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Uncovering Strategies to Empower Students: A Scoping Review of One-on-One Advising Interventions

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ABSTRACT

Student and academic advisers are pivotal in guiding students through their academic journeys, especially during challenging times. This study identifies evidence-based interventions that foster a stronger sense of student empowerment through a scoping review. The 15 articles from various fields describe interventions to empower students by enhancing competencies like resilience, self-regulation, self-efficacy, and overall well-being. This study highlights specific approaches that have demonstrated measurable impact on student engagement and academic outcomes. Additionally, we outline practical recommendations for advisers, offering an actionable competency framework that can be adapted to different educational contexts. These insights contribute to developing evidence-based advising practices, equipping educators with concrete tools to foster student empowerment and long-term success.

Introduction

Research indicates a growing concern for student well-being as an increasing number of students struggle to balance academic responsibilities with daily life (Pascoe et al., 2019; Robotham & Julian, 2006; Caruth, 2018; Dopmeijer et al., 2021). The year spent as a student are often seen as a challenging phase in a fragile development stage, characterised by a range of stress-inducing factors (Arnett, 2015; Karyotaki et al., 2020). Consequently, mental health issues like depression, anxiety, and stress are common among one in every three students globally (Auerbach et al., 2018). Furthermore, students encounter various psychosocial challenges, such as delaying tasks they need to complete, striving for perfection, fearing failure, having low self-esteem, and dealing with excessive shyness (Limburg et al., 2017; Werner et al., 2019). These experiences are not necessarily universal, nor are they always unavoidable. However, when such difficulties do arise, they can perpetuate or exacerbate mental health problems. Recognising this, institutions actively seek effective strategies to support student

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well-being and enhance resilience, ensuring students have the resources to navigate individual challenges.

To support students who encounter personal problems and circumstances that may affect their academic progress, educational institutions have support structures for students. One of these structures may include confidential one-on-one sessions with a staff member due to the sensitive or private nature of these personal problems. Whilst these staff members may go by various titles such as study advisor or adviser, academic counsellor, mentor, student counsellor, or student care officer, for this study, we use the term "student adviser" to refer to university staff that have confidential one-on-one conversations with students.

Literature indicates that student advisers are important in reducing dropout and promoting study success (Caruth, 2018; Nutt, 2003; Young-Jones et al., 2013). For example, a study based on 1,600 individual undergraduate interviews has shown that good advising is the most underestimated characteristic of a successful study experience (Light, 2003). Besides their importance in study success, the role of student advisers has shifted from providing direct advice and clear-cut solutions for students' study problems to a more educational approach, where advising aims to teach students how to develop new competencies and handle their current problems, as well as prepare them for future challenges and supporting their mental wellbeing (Baik et al., 2019; Crookston, 1994; Lowenstein, 2009).

Advisers can tailor their interventions to the specific competencies a particular student needs to develop, especially in a one-on-one setting. This 'competence-oriented' approach is supported by Baars (2021), who advocated that many unwanted outcomes of student problems, such as study delays and dropouts, can be traced back to underdeveloped competencies. By focusing on strengthening these competencies rather than simply solving the immediate problem, students can be empowered to handle future challenges independently.

Supporting students via empowerment seems like a powerful tool, especially since students associate being empowered with being someone who can set goals, reach those goals, make their own decisions (in favour of their goals), and is flexible (Seref & Mizikaci, 2022). However, much is still unknown about effectively promoting and increasing empowerment through the academic one-on-one advising setting. To our knowledge, research in the educational domain is scarce. Therefore, considering the overlap between learning in university and learning in the workplace, we decided to investigate whether research conducted in other fields, such as human resource management and (organisational) psychology, can provide valuable insights for effective interventions to empower students and develop these competencies.

One example from a related domain is the feedback model developed by de Kleijn (2021). The model was initially created for assessment and evaluation purposes; however, its principles can be adapted for use in one-on-one advising sessions. This model encourages students to generate and investigate possible solutions to their thesis writing problem and to come

prepared with specific questions for their thesis supervisor. When applied consistently in a guidance relationship, this intervention can stimulate students to become more self-regulated and increase their feelings of empowerment.

