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Research Paper

Cultural Adaptation of Parent Management Training-Oregon Model (PMTO) in Indian Context: An Implementation Model

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ABSTRACT

Parent Management Training-Oregon Model (PMTO) is an evidence-based behavioral parent training program (BPT), widely implemented and adapted to the unique characteristics of family contexts across the globe. However, despite distinct patterns of parenting in India, PMTO has not been adapted and applied for the Indian subpopulation. In light of the unique nuances of Indian socio-cultural context and a dearth of Indian literature on evidence-based parenting programs, the aim of the present article is to address this gap by proposing cultural adaptation of PMTO and identifying best practices within Indian context. The first goal is to use the cultural adaptation process model (CAP) to theoretically inform the potential of implementing PMTO for policy makers, researchers, and service providers in India. The second goal is to identify context-specific best practices to deliver the program in a school or community-based setting. Finally, a conceptual model delineating three stages of CAP: exploration, preparation, and implementation, is proposed. Successful adaptation and implementation of PMTO in the Indian context can be a pioneer of BPT in the South Asian settings. Culturally adapted PMTO can work towards widespread adoption of not only BPT but other evidence-based programs as well.

Keywords: *PMTO, cultural adaptation, India, behavioral parent training program.*

India is conventionally considered a collectivist culture, however, the rapid economic development over the past few decades, as well as processes of individualization, urbanization, intensification of mass media use and modern communication have changed Indian social life in numerous ways (Ulloa,2018). Indian families have also undergone transitions from traditional collectivist structures and values to adoption of individualistic value system (Chadda& Deb,2013; Sinha et al., 2001). Traditional families were generally patrilineal, patrilocal and patriarchal (Chema, 2011). However, contemporary families do not necessarily follow a similar socio-cultural structure and value system, which has led to structural, psychological and social dissonance among Indian families. Other important changing trends include an increase in households headed by females, suggesting a change in traditional gender roles and a decrease in age of the house-head, reflecting

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change in power structure (National Family Health Survey, 2013). These changes cascade to some challenges faced by families, such as disintegration of joint family structures, intergenerational conflicts leading to gaps in communication, academic pressure and high expectation of parents on children, under involvement of husbands in child rearing, financial stress and modern anxieties, which lead to stress both in parents and in children (Chadda & Deb,2013; De Wit et al., 2018).

The transition to a more western society in addition to other changes in contemporary India has led to a generation of parents who tend to feel lost regarding their role, not knowing when to 'push' or when to 'let go' (De Wit et al., 2018, p68). There are increased parent-child conflicts as parents place higher value on family relationships and patriarchal control (Albert, Trommsdorff & Mishra, 2007), use 'closed communication' more frequently than 'dialogical, open communication' (Chadda & Deb, 2013), and hold diverse views on morality from their children (Chadda & Deb, 2013; Sonawat, 2001). Despite mounting evidence that parents are struggling with issues such as monitoring, limit setting, and disciplining, there are too few holistic parenting programs in India to assist parents as they navigate through parenthood (Chadda & Deb, 2013; Natrajan & Thomas, 2002; Shihabuddeen & Gopinath, 2005). A review of the current body of literature demonstrates that there are only a handful of existing programs for children, predominantly for parents of children with mental or physical disabilities (Anant & Raghuram, 2005; Chandra et al., 1994; Janardhana & Manjula, 2020). For parents of typically developing children, there are even fewer evidence-based family programs in general, and parenting programs in particular (Nath & Craig, 1999; Carson & Chaowdhury, 2000). Some of the parenting programs which have been administered with varying levels of success are Mindful parenting program (Mindful Parenting Program, 2019), Parent-child training program (Action for Autism, n.d.), and randomized control trial based on Child development center model (Nair et al.,1997). However, there are some major limitations since many of these programs are short-termed with minimal avenues for fidelity check and program evaluation. These programs are not embedded in the theoretical models or have evidence-based support, casting uncertainty on the scientific validity, long-term impact, and replicability of such programs.

Parent Management Training-Oregon Model (PMTO) is one of the most commonly implemented behavioral parent training programs (BPT), which is based on operant conditioning and Social Interaction learning theory (Patterson, 2005). Within the children's social environment, BPT promotes pro-social behaviors among children by focusing on resolving conflicts between parents and their children (Forgatch et al., 2013; Patterson et al., 2002; Patterson, 2005). PMTO is an evidence-based psychological intervention that addresses, prevents and reduces challenging child behavioral problems by emphasizing on positive parenting practices, such as training parents proactive and non-punitive methods (Scavinus et al., 2020). In addition to reducing child behavioral problems, this behavioral family systems intervention has positive cascading effects on the entire family, including reduction in parental depression, and other socio-economic well-being such as "increase in standard of living as assessed by per capita annual income, educational attainment, occupational prestige, and financial stress" (Patterson & Forgatch, 2010, p. 14).

