

【第一題，本題佔 35%】

請閱讀以下一篇有關於早期療育的論文摘要，並回答相關問題：

(a) 請以中文 500 字簡述本研究的概況。(20%)

(b) 請說明本研究的控制組和臨床隨機實驗(randomized controlled trial, RCT)的控制組在設計上以及結果推論效力上的差異?(15%)

Palfrey JS, Hauser-Cram P, Bronson MB, Warfield ME, Sirin S, Chan E.

The Brookline Early Education Project: A 25-year follow-up study of a family-centered early health and development intervention. *Pediatrics*. 2005;116(1):144-152.

Abstract

Background. Clinicians, scientists, and policy makers are increasingly taking interest in the long-term outcomes of early intervention programs undertaken during the 1960s and 1970s, which were intended to improve young children's health and educational prospects. The Brookline Early Education Project (BEEP) was an innovative, community-based program that provided health and developmental services for children and their families from 3 months before birth until entry into kindergarten. It was open to all families in the town of Brookline and to families from neighboring Boston, to include a mixture of families from suburban and urban communities. The goal of the project, which was administered by the Brookline Public Schools, was to ensure that children would enter kindergarten healthy and ready to learn.

Objective. Outcome studies of BEEP and comparison children during kindergarten and second grade demonstrated the program's effectiveness during the early school years. The goal of this follow-up study was to test the hypotheses that BEEP participants, in comparison with their peers, would have higher levels of educational attainment, higher incomes, and more positive health behaviors, mental health, and health efficacy during the young adult period.

Methods. Participants were young adults who were enrolled in the BEEP project from 1973 to 1978. Comparison subjects were young adults in Boston and Brookline who did not participate in BEEP but were matched to the BEEP group with respect to age, ethnicity, mother's educational level, and neighborhood (during youth). A total of 169 children were enrolled originally in BEEP and monitored through second grade. The follow-up sample included a total of 120 young adults who had participated in BEEP as children. The sample differed from the original BEEP-sample in having a slightly larger proportion of college-educated mothers and a slightly smaller proportion of urban families but otherwise resembled the original BEEP sample. The demographic features of the BEEP and comparison samples were similar. The young adults were asked to complete a survey that focused on the major domains of educational/functional outcomes and health/well-being. The study used a quasi-experimental causal-comparative design involving quantitative analyses of differences between the BEEP program and comparison groups, stratified according to community. Hypotheses were tested with analysis of variance and multivariate analysis of variance techniques. Analyses of the hypotheses included the main effects of group (BEEP versus comparison sample) and community (suburban versus urban location), as well as their interaction.

Results. Young adults from the suburban community had higher levels of educational attainment than did those in the urban group, with little difference between the suburban BEEP and comparison groups. In the urban group, participation in the BEEP program was associated with completing >1 additional year of schooling. Fewer BEEP young adults reported having a low income (less than \$20000); the income differences were accounted for largely by the urban participants. The percentage of subjects with private health insurance was significantly lower in the urban group overall, but the BEEP urban group had higher rates of private insurance than did the comparison group. More than 80% of both suburban samples reported being in very good or excellent health; the 2 urban groups had significantly lower ratings, with 64% of the BEEP group and only 41.67% of the comparison group reaching this standard. Overall, suburban participants reported more positive health behaviors, more perceived competence, and less depression. Among the urban samples, however, participation in BEEP was associated with higher levels of health efficacy, more positive health behaviors, and less depression than their peers.

Conclusions. No previous study has focused as extensively on health-related outcomes of early education programs. BEEP participants living in urban communities had advantages over their peers in educational attainment, income, health, and well-being. The educational advantages found for BEEP participants in the early years of schooling included executive skills such as planning, organizing, and completing school-related tasks. It is likely that these early advantages in executive function extended beyond education-related tasks to other activities as participants became responsible for their own lives. The long-term benefits revealed in this study are consistent with the findings of previous long-term studies that indicated that participants in high-quality intervention programs are less likely to cost taxpayers money for health, educational, and public assistance services. The BEEP program appears to have somewhat blunted differences between the urban and suburban groups. The results of this study add to the growing body of findings that indicate that long-term benefits occur as the result of well-designed, intensive, comprehensive early education. The health benefits add a unique and important extension to the findings of other studies.

見背面

【第二題，本題佔 35%】

一名早產的男嬰目前是出生後 2 個月，仍在某醫學中心的新生兒加護病房住院中。他在懷孕週數(gestational age)28 週時出生，出生體重是 900g。在周產期間，他有開放性動脈導管(patent ductus arteriosus)，經藥物治療已完全改善；出生後曾接受呼吸器治療，目前已脫離，但仍需使用氧氣；腦部超音波發現他的左側有腦室內出血第三級(intraventricular hemorrhage, grade III)合併腦室周邊白質軟化(periventricular leukomalacia)。日前物理治療師評估發現他對於聲音與視覺刺激反應尚可，眼睛可以轉向刺激源，但轉頭動作不大；他的下肢與軀幹伸直張力較強，屈曲肌肉的動作表現較差，自主動作不多；他在活動與喝奶時容易喘，由口進食的量不足，一半需管灌餵食；此外，他容易躁動，醫護人員介入時常哭鬧不止，且伴隨手腳伸直並有顫抖現象。他的父母很關心他的狀況，積極向醫護人員學習照護方式，每日探訪時都會和男嬰互動。

根據上述個案描述，請回答以下問題。

- (a) 請以國際功能與身心障礙分類系統-兒童版(International Classification of Functioning, Disability and Health - Children and Youth Version; ICF-CY)分析個案目前的健康狀況與相關因素。(15%)
- (b) 根據個案的狀況，請敘述你的介入計畫，並說明所依據的理論架構。(20%)

【第三題，本題佔 30%】

個案為一 10 個月大男童，足月出生，出生體重為 2820 克，無兄弟姊妹，為家中唯一的小孩，一出生即被診斷為鑲嵌型(Mosaicism)唐氏症。新生兒腦部超音波顯示右側側腦室額角擴大且心臟超音波顯示卵圓孔未關(Patent Foramen Ovale, PFO)，先天性心臟問題嚴重程度輕微，不須接受藥物與手術治療，僅需持續於小兒心臟科門診追蹤，目前心臟狀況穩定，活動不需受限。聽力正常(右耳 10 分貝，左耳 5 分貝)，雙眼皆有近視與斜視，持續於小兒眼科追蹤，無須配戴眼鏡矯正，血液檢查結果無異常。此外，因甲狀腺機能低下而持續服用藥物(Eltroxin)。個案於 3 個月大首次接受物理治療評估，6 個月大開始接受每周一次物理治療，達成發展基石的情況為 3 個月大具備頭部控制能力，6 個月大可獨立翻身，8 個月大可獨坐約 2 分鐘。主要照顧者(母親)的主訴與期待為希望增加個案坐立、爬行與行走的能力。

- (a) 若您是這位個案的物理治療師，請描述如何以個案處理模式的流程進行物理治療評估與診斷。(15%)
- (b) 請對此個案的發展問題訂定一個治療目標與治療計畫(5%)，並且如何應用實證物理治療的方法，評估治療計畫的執行成效。(10%)

試題隨卷繳回