A scoping review was conducted to gain insights into existing empowerment interventions applicable in one-on-one advising sessions, encompassing educational and non-educational domains. The study aimed to identify measurement tools capable of assessing the effectiveness of these interventions in fostering students' sense of empowerment and ownership in their academic journey. By combining evidence-based interventions and evaluation tools, advisers can enhance the quality of their guidance, ultimately assisting students in attaining their academic objectives.

Methods Scoping Review

The structure of this scoping review is based on the five-stage framework of Arksey et al. (2002). This framework has the following five stages: 1) identifying the research question, 2) identifying relevant studies, 3) study selection, 4) charting the data, and 5) collating, summarising, and reporting the results. Additionally, this review is in line with the Items of Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018).

Framework Stage 1: Identifying Research Questions

This scoping review aims to create an overview of one-on-one interventions and measurement tools that contribute to increased empowerment of students in an advising setting. This leads to the following research questions: Firstly, 'What empowerment interventions described in the literature can be utilized in a one-on-one advising setting?' Secondly, 'What measurement tools are available to measure empowerment that can be effectively utilised in an academic advising setting?'

Framework Stage 2: Identifying Relevant Studies

The PCC (Population-Concept-Context) framework was employed to determine the key concepts and guide the search strategy (see Appendix 1) for the primary review question. The main focus of this study revolves around the concepts of 'empowerment' and 'intervention'. The former, empowerment, encompasses a range of interconnected concepts. In our literature search, we have identified and incorporated five relevant terms that are closely associated and often used interchangeably with 'empowerment': 'resilience', 'self-authorship', 'self-regulation', 'self-efficacy' and 'agency'. For 'intervention', we have included synonyms including; 'workshop', 'program', 'session', and 'training'.

The 'Population' aspect of this framework refers to **higher education students**, as this study focuses on their experiences with empowerment and intervention in the context of student advising. Given the diversity of student populations across institutions, we have not restricted our search to specific demographics but have instead included a broad range of student groups.

The final component of the PCC framework is context, which is focused on 'student advising during one-on-one sessions'. However, since not all institutions use the same terminology for this role, comparable terms such as 'academic support service' or 'counselling' are also included in the search. As relevant interventions may have been developed in employment settings, terms related to work floor interventions, like 'human resource (HR)-management', have also been included.

Framework Stage 3: Study Selection

The search plan was executed in three databases: ERIC, PsycInfo, and PUBMED in 2022 and 2023. Appendix two provides a complete overview of the inclusion and exclusion criteria for the search. We initially identified 1203 articles (see Figure 1), 1086 in 2022 and an additional 117 in 2023. A total of 85 articles were removed as duplicates. We focus on literature published after 1990, as this marks the first use of the term empowerment in an employment setting by Thomas and Velthouse (1990), which can be adapted to the academic context according to Frymier et al. (1996). 67 articles were excluded for this reason. 910 articles were excluded during the abstract screening because they lacked a description of the intervention or were considered unsuitable for a one-on-one advising session. Of the 91 articles that underwent the full screening, 18 were excluded for lack of open access, and 27 were not peer-reviewed. At this point, another 31 articles were excluded because they lacked a description of the intervention or the intervention would not be applicable in a one-on-one advising setting. In most cases, this was because the intervention was exclusively suited for group-based formats (e.g., classroom-based training or peer support workshops) or distance-based rather than in-person advising. This resulted in 15 articles included in the review.