The curriculum is centered on teaching parents five core parenting practices: 1) positive involvement; 2) skill building; 3) supervision and monitoring; 4) problem-solving; and 5) appropriate discipline (Forgatch et al., 2013). Benefits to these parenting practices, in turn, have been found to impact the following child/youth improvements: externalizing behavior,

and positive academic functioning; parent ratings of externalizing and internalizing behaviors; child ratings of their depression and deviant peer association; and reduction in use of tobacco, alcohol, and illicit drugs (Thijssen et al., 2017; Dishion et al., 2016; Dishion & Snyder, 2016; Chos, 2018; Gewirtz et al., 2018; Patterson et al., 2010). The main strengths of PMTO are that it is highly adaptable and can have both preventative and treatment effects on the target population (Patterson & Forgatch, 2010). PMTO can be delivered in multiple formats including individual family treatment in agencies or home-based, telephone/video conference delivery, books, audiotapes, and video recordings (Forgatch et al., 2013; Thijssen et al., 2017).

In the recent decades, the intervention has been implemented statewide in Michigan and Kansas (Forgatch et al., 2013) and nationwide in Norway, Canada, Iceland, Denmark, and the Netherlands (Côté et al., 2006, Sigmarsdóttir et al., 2015; Bjørknes & Manger,2013; Scavenius et al., 2020). Meta analysis of 17 studies indicate that BPTs, including PMTO with its high success rate in reducing child behavior problems, can be "transported to communities that are culturally distinct" from where it was initially developed, primarily the United States (Scavenius et al., 2020, p. 840). In this effort, PMTO has been culturally adapted for use with ethnic minorities in the United States (Domenech Rodríguez et al., 2011; Parra-Cardona et al., 2012), Norway (Bjørknes et al., 2012), and Mexico (Baumann et al., 2014). A study in Norway that culturally adapted PMTO for Somali and Pakistani mothers found improvement in parenting practices and reduction in child behavior problems (Bjørkness & Manger, 2013).

Keeping in mind the unique nuances of Indian socio-cultural context and a dearth of Indian literature on PMTO or any other evidence-based parenting programs, the current article outlines the process of cultural adaptation of PMTO in India using the cultural adaptation process (CAP) model.

METHODS

Although, PMTO has been implemented with diverse array of population, including military families (Gewirtz & DeGarmo, 2018), families with divorced partners (Bullard et al., 2010), and families where children have mental health problems (Bjørnebekk et al., 2015, Thinssn et al., 2017), the current article targets PMTO implementation framework for Indian parents of children without conspicuous mental or physical disability. The target age range of the children of the participating parents is expected to be within 4-16 years as PMTO has been generally implemented for children in this age group and this is typically the school going age in Indian schools. The adaptation will be based on the three stage CAP model utilized by Baumann et al. (2014) in Mexican adaptation of PMTO, in accordance to the nuances of Indian population. The following section will examine each of the three stages of the model.

Exploration

The first stage is exploration stage where "the team assesses who may be the key stakeholders of the process and focuses on formation of collaborative relationship with future stakeholders, including the program developer and the cultural adaptation specialists, as well as the champions, agency leaders, and likely participants who would lead to the work" (Baumann et al., 2014, p. 38). Parenting programs generally come under the purview of several ministries, sometimes in collaboration with one another. In India, numerous ministries such as Social Justice and Empowerment, Health and Family Welfare, Human Resource Development, Women and Child Development, and Health and Family Welfare

