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Workforce matters: Defining labour input for better health technology assessment

Mirre Scholte, Merel Kimman, Sabine E. Grimm, Joost Verbeek on behalf of the EVALUATOR working group*

* EVALUATOR working group: Evelyn Croonen, Anne Deckers, Marcel Douven, Andrea Fernández Coves, Sabine Grimm, Martijn de Groot, Manuela Joore, Merel Kimman, Nicole van Eldik, Anouk Schevers, Mirre Scholte, Marieke Spreeuwenberg, Joost Verbeek.

Introduction

Dutch healthcare faces growing workforce shortages. While innovations are being developed to relieve this pressure, evaluating their effects is challenging, as impact on labour input extends beyond the time spent on specific tasks. Labour input is a complex construct that may also involve changes in work satisfaction and shifts in workflows and care delivery. The **EVALUATOR project** develops a practical toolkit to support healthcare organisations and policymakers in assessing how innovations affect **labour input.**

Objective
To define labour input and identify its relevant domains within the context of health technology assessment (HTA).

Methods

Labour input was defined through workshops using the World Café method, a structured, small-group discussion format that encourages idea exchange across rotating tables. Three workshops were organised: two with potential end users of the envisioned toolkit and one with experts in HTA and labour input. Insights from the first two workshops were synthesised into a preliminary conceptual framework, which was refined in the expert session. Finally, findings were compared with key theories on work design and occupational stress: the Job Characteristics Model[1] and the Job Demands–Resources Model[2], which together informed the conceptual framework of labour input for HTA.

Results

We conducted three workshops with in total 27 participants, researchers, nurses, physicians, innovators, innovation advisors, directors and representatives from HR, medical technology and information technology.

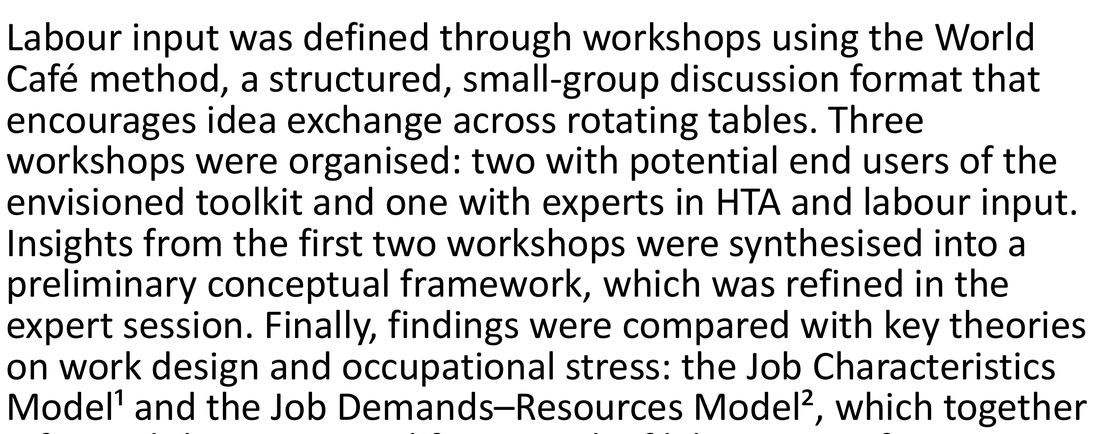

Figure 1: Labour input has multiple domains and impact on multiple levels
* Between (healthcare) professionals or to patients, informal caregivers or technology

Findings suggest that impact in terms of labour input can occur on multiple levels: the individual worker or informal caregiver, the organisation and on societal level (**Figure 1**). For the worker level, two key domains were found: productivity and job satisfaction and motivation, which have different aspects (**Figure 2**). Findings on worker and organisational/regional level translate to societal level.

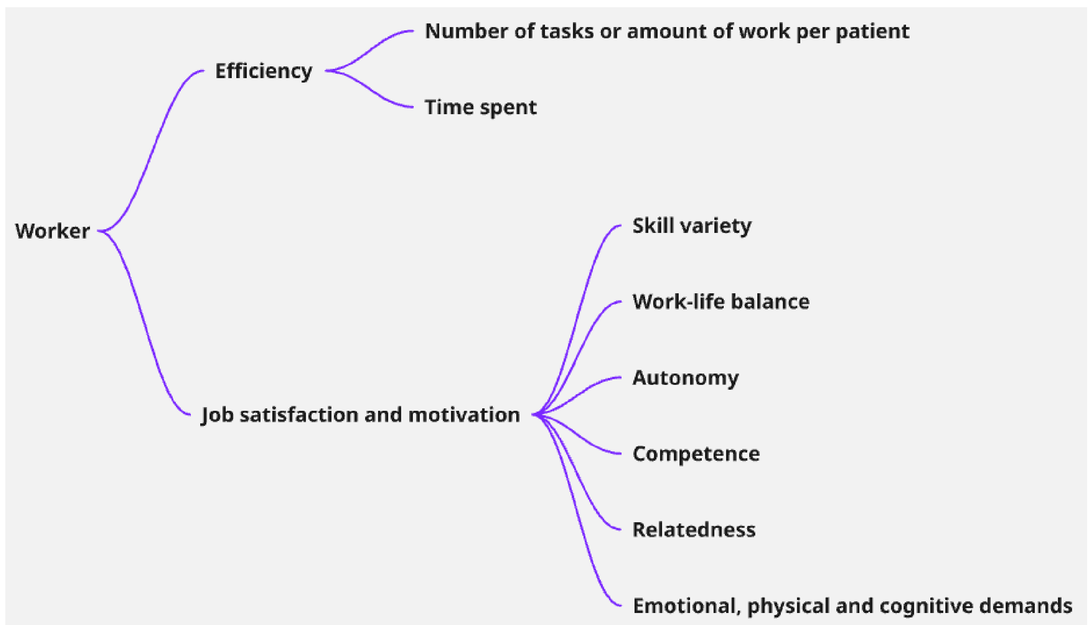

Figure 2: Identified domains and aspects at the worker level

Aspects identified in the workshops that related to patient outcomes or implementation were not incorporated in the framework. For some domains, already existing measurement instruments were identified. Based on the workshops a preliminary definition of labour input for HTA was created:

Labour input in HTA refers to the **amount and nature of work** that workers and/or informal caregivers perform per **patient or task**, reflecting both the **time** invested and the associated dimensions of **job satisfaction and motivation**. It can be considered at **individual, organisational**, and **societal** level.

Discussion and conclusion

These findings highlight the need to assess labour-saving innovations at multiple levels and domains. Suitable measurement methods need to be identified and may need to be developed. Next steps include a scoping review on measurement methods for labour input and a Delphi study to reach consensus on its definition, domains, and appropriate measurement approaches. Further research should explore trade-offs between domains (e.g. is one willing to sacrifice job satisfaction to gain efficiency) and their interaction with value elements like cost-effectiveness. The definition and domains of labour input will inform a practical toolkit to support healthcare organisations and policymakers in evaluating, purchasing, and effectively implementing labour-saving innovations.

References: 1. Hackman and Oldham 1975, 2. Bakker et al. 2003

Questions or want to get in touch? Please send an email to: Mirre.Scholte@Radboudumc.nl

Maastricht UMC+ Maastricht University Radboudumc