Framework Stage 4 & 5: Charting the data; Collating, summarizing and reporting the results

An Excel spreadsheet was used to systematically organize and extract relevant information (Appendix 3), following Pawson's (2002) *narrative review* approach. This approach is particularly useful for synthesizing diverse sources of evidence by emphasizing how findings are interpreted within their broader context. It enables a structured yet flexible method of reviewing literature, allowing for thematic analysis of key elements across studies. The charted data included essential study characteristics such as aim, target group, publication source, research approach, relevant results, and measurement tools. The results are presented in the following section, beginning with an analysis of the alignment between intervention aims and outcomes, followed by a descriptive summary of key study features.
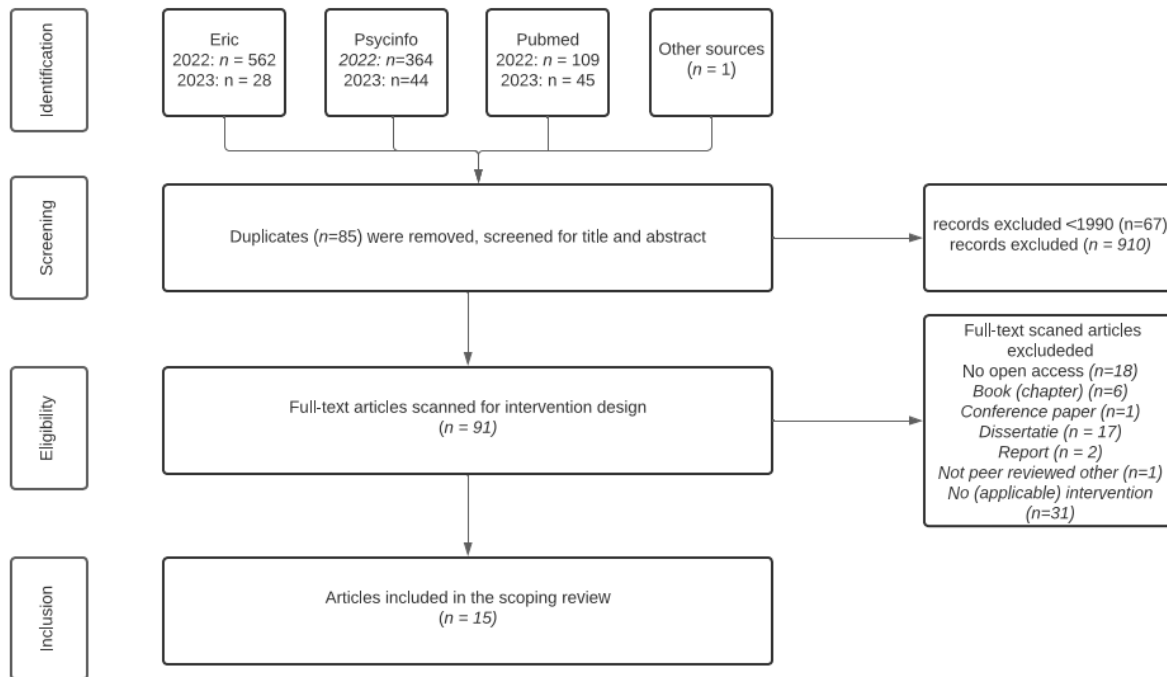
Figure 1 – Study Selection Flowchart

Results

This scoping review aimed to identify and provide an overview of key features of available empowerment interventions that could be implemented in one-on-one sessions with students and identify potential tools for measuring the effectiveness of empowerment-increasing interventions. The review included 15 articles from diverse backgrounds, including the United States, Australia, the United Kingdom, China and South-East Asia. The interventions targeted a wide range of groups, from high school students to employees (as presented in Appendix 3). Although the included interventions differed in structure and format, there were many shared features.

Objectives

A close analysis of the included articles led to four distinct classifications of sub-objectives that contributed to achieving empowerment. We identified studies focusing explicitly and implicitly on 1) increasing resilience (n=10), 2) increasing self-efficacy (n=10), 3) increasing self-regulation (n=11), and 4) increasing personal health management (n=10).