have been instrumental in budgetary allocation of family programs akin to the parent training (Sanders et al., 2021). These ministries collaborate with local institutions to deliver family programs. For PMTO, the exploration stage can be executed in four steps, which can be performed parallel to one another as well. In the first step, training resources (e.g., formal or informal training models) that already exist within teaching curriculum or other intervention programs can be evaluated in order to understand the 'lay of the land', getting estimates about resources and infrastructure already in place, and cross-referencing the available resources for implementation requisites. Second step would be to assess human capital (e.g., volunteers, available therapists and social workers) for actual intervention, which would require substantial engagement with the community. Community engagement is important for cultural adaptation (Bender, Clark & Gahagan, 2014). At this step, stakeholders, including mental health experts and local community groups will be invited to get involved in different phases. In addition, endeavor will be to build the bridge among the steering group, which can be the project principal investigator (PI), allied professors in clinical psychology, public health worker who previously completed another cultural adaptation of the intervention with a different population, social health workers, and volunteers. The third step will be to establish team level leadership (e.g., principals in schools, psychologists in communities, collaboration with family elders) with the aim of ensuring hierarchical inclusivity. For example, within school settings, it is important for the project implementers to gauge the motivational level of the school principal and teachers. Implementers will also have to evaluate the readiness of the available staff (e.g., teachers, school psychologists). These evaluations at institutional level are crucial since they can impact program implementation and sustainability. Once motivation and readiness within the institution have been evaluated, implementers then can proceed to determining the organizational structure with respect to taking leadership charge in respective institutions. In the final step, implementers will compare existing parenting practices with recommended PMTO training and identify if there are any non-negotiable contrasts relating to the core components because PMTO is fairly an uncharted territory in the South Asian countries, and a rigorous evaluation of fit between this program and the target population is warrant. For example, parents may perceive that skill encouragement can result in boastfulness in the child. In a study by Natraj & Thomas (2002), the researchers found that within Indian families, there are specific cultural norms about child rearing, freedom, and obedience. Deviance from conventionally accepted social norms could often lead to conflicts among parents and children. Identifying and addressing such dissonance must be done prior to pilot training. Semi-structured interviews and focus group discussion (FGDs) can be conducted to identify and understand the prevalent parenting practices.

Preparation

The second stage of CAP model includes, "making the first round of adaptations on the measures and on the manual in close contact with the treatment developer" (Baumann et al., 2014, p. 39). Preparation stage will be executed in three steps: training, contextual modification of the manual, and pilot testing.

In the first step, 'Train the Trainer model' (Sigmarsdottir & Guomundsdottir, 2013) will be used for the training purpose. This model was utilized for implementation of PMTO in Iceland, wherein PMTO specialists were trained by PMTO purveyors and certified. These certified PMTO specialists trained subsequent generations of therapists in order to disseminate the parenting intervention to community/individual households. Second step includes the contextual modification of the manual. In this step, PI executes the first round

of adaptations to the program manual with the institutional team leaders, cultural adaptation specialists, and original developers. Similar to study by Sit et al. (2020), in this step, attempts will be made to make the content more relatable to the Indian population by translating program manuals that are written in English language into Hindi or other local dialects, including more visual contents created by local artists, and using examples from everyday life and stances. Upon making contextual adaptation to the manual, the steering committee will then move forward with the pilot testing of a small focal group of parents. Pilot testing using adapted materials will focus on parenting practices to identify potential changes that need to be incorporated in the treatment manual. For example, implementers might evaluate the certain core components requiring more extensive training than other core components and choose to reallocate the number of training sessions on the basis of evaluations from the pilot test. In the past, PMTO adaptations for unique contexts have included additional components to cater to unique population needs. For example, Pinna et al. (2017) have included two more components of mindfulness and parental emotion socialization training to the original PMTO model for implementing with military families. Techniques like mindfulness can be easily integrated in Indian context due to its close alignment with Eastern philosophy of Yoga. After incorporating the evaluation-based modifications in the pilot test, the program will be ready to enter the final stage.

Implementation

"Phase 3 of the CAP model, which takes place during the early adoption and the implementation stages, focuses on capturing the adaptations in the new version of the manual, finalizing changes to the measures, and planning for future replications and implementation of the intervention" (Baumann et al., 2014, p. 39). The implementation stage will be executed in three-fold ways: implementation to the larger settings, delivery in multiple formats, and identifying relevant measures.

The team can utilize multiple delivery formats (e.g., online platform, group sessions, in-person individual sessions) and deliver on multiple sites (e.g., schools, community centers, local recreational centers) for ease of access to the participants, thereby ensuring broader scope of reach. Banerjee et al. (2010) have highlighted the challenges in participatory research in India, and indicated limited formats as a potential pitfall that hinder participant involvement and retention. Availability of the program in different formats is critical for higher participation. With increasing popularity of digital health interventions, other technology-based delivery formats and increase in smart phones ownership in India (Gopalakrishan et al., 2020), disseminating PMTO as a digital intervention in addition to conventional methods can broaden its scope.

Continuous and iterative evaluation of program delivery will also be done in this stage. Since socio-economic conditions (e.g., economic status, caste) of families are diverse in India and have great influence in socio-cultural interactions in the communities (Bapuji & Chrispal, 2018), it is important to monitor that the intended delivery approach (e.g., focus group) is suitable for the specific study site or not. More specifically, parents from different socio-economic backgrounds may not be willing to participate in the same focus group. In fact, parenting practices within these groups may be polar different from each other (Kali & Ryan, 2020), requiring nuanced exploration of such factors in program outcomes.

