in Europe and Northern America have grown considerably through international immigration. Approximately 41.3 million immigrants (i.e., individuals born outside of the country in which they currently reside) lived in the United States in 2013, accounting for 13% of the population (Zong & Batalova, 2015). In 2014 more than 33.5 million people born outside of the EU-28 were living in Europe, of which 19.6 million were born outside of a EU Member State, representing 3.9% of the EU-28 population (Eurostat, 2015). When looking at populations under the age of 18, it becomes even clearer that immigration is a topic of major concern. In Western societies’ school systems immigrant children make up fast growing proportions of the student body. Data from the PISA (Programme for International Student Assessment) study shows that in the US immigrant students account for 26.9% of all 15-year old high school students, in Canada it is even higher at 35.4%, while in France and Germany these numbers range around 25% (Abdul-Rida & Nauck, 2014). Consequently the social and economic future of the US and other hosting countries depends increasingly on investments in the life chances of immigrants and even more importantly their children.

Immigration brings both enrichment and challenges to the hosting societies. While it is connected to an increase in diversity, economic, and cultural growth in the hosting countries, research has identified several risk factors related to migration. Immigrant children and youth face particular challenges that are not experienced in the same way by their native peers. These challenges stem from having to adjust to a new culture, struggling with language barriers, lack of knowledge on the academic system in the host country, discrimination, previous trauma (of the children or of their parents), disrupted social bonds, low-income, and intergenerational conflicts due to different levels of acculturation (Coll & Magnuson, 2014). The way these risk factors play out highly depends on the specific conditions of immigration (e.g., country of origin, host country, length of residence in host country, reasons for immigration, social and cultural capital of the family), resulting in quite diverse outcomes. While children in some immigrant populations are academically successful (Wang, 2007), there is still a prevailing trend of immigrant children showing higher rates of high school dropouts (National Center for Education Statistics, 2014), and poorer results in academic performance and school adjustment (Glick & Hohmann-Marriott, 2007). In addition, research repeatedly finds a positive connection between immigrant status and higher rates of behavioral problems such as delinquency, antisocial behavior,
engagement in risk behavior, and drug use (Johnston, O’Malley, Bachman, & Schulenberg, 2010).

Since negative outcomes of immigration for children and adolescents are strongly linked to family dynamics (Guilamo-Ramos, Bouris, Dittus, & Jaccard, 2008; Liu & Wang, 2008), several programs intended to improve the adjustment of immigrant youth take a family-focused approach. Working with the whole family by including parents in programs addressing child outcomes is the main characteristic of this approach. In general, it has been shown that involving parents or other caregivers has an incremental effect in child and adolescent programs (Thomas, Baker, Thomas, & Lorenzetti, 2015). Especially in immigrant populations, family-focused prevention is a promising strategy since many immigrant cultures have strong family bonds and values (Rumbaut, 1994), which can be activated as a resource in coping with acculturation stress (Tang, 2012). On the other hand, factors and processes within the family have to be considered when aiming to buffer the negative effects of immigration because some stressors lie in the family itself, for example, different levels of acculturation within the family can lead to severe intergenerational stress (Beiser, Dion, Gotowiec, & Hyman, 1995; Kim, Chen, Li, Huang, & Moon, 2009).

Several family-focused prevention programs for immigrant youth populations have been applied and evaluated (e.g., Gamoran, Turley, Turner, & Fish, 2012; Guilamo-Ramos et al., 2008; Martinez Sanchez, 2007). However, there is still debate on how exactly these programs work best within this particular population, what are the most promising implementation strategies, and how well different outcomes can be addressed. Therefore the purpose of this review is to systematically summarize the findings from published and unpublished evaluation studies and provide answers to these questions. Furthermore the review will be able to provide guidance to program developers, policy makers, and practitioners regarding how to best improve the cognitive, education, and socio-emotional development of immigrant children and adolescents through use of family-focused programs. In general, the proposed review will offer information on a promising intervention strategy within a population experiencing great vulnerability. Since this population has been growing dramatically in the last years in almost every country with high economic standards, it is increasingly important to have sound information on the effectiveness of existing prevention programs.