Figure 2 provides an overview of the included articles and underlying objectives the described intervention attempted to achieve among the participants. A small fraction (n=3) of the articles focused exclusively on one objective, either self-regulation or self-efficacy. Some

interventions made an intentional link between two or more objectives. The majority (n=10)
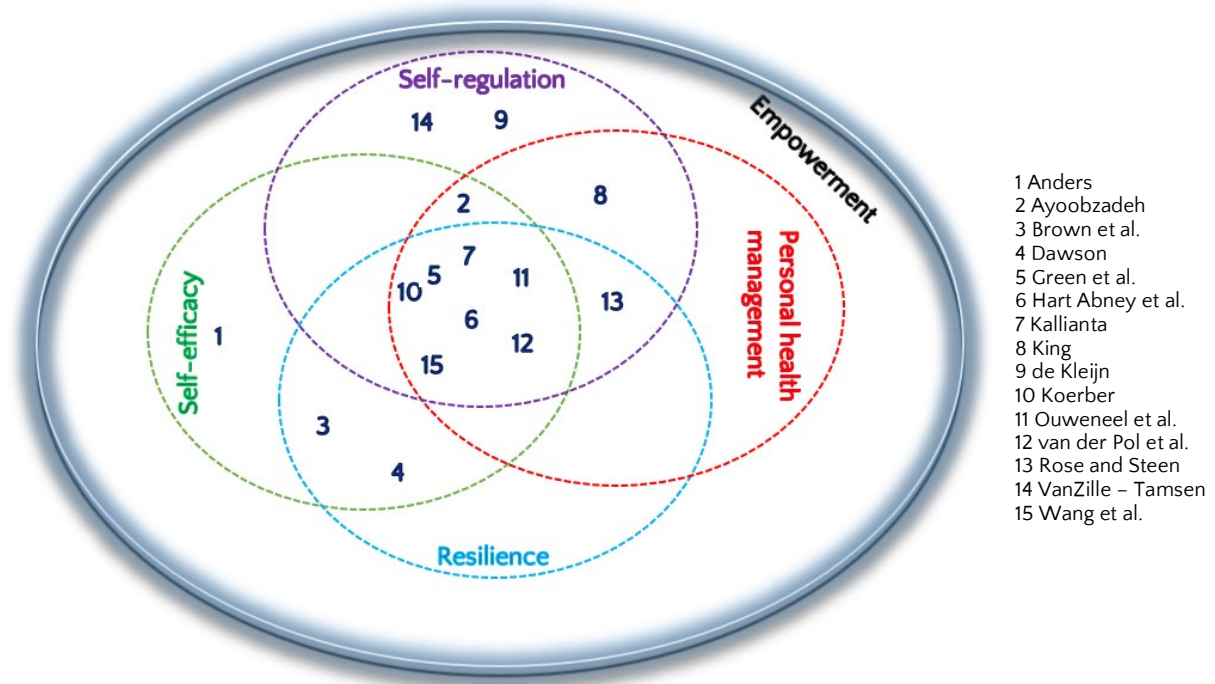

Figure 2 – Overview of included studies in an empowerment framework

focused on more than one objective—six of those addressed all four components, while three articles targeted a combination of two or three objectives. Self-regulation was mentioned as a significant objective in nearly all (11 out of 15) articles.

Figure 2 positions these fifteen interventions within a framework that breaks down student empowerment into four sub-competencies. It illustrates how the interventions aimed to enhance these competencies and highlights the holistic approach adopted by some.

Features

Besides partly overlapping objectives, the data analysis also showed that the included interventions had important features in common concerning 'duration and frequency of the intervention', 'individuality of the approach', 'homework', and 'psychoeducation'.

Duration and frequency

The interventions varied in number, ranging from four to 10 sessions, with most comprising six to eight sessions. The duration of sessions also varied from half-hour to three-hour sessions. The selection of the number of sessions may have been guided by the intervention's goals, the complexity of the empowerment objectives, and feasibility constraints. Shorter programmes

have focused on specific, well-defined objectives, while longer ones were used for multiple objectives related to empowerment.

While the exact frequency of sessions was not always explicitly stated, it can be inferred that interventions were likely conducted weekly or bi-weekly, given the typical duration of empowerment programmes. Regular weekly sessions are a common practice in skill-building and personal development programmes, as they help maintain consistency and provide a structured learning approach

Generic or tailored made

Interventions were tailored in terms of content and workload to cater to the needs of the participants. In some interventions, individuals were granted the freedom to handpick topics of personal interest (Ayoobzadeh, 2019). In other interventions, the topics did not only directly relate to academic concerns but also personal issues (Dawson & Shand, 2019; Green et al., 2007; Hart Abney et al., 2019). Training targeting resilience stood out for its inherent adaptability to the needs of each participant.

