

## Abstract

Due to the COVID-19 pandemic, the public has increased awareness of the role that parents play in the acquisition of language, literacy and numeracy skills by young children. In the present work, two studies have been proposed to examine the importance of parental role play in young children's skills development, in Cebu, Philippines. In the first study, we examined the association between the early acquisition of language, literacy and numeracy skills of children with socioeconomic factors (SES), parental beliefs and parental cognitions while in the second study, the effectiveness of an online parental coaching programme in improving both parental beliefs and cognitions, and children's language, literacy and numeracy skills were examined.

In Study 1, the present study failed to find any relations between parental beliefs and cognitions with young Cebuano children's language, literacy and numeracy skills. Furthermore, the present study also failed to showcase the differential effects of parental education and family income as both SES indicators correlated significantly with children's skills.

In Study 2, the 13-week long online parental coaching study was found to be successful in promoting better language, literacy and numeracy skills in young Cebuano children. Children in the intervention group showed significant improvement in their receptive vocabulary, syllable matching, letter name knowledge, numeral identification, object counting, rote counting, missing number, numerical magnitude comparison and addition skills but not in their expressive vocabulary and syllable deletion as compared to the waitlist control group. However, our online intervention failed to significantly improve parental educational aspiration, parental stress and parental efficacy among parents of the intervention group. Apart from the moderating effect of SES on receptive vocabulary found, the online intervention was not moderated by factors of SES, parental stress and parental self-

efficacy, whereas a main effect of parental involvement for rote counting, missing number and addition were found.

Despite the present study failed to highlight the differential relation between parental education and family income to children's skills, our studies underscore the validity and feasibility of an online format of intervention and data collection procedure, particularly in a low-to-middle income country – the Philippines context. Moreover, findings also demonstrate the possible added benefits of an online intervention format and the importance of an integrated cross-domains (i.e., language, literacy and numeracy) intervention format.

*Keywords:* parental beliefs and cognitions, online intervention, literacy and numeracy, virtual assessment, Philippines

## 摘要

在新冠肺炎疫情的當下，人們越來越意識到父母在幼兒早期獲得語言(language)、讀寫(literacy)和計算( numeracy)方面所扮演的重要性。在此研究中，我們在宿霧市(Cebu), 菲律賓提出了兩項研究來檢驗父母對幼兒技能發展扮演的重要性。在第一項研究中，我們檢驗了社會經濟地位 (SES)、父母信念和父母認知與兒童早期語言能力、讀寫能力和計算能力之間的關係。而在第二項研究中，我們研究了在線上父母輔導計劃在改善兒童的語言、讀寫和計算能力以及父母信念和認知能力的效用。

在研究 1 中，本研究未能發現父母的信念和認知與宿霧市兒童的語言、讀寫和計算能力之間存在的關係。此外，本研究未能展示父母教育和家庭收入對幼兒技能發展的不同影響。此研究發現這兩項不同的社會經濟地位指標都與孩子的技能都有著顯著相關。

研究 2 發現為期 13 週的在線家長輔導研究成功地提高了在宿霧市兒童的語言、識字和計算能力。與候補名單控制組(waitlist-control group)相比，干預組(intervention group)兒童在理解性詞彙能力(receptive vocabulary)、音節匹配(syllable matching)、字母名稱知識(letter name knowledge)、數字識別(numeral identification)、物體計數(object counting)、死記硬背數字(rota counting)、漏數(missing number)、數量大小比較(numerical magnitude comparison)和加法技能(addition)方面有顯著提高，但在表達性詞彙能力(expressive vocabulary)和音節刪除(syllable deletion)方面沒有顯著提高。然而，我們的在線干預未能顯著提升干預組父母對孩子的教育願望(parental educational aspiration)、父母壓力(parental stress)和父母效能(parental self-efficacy)。除了發現社會經濟地位對理解性詞彙能力所存在的調節作用，在線干預所得的訓練成果並不受社會

經濟地位、父母壓力和父母自我效能等因素所影響，而父母參與度對死記硬背數字、漏數和加法有主要影響。

儘管目前的研究未能突出父母教育與家庭收入與兒童技能之間的差異關係，我們的研究強調了在線模式的干預和數據收集程序的有效性和可行性，特別是在中低收入國家如菲律賓。此外，目前的研究結果還證明了在線干預模式可能帶來的額外好處以及整合跨領域（即語言、讀寫能力和計算能力）干預形式的重要性。