OBJECTIVES

Based on a comprehensive review of published and unpublished international experimental studies (RCTs and high quality quasi-experimental studies), the review will answer the following specific questions:

1. What is the overall effectiveness of family-focused programs to prevent negative effects of immigration in children and adolescents (e.g., academic problems, problem behaviors, substance use, depression, internalizing and externalizing behaviors)?
2. How do various features of the research design, intervention, implementation, and sample moderate the effects of the interventions?

   a. What is the contribution of methodological moderators such as study design, different aspects of internal and external validity, or sample size? How do publication bias and conflict of interest affect the outcomes?

   b. What are the relevant moderators concerning the intervention characteristics (e.g., intensity, program type, type of trainer, etc.)?

   c. How does the quality of implementation (e.g., measured recruitment and attendance/termination rate, rating of the quality of cooperation) affect outcomes of family-focused prevention programs? Especially since implementation in families is challenging (Heinrichs, Bertram, Kuschel, & Hahlweg, 2005).

   d. What are relevant sample characteristics (e.g., ethnic group, immigration status, income, age, gender, etc.) that moderate the outcomes?

3. What are the long-term effects of family-focused prevention programs in immigrant children and adolescents?

4. How can the results of family-focused prevention programs for immigrant children and adolescents be compared to results of other systematic reviews in the field of prevention science (e.g., Gutman & Schoon, 2015)?

EXISTING REVIEWS

To date there is no systematic review of family-focused programs designed to improve the cognitive, education, and socio-emotional development of immigrant children and adolescents. However, there are a number of reviews on related topics focusing on prevention within immigrant children and adolescents (Adesope, Lavin, Thompson, & Ungerleider, 2011; Beelmann, Maichrowitz, Schulz, & Arnold, 2015; Cardoza, Docomét, Fryer, Gold, & Butler III, 2012; Huey & Polo, 2008; Jackson, 2009; Kong, Singh, & Krishnan-Sarin, 2012; Shanahan & Beck, 2006; Slavin & Cheung, 2005). Nonetheless, these reviews are only partially related to family interventions (Adesope et al., 2011; Beelmann et al., 2015; Huey & Polo, 2008; Shanahan & Beck, 2006; Slavin & Cheung, 2005), are restricted to selected outcomes such as academic variables or tobacco use (e.g., Beelmann et al., 2015; Huey & Polo, 2008; Kong et al., 2012; Perez-Johnson & Maynard, 2007), or included non-immigrant samples (e.g., African-Americans) which are not included in our definition of the immigrant status (see below; Huey & Polo, 2008; Jackson, 2009; Kong et al., 2012). Therefore, although these reviews are of certain value for our project (e.g., as a source for relevant studies), a review regarding the effects of family-focused programs for
immigrant children and adolescents on a broad range of different prevention fields (e.g., cognitive, educational, and socio-emotional development) is still missing.

In addition to these reviews, the approach of family-focused prevention has been analyzed in several systematic reviews (e.g., Arnold & Beelmann, 2015, under review; Beelmann & Eisner, 2015, Filges, Rasmussen, Andersen, & Klint Jørgensen, 2015; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009; Woolfenden, Williams, & Peat, 2001). These reviews will be informative for the proposed review, since they provide information on the mechanisms of family-focused prevention. However, all these projects focus on different or mixed populations, not specifically on immigrant children and adolescents.

Hence, the planned review will be the first comprehensive summary of existing international evidence on family-focused prevention programs for immigrant children and adolescents. Our review will include all international research (i.e., it will not be restricted to English-language publications), all age groups (up to the age 18), and diverse prevention fields (i.e., no restriction to academic or psychosocial programs) by taking into account a broad range of effect moderators (addressing the intervention, sample, quality of implementation, and research methods). From a preliminary literature search and search results from a meta-analysis on a neighboring topic (Beelmann et al., 2015) we estimate to include about 60 research reports in this systematic review.

**INTERVENTION**

The interventions summarized in this review will have to meet the following criteria:

1. **Preventive character:** All programs have to be designed to improve the cognitive, education, and socio-emotional development of immigrant children and adolescents. Programs will not be included, if they are designed specifically to address already manifest negative behaviors and mental health disorders (e.g., programs for delinquent immigrant youth or treatment of mental disorders in immigrant youth).

2. **Family-focused:** All programs have to apply a family-focused approach, which means that family members or other caregivers are included in an intervention that ultimately aims to improve child development. The program can either be implemented with family members alone or as a combined child- and parent-program (e.g., parent training programs, multi-family group intervention, parent-adolescent training, early family intervention).

3. **Control condition:** Comparison groups will be untreated groups, including placebo, minimal treatment, unspecific, or treatment-as-usual conditions. Studies with alternative treatment designs without a control condition will be excluded.
POPULATION

Concerning the samples included in the present review, three characteristics have to apply.

1. Immigrant population: At least 50% of the sample has to qualify as immigrants. This will be determined in two ways: 1) Study participants will be considered immigrants if they have a least one parent that was not born in the country where the program took place, or, if this information is not available, 2) if they belong to an ethnic or language minority, which commonly has a high percentage of foreign-born members. These samples will be included if 90% of the participants belong to an ethnic or language minority, so that it can be assumed that at least for 50% of the sample the first criterion applies as well. Studies from the US show that in the Asian American and Hispanic population at least 50% can be considered first or second generation immigrants (Grieco, 2010; Lee, 1998).