Incorporating flexibility in workload not only facilitated the customisation of content but also enabled a closer alignment with the individualised needs and objectives of the trainees. Furthermore, the degree of self-regulation demonstrated by participants emerged as a pivotal factor in gauging the intervention's effectiveness (Anders, 2018; de Kleijn, 2021; VanZile-Tamsen, 2002). Participants exhibiting higher levels of self-regulation typically derived more substantial benefits from the programmes, underscoring the crucial role that a participant's engagement played in determining the success of the intervention.

Homework

Almost half of the interventions (n=7) included some assignment(s) to be completed independently. These homework assignments included journaling (Wang et al., 2017), separate assignments (Ouweneel et al., 2013) or even exercises (Dawson & Shand, 2019). Homework served as a means to reinforce concepts introduced during physical sessions and the practical application of newly acquired skills (Anders, 2018). This approach concurs with Ayoobzadeh's (2019) perspective, which emphasises the paramount importance of mastery and skill development in fostering an individual's self-efficacy.

Psychoeducation

For one-third of the interventions, creating awareness of the problem, its causes, and negative consequences was essential. This was, for example, done by Kallianta et al. (2021) through incorporating psychoeducation, such as providing information via lectures about stress and its negative consequences.

Effectiveness of One-on-One Empowerment Interventions

While the reviewed interventions shared common characteristics, their effectiveness varied based on design, duration, and participant engagement levels. The included studies used qualitative and quantitative assessments to measure intervention success, ranging from self-reported improvements in student well-being to validated psychological and behavioural scales.

Among the most impactful interventions were those that incorporated:

> *Structured mentoring and coaching*: Studies such as Dawson & Shand (2019) found that structured mentorship significantly increased student self-efficacy, with participants reporting higher confidence levels in academic and professional decision-making.

> *Reflective journaling and self-assessment*: Interventions such as Wang et al. (2017), which incorporated personal narrative-building, showed long-term benefits in fostering mindful agency and self-determination.

> *Psychoeducation & cognitive reframing techniques*: Studies like Hart Abney et al. (2019) reported a marked reduction in anxiety and depression levels after incorporating structured psychoeducational components into one-on-one interventions.

In contrast, interventions that lacked self-directed reflection or were implemented too briefly (less than four sessions) tended to show weaker long-term outcomes. Notably, none of the studies assessed sustained behavioural changes beyond six months, indicating a need for more longitudinal research.

These findings suggest that effective one-on-one advising interventions should prioritize active student engagement, goal-setting mechanisms, and iterative reflection practices over a long period of time.

Measuring Instruments

The articles describe various measurement tools used to assess the impact of the intervention. These tools encompass interviews, focus groups, and validated self-evaluation questionnaires. Most studies relied primarily on tailored self-evaluation questionnaires administered before and after the intervention, and in some cases, multiple instruments were utilised. Some tools were developed explicitly for the particular intervention, while most were adapted from existing validated questionnaires on the underlying empowerment competencies (Appendix 3). Including these measurement tools, particularly the questionnaires, aims to create awareness and encourage practitioners to adopt a robust evaluation protocol from the outset.

Discussion

Student advisers play an essential role in supporting students with various (academic) problems. Such problems may lead to study delays, reduced feelings of empowerment or low levels of well-being. Literature suggests that sustainable support can be given by strengthening specific competencies (Baars, 2021). Interventions by student advisers that target increasing (a combination of) these competencies are expected to result in a higher sense of empowerment among these students. In this scoping review, we aimed to identify interventions that would be suitable for the one-on-one setting of the student adviser.

