Adaptive strategies as indicators of successful ageing with hearing loss

A factor analysis approach based on the hearing-related application of the SOC model

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Background

- Successful ageing goes beyond achievement of desirable outcomes (i.e., quality of life, health, well-being)
- It reflects human capacities such as loss adaptation and mastery of changes over life span (i.e., major life events)
- Model of Selective Optimization with Compensation (SOC[1]) describes such behavioral strategies (see Fig. 2)
- Strategy use was found to be positively related to indicators of successful ageing[2]
- Diagnosis of age-related HL and HA uptake are major live events – SOC-like adaptation process?

Research aims

- SOC-based conceptual framework on the use of hearing-related adaptive strategies (Presented)[3]
- Development and validation of a SOC scale on the use of hearing-related adaptive strategies (AStra)

Methods

- Online survey May - July 2022
- AStra scale
  - 49 items
  - 5-point Likert scale (strongly disagree to strongly agree)
- Convenience sample:
  - N = 59 (32 male; 57% HA owner)
  - 28 to 82 years (M = 57.6)
  - Wide range of hearing difficulties onset (see Fig. 1)
  - Self-reported HL (average for 4 items, scale 0 (no problems at all) to 3 (not possible at all)): M = 1.28 (SD = 0.69)
- Revision of AStra questionnaire: Principal component analyses (varimax rotation) for SOC scales with theoretical examination of the result (content validity)
  - Item elimination < .50
  - Psychometric properties: Reliability, validity of items
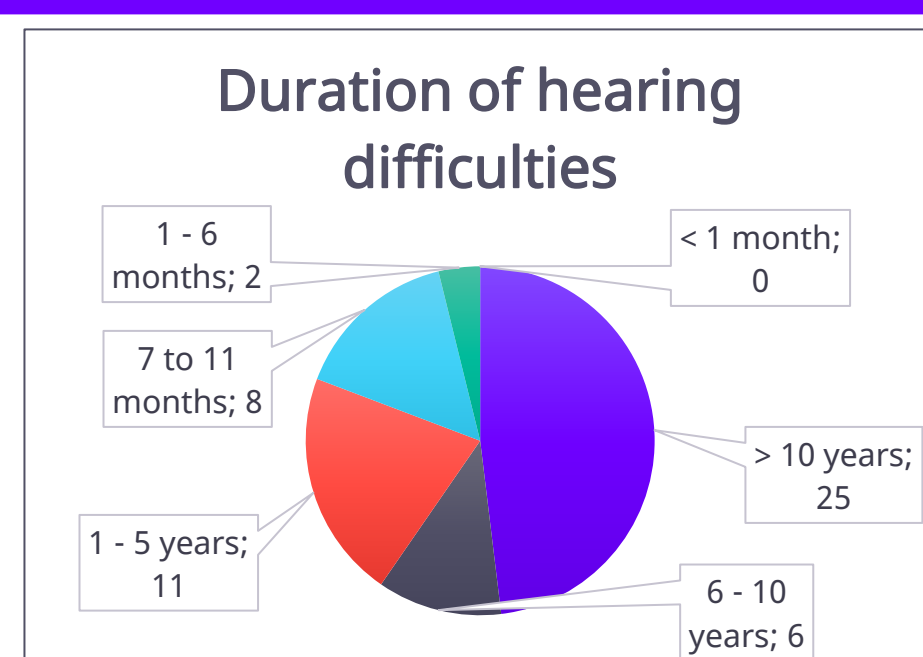- Convergent validation with generic SOC scale[4]