2. Children and adolescents: The study has to aim for improving the lives of children and adolescents by recruiting children under the age of 18 and their parents or caregivers.

3. Non-clinical population: The samples under consideration have to address a non-clinical population (i.e., study participation is not based on a screening of a clinically relevant disorder).

OUTCOMES

The review will consider a broad range of different outcomes on both the child and the parental (caregiver) level. These outcomes can be in the following domains:

Child outcomes:

- Cognitive development and educational outcomes, e.g., intelligence, attention, language skills, graduation rate, school grades, learning problems, school attendance, etc.

- Social-emotional outcomes, e.g., externalizing and internalizing behaviour, social competence, problem behaviour, substance use, sexual risk behaviour, etc.

Family outcomes:

- Parental attitudes and knowledge, e.g. self-efficacy, educational beliefs, attitudes towards use of corporal punishment, etc.

- Parental behavior, e.g., sensitivity, parenting skills, parental involvement

- Parent-child relationship, e.g., quality of family communication, attachment
• Stimulation, e.g., number of books in the household, library visits

**STUDY DESIGNS**

Concerning the study designs included in the present review, two characteristics have to apply:

1. The review will consider published and unpublished studies with RCTs with at least two assessment points (pre–post) and two groups (intervention vs. control conditions). Design quality must reach Level 5 on the Maryland Scientific Method Scale (i.e., randomized control trials that guarantee comparability of groups, see Farrington, 2003).

2. Furthermore, in order to provide a meta-analysis of high quality, the sample sizes have to be at least 15 for experimental and control group respectively. By excluding smaller samples the meta-analysis is less likely to be affected by publication bias (Dickersin, 1990; Gilbody, Song, Eastwood, & Sutton, 2000; Newcombe, 1987; Thornton & Lee, 2000). Although parameter estimation is more robust in larger samples due to higher test power (Cohen, 1988; Lipsey, 1990), we chose this cut off because in the field of family-based intervention we expect to find smaller rather than large-scale programs.

**REFERENCES**


## REVIEW AUTHORS

### Lead review author:

- **Name:** Louisa S. Arnold  
- **Title:** Diploma Psychology  
- **Affiliation:** Friedrich-Schiller-University Jena, Germany; Institute of Psychology, Department of Research Synthesis, Intervention and Evaluation  
- **Address:** Am Steiger 3/Haus 1  
- **City, State, Province or County:** Jena  
- **Postal Code:** 07743  
- **Country:** Germany  
- **Phone:** +49 (0)3641-945147  
- **Email:** louisa.arnold@uni-jena.de
Co-authors:

Name: Andreas Beelmann
Title: Prof. Dr.
Affiliation: Friedrich-Schiller-University Jena, Germany; Institute of Psychology, Department of Research Synthesis, Intervention and Evaluation
Address: Humboldtstrasse 26
City, State, Province or County: Jena
Postal Code: 07743
Country: Germany
Phone: +49 (0)3641 - 945901
Email: andreas.beelmann@uni-jena.de

Name: Douglas Coatsworth
Title: Professor
Affiliation: Colorado State University
Address: A 120 Behavioral Sciences Building; 1570
City, State, Province or County: Fort Collins, Colorado
Postal Code: 80523
Country: USA
Phone: 970-491-0662
Email: Doug.coatsworth@colostate.edu
The lead review author (Louisa Arnold) is a research assistant at the Department of Research Synthesis, Intervention and Evaluation at the University of Jena and has previously worked with Douglas Coatsworth during her research stay at the Department of Human Development and Family Studies at the Pennsylvania State University, PA, USA. She will be conducting the review as part of her dissertation project. She provides the expertise on immigration and child well being as well as meta-analytical methodology, and has published a first meta-analysis on the effects of relation education in low income populations (Arnold & Beelmann, 2015, under review). Together with the second co-author, Andreas Beelmann, and his team she has worked on a large meta-analysis on the effects of educational and psycho-social prevention programs in low-income and migrant and children and adolescents (Beelmann et al., 2015).