Each intervention centred on enhancing one or more core competencies: self-efficacy, self-regulation, resilience, and personal health management. It is important to note that these four competencies are intricately interconnected, collectively fostering individuals' profound sense of empowerment. In light of this interdependence, a comprehensive intervention strategy that concurrently targets a blend of these underlying competencies is expected to yield more substantial outcomes in terms of empowerment. These competencies are not isolated or independent entities; they operate synergistically, mutually reinforcing and supporting one another. By integrating them in one coherent intervention, the student adviser acknowledges and capitalises on the inherent interrelatedness of these competencies. This multi-objective approach was employed in most of the reviewed articles, with a significant emphasis on integrating self-regulation. It suggests a recognition among researchers and practitioners of the interconnectedness of these empowerment components, where enhancing one dimension can potentially lead to improvements in others. This interplay underscores the holistic nature of empowerment.

The studies included in this research highlight several overarching characteristics of successful interventions. One of these characteristics includes the appropriate timing and personalisation. Ideally, we aim to equip students with the competencies necessary to become empowered individuals before they face challenges, which we refer to as proactive advising. However, it is crucial to acknowledge that students' readiness to change is a critical factor in enabling them to modify their behaviour (Holt et al., 2010). Behaviour change or addressing ineffective patterns is more likely to be successful when driven by an intrinsic motivation for change. Often, individuals may not be aware of the competencies they lack until the absence of these competencies leads to problems, complicating the concept of proactive advising. Therefore, while generic training aimed at developing competencies has its merits, scaffolding the learning process for a student when they are ready to take a step increases the likelihood of success. This is why it is important to have support structures that facilitate student-initiated meetings instead of, or beside, adviser-led learning activities. In addition to timing, several interventions offered participants choices by including adaptable elements. This flexibility enabled the interventions to better align with participants' needs and preferences, likely contributing to their overall effectiveness.

Literature on self-directed learning suggests that when individuals feel a sense of autonomy, competence, and relatedness in their learning pursuits, they are more likely to be motivated intrinsically. This intrinsic motivation can lead to more effective and sustained learning as it is driven by personal interest and satisfaction (Ryan & Deci, 2000).

Furthermore, it is important to realise that any change in behaviour takes time to embed. Old behaviours must be unlearned, and time must be granted to practice new behaviours in a real-world setting. The mapped intervention provided ample opportunities for students to practice their newly acquired skills through homework, deep reflection, and sparring with a staff member or peer about their learning process. This approach is essential to achieve meaningful and lasting behaviour change.

In addition to analysing the interventions, we also focused on the assessment tools employed to measure their effectiveness. Notably, our study identified a range of assessment instruments, including validated and custom-made tools, suitable for this purpose. All the interventions examined in the studies predominantly focused on assessing participants' immediate feedback and satisfaction with the training or evaluating their knowledge and skill acquisition either during or immediately after the intervention. Remarkably, none of the studies attempted to measure longer-term changes in participants' behaviour or the intervention's broader impact on the organisation. Although evaluations at these higher levels may demand additional resources and effort, they represent a critical route for assessing the effectiveness of competency-enhancing interventions (Kirkpatrick & Kirkpatrick, 2006).

Given the importance of measuring impact, it may be valuable to consider alternative assessment outcomes beyond immediate feedback and knowledge acquisition. The broader impact of these interventions on student engagement, experience, and learning can be better understood by including more comprehensive assessment methodologies. Research has explored such measurement approaches in various educational settings (Coulson, 2023; Coulson, Loddick & Rice, 2021; Loddick & Coulson, 2020). These studies provide insight into potential frameworks for assessing long-term behavioural change and the organisational benefits of learning development interventions. Incorporating such methodologies into student advising interventions could provide a more robust evaluation of their effectiveness and lasting impact.

While not all articles explicitly detailed the use of measurement tools, we strongly recommend their incorporation as essential components of implementing and evaluating interventions. In practice, most student advisers rely primarily on personal experience or intuition rather than on research during student advising sessions. This practice is pivotal in enriching the still-developing body of research-based advising practices applicable to competency-enhancement interventions.

Limitations and future research directions

The review process led us to understand that the concept of empowerment is multifaceted and often ambiguous. This posed a challenge in identifying effective interventions. The goal of this study is not to fully unravel the complex interactions of empowerment, resilience, agency, self-efficacy, and related concepts but rather to offer a practical framework based on competencies that can assist student advisers, mentors, counsellors, and faculty members in their one-on-one sessions with students.