While it is important to use standardized research instruments in order to ensure comparability of results across diverse samples and have greater degree of internal validity

(Miles, Fulbrook& Mainwaring-Magi, 2018), a standard instrument may not be valid at another time, culture, or context (Gjersing, Caplehorn & Clausen, 2010). Thus, it is highly recommended to measure parenting and child outcomes with instruments that have been validated for Indian population to evaluate effectiveness of PMTO. Recommended scales to assess relevant child outcomes are Vineland Social Maturity Scale, Indian Adaptation (VSMS; Malin, 1968) for social competence, and perceived parenting scale (Gafoor & Kurukkan, 2014) for children's perception of their parents' style of parenting (Baumrind, 1971). In addition, Beck's depression inventory (BDI), Depression Anxiety and Stress inventory (DAS), and Strength and Difficulties Questionnaire (SDQ) are some of the cross-cultural assessment measures to measure child mental health. Most of these scales have been used previously in the Indian population and found to be reliable measures. Previous studies have also administered SDQ with teachers for triangulation of solely family-based data. Parent outcomes can be assessed by parent encouragement scale (Sharma, 1988), used to measure the degree of parental encouragement, which a child receives from his parents, as these are the common parental practices targeted by components of PMTO.

Table 1: PMTO Implementation Framework in Indian Context

Stage	***Steps***	***Collaboration***
Stage 1: Exploration	1. Evaluation of training resources. 2. Assessment of human capital. 3. Establishment of team leadership. 4. Evaluation of non-negotiable contrast between existing parenting practices and core PMTO components	Establish collaborative relationship among multiple stakeholders: Various ministries, program developer, trainers, program specialists, and team leaders Evaluation of funding resources and human capital Assessment of EBT within the Indian context
Stage 2: Preparation	1. Training using the 'train the trainer model' 2. Contextual modification of the manual. 3. Pilot Testing	Formation of a team including trainers, cultural adaptation specialists, Counselors, social workers, volunteers. Selection of implementation plan Final adaptation of the manual Pilot testing with adapted materials
Stage 3: Implementation	1. Implementation in larger settings with all the collaborators and steering team. 2. Delivery in multiple formats using standardized manuals and, measurements. 3. Delivery on multiple sites	Collaboration with the team at various levels of implementation Sustainability assessment Feasibility evaluation Continuous and iterative evaluation of program delivery

DISCUSSION

Evidence-based parenting programs have demonstrated efficacy in enhancing family outcomes across the globe. Unfortunately, despite immense scope, such programs are implemented in developing and low-income countries very infrequently (Baumann et al.,

2014; Mejia et al., 2012). Particularly in India, which comprises of 472 million children below the age of 18 (National Institute of Urban Affairs, 2016), parenting training is a nascent field with promising preliminary outcomes. The findings by Sharma and Kirmani (2015) posit that parent management training can be easily integrated with cognitive-behavior therapies for Indian population. The feasibility study of Parwarish positive parenting intervention among disadvantaged Indian communities by Mathias et al. (2022) indicated that although such programs took time to gain momentum, they tend to receive positive feedback and high participation keenness among eligible parent sample population over time. However, one challenge observed by the authors was retaining participation, especially for fathers. In light of previous feasibility studies, the current article applies CAP model to suggest PMTO implementation in Indian context in collaboration with school and community-based setting. PMTO is a promising intervention, as it has delivered positive outcomes, even in non-American context. For example, findings from a randomized controlled trial in Iceland suggested that PMTO attenuated the harmful effects of maternal depression on parenting practices (Sigmarsdottir et al., 2013). In Norway, PMTO was effective in improving parental discipline, child externalizing problems, as well as child social competence (Ogden & Hagen, 2008). Through implementation of Indian adapted version of PMTO, expected outcomes in children can include reduction in internalizing and externalizing behaviors, and improvement in prosocial skills, and emotional functioning. Expected parental and family outcomes are reduced parental distress, improved parental locus of control, improved parent-child communication, positive involvement and collaborative problem solving.

