

The Role of Occupational Therapy in the Assessment of Biological Damage: A Multidisciplinary Perspective

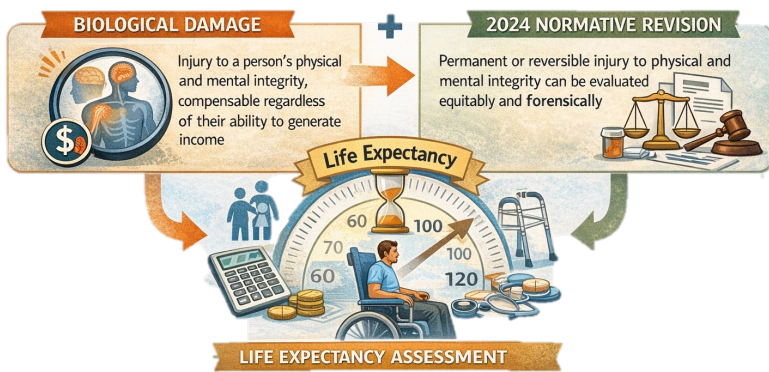
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Introduction: Accidents and injuries are major causes of disability, yet traditional medico-legal assessment frameworks often fail to capture their full impact on daily life and social participation. The Italian legal-insurance system, following international methodologies, relies on standardized medico-legal tables that do not adequately consider functional deficits, environmental barriers, and caregiver burden. This study, requested by ANIA (National Association of Insurers), proposes an innovative evaluation model integrating occupational therapy (OT) to ensure fairer compensation. By incorporating patient-reported outcomes (PROs), the study provides a comprehensive assessment of biological damage and its impact on occupational performance.



Aim: This study integrates OT evaluations into medico-legal assessments to identify gaps in standardized tables and ensure a more accurate representation of functional deficits.<

Methods: Eligible participants were clinically stable individuals in ongoing litigation. A multidisciplinary team, including forensic physicians, physiotherapists, and occupational therapists, conducted evaluations using validated tools: CIQ-R for social integration, CHIEF for environmental barriers, XClinic sensors for motion analysis, and the Zarit Burden Interview for caregiver burden. Functional impairment was quantified using DASH, BERG, KOOS, LEFS-I and TSK.

Results: Among 76 participants (mean age 45.2±12.3, 63.2% male), 53 sustained injuries from road accidents and 23 from medical malpractice. High caregiver burden was observed in 58%, social isolation in 78%, and significant environmental barriers in 92%. OT assessments revealed discrepancies in social and occupational reintegration. Statistical analysis confirmed strong correlations between functional deficits, life expectancy, and proposed rehabilitation compensations.

Variable	Occupational Therapy Compensation	Total Cost of AT	Total Compensation (Occupational Therapy + AT)	Total Compensation (OT + AT + Physiotherapy)	Total Number of AT (number of types)
Damage (%)	0.206	0.219	0.235	0.169	0.261*
Total Functional Deficit	0.088	-0.045	-0.036	0.089	0.388**
Functional Deficit × Life Expectancy	0.280*	0.228	0.251	0.464**	0.369**

Conclusions: Integrating OT into medico-legal evaluations enhances the accuracy of biological damage assessments by addressing physical, social, and occupational dimensions.