It is important to acknowledge that although numerous interventions are designed to promote empowerment, they often focus on different aspects of the concept. To address this issue, we have identified a set of terms representing crucial components of empowerment. To ensure a minimum standard of intervention quality, we have exclusively focused on peer-reviewed articles. While there might be other exciting interventions described in grey literature or non-open access, they are therefore omitted.

During this research, we focused explicitly on a non-clinical learner population. This meant that all settings that included patients, (post-) addiction studies and clients in a (para)medical setting were excluded. While some advising and mentoring literature suggests using motivational interviewing or solution-focused conversation techniques, none of these studies have taken place in a non-clinical setting.

Beyond these methodological limitations, the applicability of the reviewed interventions in institutional settings remains a critical challenge. While this study provides a starting point for student advisers by outlining key competencies, potential interventions, and evaluation tools, translating these insights into practice requires further investigation. Factors such as institutional support structures, available resources, and student demographics significantly influence the feasibility of implementation. Additionally, interventions that prove effective in one context may require adaptation to fit the unique needs of different institutions and student populations. Future research should explore how these interventions can be tailored to diverse educational settings and identify the conditions for successful implementation.

We advocate for further research into the long-term impacts of these empowerment-oriented interventions, preferably conducted with larger student cohorts. Additionally, we urge practitioners to integrate the systematic assessment of intervention effectiveness in their practices. In these challenging times for students, the need for evidence-based student guidance and support cannot be overstated. However, many student advisers still rely primarily on personal experience and intuition rather than research-driven approaches. To enhance the effectiveness of student advising, we call for a stronger evidence-based foundation, where interventions are implemented and rigorously evaluated and refined based on empirical findings.

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About the Author/s

Iris Burks is the Programme Manager for Student Guidance at Maastricht University. With over a decade of experience coordinating student guidance programmes within Liberal Arts and Sciences, she has developed expertise in designing these programmes and has found joy in experiential coaching. In her current role, she fosters collaboration within the guidance community to develop future-oriented initiatives. Iris is committed to creating inclusive, challenging, and meaningful learning experiences.

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Appendix 1: Key search terms - ERIC database

Search Plan		ERIC
Date		10-4-2023
1	**TI** (employee OR worker) OR **AB** (employee OR worker)	48 721
2	**TI** (Undergraduate OR "Higher education" OR Graduates OR Graduate OR academic OR university OR "middle school" OR "high school" OR "vocational education" or "higher vocational" OR "intermediate vocational" OR college) OR **AB** (Undergraduate OR "Higher education" OR Graduates OR Graduate OR academic OR university OR "middle school" OR "high school" OR "vocational education" or "higher vocational" OR "intermediate vocational" OR college)	635 029
3	**TI** (student* OR learner*) OR **AB** (student* OR learner*)	817 071
4	2 AND 3	407 130
5	1 OR 4	447 620
6	TI (SU(empower*) OR SU(resilience) OR SU("self-authorship") OR SU("self-regulation") OR SU("self-efficacy") OR SU(agency)) OR AB (SU(empower*) OR SU(resilience) OR SU("self-authorship") OR SU("self-regulation") OR SU("self-efficacy") OR SU(agency))	52 154
7	TI (program* OR intervention* OR session* OR workshop OR training) OR AB (program* OR intervention* OR session* OR workshop OR training)	623 620
8	6 AND 7	23 839
9	TI ("person centered" OR individual OR individuali#ed OR personal OR personalized) OR AB ("person centered" OR individual OR individuali#ed OR personal OR personalized)	260 752
10	8 AND 9	5 056
11	10 AND 5	1 667
12	TI ("Academic support services" OR Tutoring OR counsel#ing OR advisor or adviser OR mentor OR mentoring OR coaching OR coach OR tutor OR tutoring OR mentorship OR support OR "HR management") OR AB ("Academic support services" OR Tutoring OR counsel#ing OR counseling OR advisor or adviser OR mentor OR mentoring OR coaching OR coach OR tutor OR tutoring OR mentorship OR support OR "HR management")	277 938
13	10 AND 5 AND 12	638
14	S13 NOT TI ((patient OR patients OR clinical OR clients OR clients)) NOT AB ((patient OR patients OR clinical OR clients OR clients))	605