Despite the widespread success of PMTO, implementation of the program does not come without a range of challenges. The adapted intervention proposed here is not an exception to it. Baumann et al. (2014) outlined some of the barriers in their cultural adaptation process of the PMTO in Mexico, which includes organizational capacity, infrastructure and organizational climate, and financial support, as well as the characteristics of the intervention, physical distance, and differences in political context. These challenges have further strained evidence-based research practices in India in the past as well, and continue to pose challenges even in the present milieu. In addition to their identified challenges, we project several other challenges in the Indian context such as lack of normative data for comparison, issues with measurement protocols, relationship between community leaders and staff, and disparities in cultural values relating to parenting practices within India. To begin with, since BPT would be a fairly new approach in India, organizations such as schools may not be readily available to provide the required layout for implementation. In an effectiveness study of Penn Resilience program with Indian children, Sankaranarayana & Cycil (2014) reported a need to integrate parents through parent training programs in school-based interventions. However, many Indian schools (especially government schools) in are generally overcrowded, and institutional leaders and teachers are in constant pressure to meet the communities' needs and expectations (Gouda et al., 2013). Therefore, school principals, teachers, and organization staff may show hesitance in taking on extra responsibility of program delivery. As a solution to this challenge, school counselors can take the role of PMTO program delivery personnel as part of professional development, since in recent years counseling in schools has become a rapidly emerging area (Thomas & Dey, 2020). In addition to structural limitations in institutions, organizations and community leaders may not be in agreement about implementing parent-focused intervention, which stems from diverse beliefs relating to parenting practices. For example, conservative community leaders may believe that harsh disciplinary actions are predominantly effective

in regulating children's delinquent behaviors, whereas schools may believe that on positive reinforcement to have the same effect. Resolution of such differences in parenting ideology is a core-goal of cultural adaptation, with an effort to find balance between suggested modifications of community and organizational leaders and keeping the core elements of PMTO intact. In the Indian implementation of South African based positive parenting intervention, Parenting for Lifelong Health, Mathias et al. (2022) ensured community leaders trusted and accepted the facilitators, and had support from other non-governmental organizations for infrastructure and logistical support, which contributed towards successful outcomes of Parwarish parenting program.

Another challenge are existing disparities in parenting practices even within these multiple arrays of cultures within the Indian subcontinent, which comprises 28 states and 8 union territories. Many Indian states are known for their explicitly distinct culture. Culture contributes towards construction, maintenance, and transmission of parental cognitions, which in turn impact parenting practices (Bornstein, 2012). More diversity in culture can often translate into more diversity in parenting practices, making a parenting program require more tailoring to fit the specific needs of people belonging to different subcultures. Fortunately, the core components of PMTO- skill encouragement, limit setting, monitoring, problem solving, and positive involvement- also align with deeply embedded Indian cultural values of parenting (Tuli, 2012). Some minor modifications can facilitate acceptability of PMTO in subcultures within Indian context.

Some limitations with the measurement protocols are lack of updates and culturally inappropriate coding for observational tasks. The challenge with measurement is further complicated by lack of national administrative dataset about already existing parenting programs or other randomized control trials aimed to improve child outcomes. Dearth of such "banks" of published and unpublished trials exacerbate the efficacy of new programs, comparison of results with normative dataset, and meta-analytical studies (Walker, Hernandez & Kattan, 2008). A possible solution is to ensure that measures assess what they are intended for in the pilot testing, and make modifications to enhance the instrument appropriateness for the intervention program. The results of the current program can be among the first ones for the national dataset that can help researchers in future.

CONCLUSION

Although PMTO is widely adapted and implemented internationally, in this paper we have proposed cultural adaptation of PMTO in the Indian context. This proposed adaptation is a tailored intervention, which would take local language, socio-economic and cultural factors, and availability and preparedness of local institutions/communities into consideration. Targeting a specific cultural group can have stronger effectiveness than targeting multicultural groups, which is supported by a meta-analytic study of 76 studies by Griner and Smith (2006). Therefore, this proposed plan only focuses on India instead of South Asian Culture as a whole. Although, there are significant differences in culture, ethnicity, religion, language, and even parenting practices within South Asian countries (Srinivasulu & Srinivasulu, 2012; Fearon, 2003; Maiter & George, 2003), the current article can be a guiding manual to address the adaptation need in a culture conspicuously distinct from western nations, such as India. For example, while adapting to the context of South Asian countries other than India, certain tools such as language can be one of the mediums in the tailoring process of the parenting programs, which can bring a huge impact on program acceptability and effectiveness (Griner & Smith, 2006). At the same time, successful

adaptation and implementation of PMTO in the Indian context can be a pioneer of BPT in the South Asian settings. Following the outcomes of the said adaptation, countries with similar socio-economic-cultural settings can investigate the scope of PMTO to enhance parenting practices for better family outcomes. In fact, culturally adapted PMTO can work towards widespread adoption of not only BPT but also other evidence-based programs.

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