Fig 1.: Perceived duration of hearing difficulties
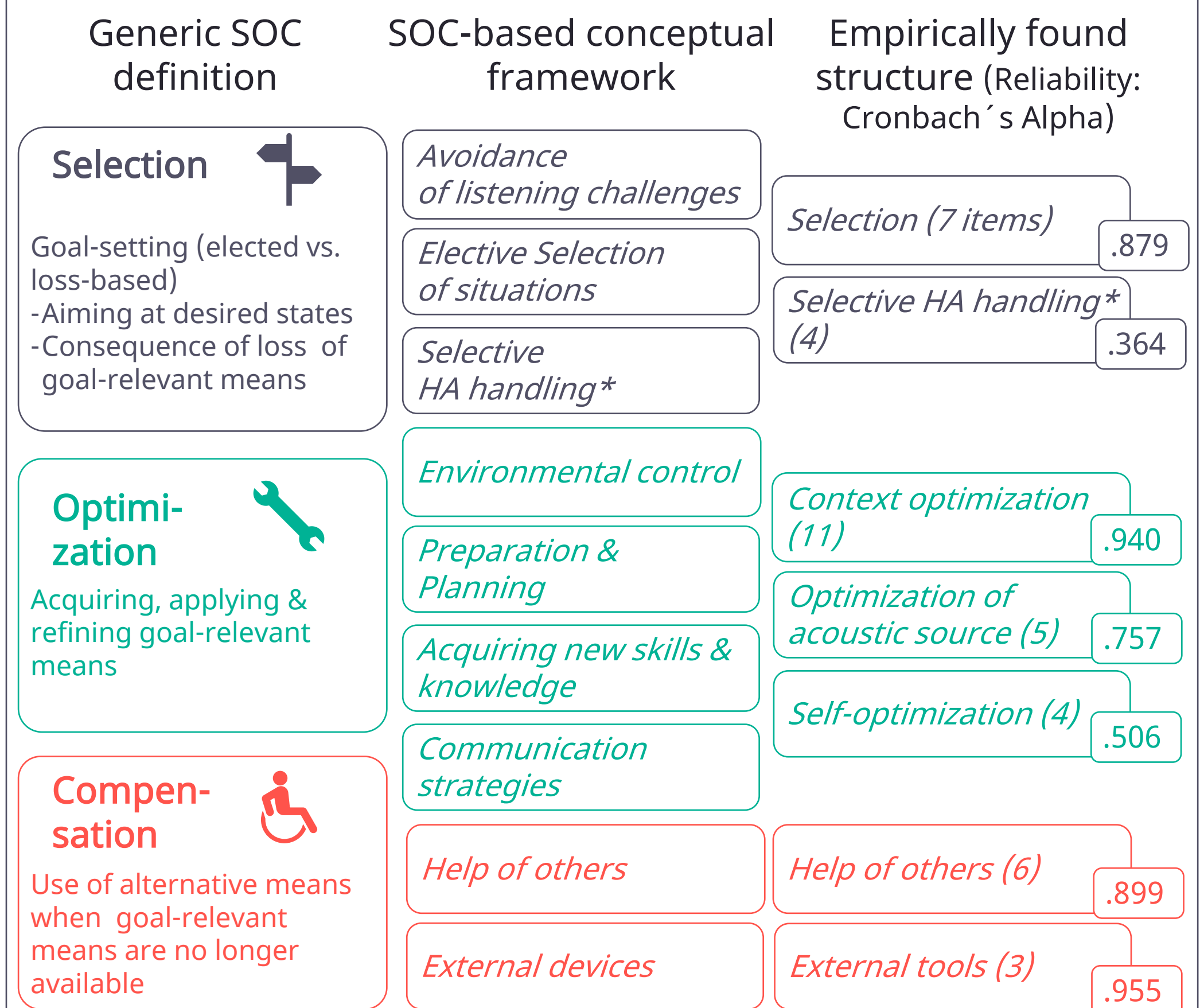
Results & Discussion

Fig 2.: Description of SOC model and development of hearing-related adaptive strategies questionnaire (AStra). *Items for HA wearers only

- High reliability of seven AStra subscales
- Convergent validity: AStra did not show consistent correlation patterns with SOC scale[4]
  - AStra might measure highly situational and adaptive behaviors and decisions towards coping with hearing difficulties
  - SOC scale measures dispositional attitudes and behavioral patterns over time

Outlook

- 6 months longitudinal field study (ongoing, N=500)
- Convergent validation with relevant scales from "Ways of Coping checklist" (revised)[5]
- Theoretical implications:
  - Are age-related HL and HA uptake a SOC-like adaptation process?
  - Does the engagement of adaptive strategies result in more successful listening experiences?
- Clinical implication: Does the application of adaptive strategies change with progress along the hearing journey? Do they predict progress?

[1]Baltes, P.B., & Baltes, M.M. (1990). Psychological perspectives on successful aging: the model of selective optimization with compensation. In Baltes P.B., & Baltes M.M. (eds): *Successful Aging: Perspectives from the Behavioral Sciences* (pp. 1–34). New York: Cambridge University Press.

[2]Lang, F. R., Rieckmann, N., & Baltes, M. M. (2002). Adapting to aging losses: Do resources facilitate strategies of selection, compensation, and optimization in everyday functioning? *Journal of Gerontology, 57(6),* 501–509

[3]Fischer et al (2022). Hearing-related application of the SOC model: Adaptive strategies as indicators of successful ageing with hearing loss. Poster presentation at HEAL conference, Como Italy.

[4]Baltes, P. B., Baltes, M. M., Freund, A. M., & Lang, F. (1999). *The Measurement of Selection, Optimization and Compensations (SOC) by Self-Report. Technical report 1999.* Berlin: Max-Planck-Institute.

[5]Folkman, S. & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48,* 150-170.

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