The second co-author (Prof. Andreas Beelmann) and his department team have many years of extensive experience in conducting systematic reviews and meta-analyses. He has published reviews on early childhood intervention, child skills training, child and adolescent psychotherapy, prevention programs in general, prejudice prevention, hypnosis, and the development of prejudice (Beelmann, 1996, 2006; Beelmann & Heinemann, 2014; Beelmann & Lösel, 2006; Beelmann, Pfingsten, & Lösel, 1994; Beelmann, Pforst, & Schmitt, 2014; Beelmann & Schneider, 2003; Lösel & Beelmann, 2003; Raabe & Beelmann, 2011; Sundell, Beelmann, Hasson, & von Thiele Schwarz, 2015; Tevikow et al., 2013). He has also extended research experience in the evaluation of parent training programs for the prevention of antisocial behaviour (e.g., Beelmann, 2003; Beelmann & Raabe, 2007, 2009; Stemmler, Beelmann, Jaursch, & Lösel, 2007; Stemmler et al., 2013), where he actually worked on a Campbell Systematic Review on this topic (Beelmann & Eisner, 2015).

The first co-author (Prof. Douglas Coatsworth) provides expertise in prevention research and family-focused prevention. He has both developed and conducted family-based prevention programs, also in immigrant populations (Coatsworth, Santisteban, McBride, & Szapocznik, 2002; Coatsworth, Pantin, & Szapocznik, 2002; Pantin, Coatsworth, Feaster, Newman, Prado, & Szapocznik, 2004) He also has experience adapting and evaluating evidence-based family strengthening programs to prevent adolescent substance use (Coatsworth, Duncan, Greenberg & Nix, 2010; Duncan,Coatsworth & Greenberg, 2009; Coatsworth et al, 2015).

The roles and responsibilities for the systematic review will be as follows:

- Content: Louisa Arnold, Andreas Beelmann, Douglas Coatsworth
- Systematic review methods: Louisa Arnold, Andreas Beelmann
- Statistical analysis: Louisa Arnold, Andreas Beelmann
• Information retrieval: Louisa Arnold, Andreas Beelmann.

FUNDING

There is no recent or planned financial support for this. One systematic review on a related topic (Beelmann et al., 2015) was supported by a grant from the German Federal Ministry of Education and Research (BMBF) from 2011 to 2014. Findings from this study will be used to inform the literature research for the proposed systematic review.

POTENTIAL CONFLICTS OF INTEREST

All researchers involved have no financial interest in this review. The lead review author has been review author of related topics (Beelmann & Eisner, 2015; Beelmann et al., 2015). One co-author (Douglas Coatsworth) was involved in the first-generation development and evaluation of project Familias Unidas, which will possibly fulfill the inclusion criteria of the proposed review. He is not involved in the second generation (and beyond) studies of this program. He does not receive any monetary compensation from that program.

PRELIMINARY TIMEFRAME

• Date you plan to submit a draft protocol: 60 days after funding decision

• Date you plan to submit a draft review: 12 months after funding decision
AUTHOR DECLARATION

Authors’ responsibilities
By completing this form, you accept responsibility for preparing, maintaining, and updating the review in accordance with Campbell Collaboration policy. The Coordinating Group will provide as much support as possible to assist with the preparation of the review.

A draft protocol must be submitted to the Coordinating Group within one year of title acceptance. If drafts are not submitted before the agreed deadlines, or if we are unable to contact you for an extended period, the Coordinating Group has the right to de-register the title or transfer the title to alternative authors. The Coordinating Group also has the right to de-register or transfer the title if it does not meet the standards of the Coordinating Group and/or the Campbell Collaboration.

You accept responsibility for maintaining the review in light of new evidence, comments and criticisms, and other developments, and updating the review every five years, when substantial new evidence becomes available, or, if requested, transferring responsibility for maintaining the review to others as agreed with the Coordinating Group.

Publication in the Campbell Library
The support of the Coordinating Group in preparing your review is conditional upon your agreement to publish the protocol, finished review, and subsequent updates in the Campbell Library. The Campbell Collaboration places no restrictions on publication of the findings of a Campbell systematic review in a more abbreviated form as a journal article either before or after the publication of the monograph version in Campbell Systematic Reviews. Some journals, however, have restrictions that preclude publication of findings that have been, or will be, reported elsewhere and authors considering publication in such a journal should be aware of possible conflict with publication of the monograph version in Campbell Systematic Reviews. Publication in a journal after publication or in press status in Campbell Systematic Reviews should acknowledge the Campbell version and include a citation to it. Note that systematic reviews published in Campbell Systematic Reviews and co-registered with the Cochrane Collaboration may have additional requirements or restrictions for co-publication. Review authors accept responsibility for meeting any co-publication requirements.

I understand the commitment required to undertake a Campbell review, and agree to publish in the Campbell Library. Signed on behalf of the authors:

Form completed by: Louisa S. Arnold, Andreas Beelmann Date: 2016/06/16