

Experiment on Romanian orphans: They have lower volumes of gray matter

Written by Administrator

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Living in harsh conditions in an orphanage early in life has long-lasting consequences for a child's social skills, a new study finds. Children who spent their first two years in a Romanian orphanage behaved abnormally in social interactions with other children, even years after leaving the institution, sciencenews.org reports.

Life in the orphanage was also linked to brain abnormalities, Charles Nelson of Harvard Medical School reported February 17 at the annual meeting of the American Association for the Advancement of Science.

"I think this work nails the really important issues in trying to understand the effects of early life experiences," said psychologist Janet Werker of the University of British Columbia in Vancouver.

Since 1999, Nelson and colleagues have followed 136 children who were abandoned at birth and placed in an orphanage in Bucharest, Romania — a Spartan environment where the children spent hours staring at a white wall and followed a highly regimented schedule of activities. The kids received very little attention from caregivers.

Nelson and his team arranged for half of these children to move into individual homes for foster care. (A bias against foster care in Romania made the situation unusual.) Called the Bucharest Early Intervention Project, the experiment offered a way to test the importance of a good environment.

Echoes of a hard start in life persisted long after the orphans had moved into a home, the team found. At age 8, kids who spent their first 2 years or longer in the orphanage before moving to foster care had profound deficits in how they interacted with other children. These children couldn't carry on a conversation normally and had other social problems.

But kids who escaped the orphanage before they turned 2 were able to recover normal social skills, performing as well as children who had been raised in their own homes.

In addition to behavioral problems, the children raised in an orphanage showed brain differences, too. MRI brain scans revealed that kids who were institutionalized had dramatically lower volumes of gray matter — which contains the brain's nerve cells — than children who grew

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up normally in their own home. Whether or not the child moved to a foster home didn't matter: Living in an orphanage for any amount of time was tied to reduced gray matter.

But the story was different for another kind of brain tissue: The volume of white matter — tissue that carries nerve cell signals around the brain — was lower for kids who were in an orphanage for two or more years, but the volume was greater in children who left the orphanage before age 2. The results suggest that white matter, a brain tissue that is thought to be heavily responsive to the environment, may be able to bounce back from an early rough start.

“Institutional care should be considered the last resort,” Nelson said. “And effort should be made to place a child as soon as possible.”

Experiment pe orfanii din Romania. "Materia lor cenusie este redusa. Traiesc intr-un mediu spartan"

Un grup de oameni de stiinta, condus de americanul Charles Nelson de la Scoala Medicala Harvard, a studiat comportamentul orfanilor care au crescut intr-o institutie sociala din Romania. Astfel, concluzia principala este ca acesti copii care si-au petrecut primii doi ani intr-un orfelinat din Romania s-au comportat "anormal" in relatiile sociale cu alti copii, chiar si dupa cativa ani de la parasirea institutiei, conform Stirilor Pro TV.

De asemenea, s-a constatat ca viata intr-un orfelinat este strans legata de anumite anomalii ale creierului - a anuntat profesorul Nelson in cadrul adunarii anuale a Asociatiei Americane pentru Dezvoltarea Stiintei.

Din 1999, Charles Nelson si colegii sai au urmarit comportamentul a 136 de copii care au fost abandonati la nastere si plasati intr-un orfelinat din Bucuresti. Numele acestei institutii nu este precizat, insa sunt descrise conditiile de acolo, potrivit publicatiei Science News: " ... un mediu spartan, in care copiii petrec ore intregi holbandu-se la un perete alb, fiind obligati sa respecte

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un regim strict de activitati. Copiii au parte de foarte putina atentie din partea ingrijitorilor sociali."

Nelson si echipa sa a aranjat ca jumatate din acesti copii sa ajunga in locuinte individuale, pentru a avea parte de asistenta maternală. Jurnalistii de la Science noteaza faptul ca in Romania exista o "prejudecata" fata de serviciile de asistenta maternală, fapt care a facut ca actiunea lui Nelson sa para "neobisnuita". Acest experiment a fost numit "Bucuresti, Proiect de Interventie Timpurie" si a oferit specialistilor date despre importanta mediului in care sunt crescuti copiii.

Oamenii de stiinta au constatat ca urmarile unei educatii si a unui tratament dur persista mult timp, chiar si dupa ce copiii sunt mutati intr-o casa. La varsta de 8 ani, copiii care si-au petrecut primii 2 ani sau mai mult intr-un orfelinat, pana sa fie mutati intr-o locuinta individuala, au "deficite profunde" in interactiunea cu alti copii. "Acesti copii nu au fost in stare sa poarte o conversatie normala si au avut, de asemenea, si alte probleme sociale", spun specialistii.

Insa copiii care au reusit sa plece inainte sa se implineasca doi ani de stat in orfelinat au fost capabili sa-si recapete abilitatile de socializare, comportandu-se la fel ca ceilalti care au crescut in propriile case.

Mai mult decat atat, copiii care au crescut intr-un orfelinat au prezentat si diferente mentale. Scanarile RMN facute la creier au aratat ca acesti copii, care au fost institutionalizati, prezinta "o scadere dramatica a volumului de materie cenușie, cea care contine celulele nervoase ale creierului", comparativ cu a celor crescuti in propriile locuinte. Studiul mai releva insa si altceva. "Volumul materiei albe, care se refera la semnalele transmise creierului de catre celule, a fost mai mic in cazul copiilor care au crescut in orfelinat un an sau doi, si mai mare in cazul celor care au parasit institutia inainte sa se implineasca doi ani."

"Ingrijirea institutionala a orfelinatelor ar trebui sa fie considerata ultima solutie. Cel mai mare efort ar trebui sa fie concentrat pe gasirea cat mai rapida a unor parinti adoptivi", a concluzionat profesorul Nelson.