Appendix 2: Inclusion and exclusion criteria

Criterion	Inclusion	Exclusion
Time period	1990 – Present	Articles before 1990
Language	English and Dutch	Other languages
Types of Articles	Systematic reviews, scoping reviews, original research, replication studies	Non-peer review, no open access
Ethics Clearance	Studies with approved ethics notification	Studies without approved notification
(Study focus)	Employers in work settings. Students in (higher) education settings. Participants in empowerment intervention or empowerment measurement settings, coaching studies, and one-on-one settings.	Participants not in an empowerment intervention setting
Literature focus	Articles focused on interventions and/or measurement tools related to empowerment	Opinion pieces
Grey literature		Excluded
Population and Sample	Employees, middle and higher students, participants	Patients, primary school
Empowerment Interventions	Interventions, workshops, programmes, sessions, and/or training with the concept based on empowerment, self-authorship, resilience, autonomy, agency, self-efficacy, and/or self-regulation.	When it is not focused on one of the aforementioned empowerment and related terms and/or when the articles do not describe an intervention, workshop, program, session, or training.
	Additionally, interventions that can be used by all academic staff (i.e. teacher, student advisers, student advisers, mentors)	Interventions that can only be used by certified psychologists.
Place and time Intervention	Interventions should be able to take place during 1-on-1 session(s) with the student adviser. Interventions that would take multiple sessions will be included. Additionally, interventions that require homework and blended interventions are also included.	Interventions that can only take place in group session(s).
Measurement instruments	Instruments that measure empowerment or related term competencies	Instruments that can only be used by a specialist.

Appendix 3 – An overview of the included studies

No.	Article	Title	Year	Research context	Aim	Target Group	Quantitative Qualitative	Relevant results	Measuring instruments
1	Anders	Networked learning with professionals boosts students' self-efficacy for social networking and professional development	2018	North America	Developing students' self-efficacy for social networking and professional development	(Business) undergraduate students	Quantitative	The intervention led to an increase in self-efficacy, behavioural intentions, lifelong learning, and professional development.	Self-efficacy and behavioural items; Focus group interviews
2	Ayoobzadeh	The impact of frequency of contact on protégé mentoring outcomes: the moderating effects of protégé general self-efficacy and face-to-face interaction	2019	Asia	Increasing self-efficacy for career decision-making	Undergraduate students	Quantitative and Qualitative	A higher frequency of contact between mentors and students is associated with the development of the self-efficacy of students in regard to career decisions.	Protégé CDSE: Career Decision Self-Efficacy Short form (CDSE-SF); General Self-Efficacy Scale (GSES); Satisfaction with mentoring; Frequency of contact; Face-to-face intervention
3	Brown et al.	Can stoic training develop medical student empathy and resilience? A mixed-methods study	2022	Europe	Researching whether an online training package based on Stoic philosophy would increase students' resilience and empathy initially and longitudinally	Third-year medical students	Quantitative and qualitative	The intervention led to an increase in resilience.	Stoic attitudes and behaviours Scale (SABS); Brief Resilience Scale (BRS); Jefferson Scale of Empathy (JSE)

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No.	Article	Title	Year	Research context	Aim	Target Group	Quantitative Qualitative	Relevant results	Measuring instruments
4	Dawson	Impact of support for preservice teachers placed in disadvantaged schools	2019	Oceania	Increasing self-efficacy via a one-on-one subject specialist mentor and targeted workshop program	Employees (teachers)	Quantitative & qualitative	The intervention led to a similar self-efficacy for participants in a more difficult situation compared to participants who are in a less difficult situation	Self-efficacy survey; Questionnaire with Open-ended questions
5	Green et al.	Evidence-based life coaching for senior high school students: building hardiness and hope	2007	Oceania	Increasing cognitive hardiness, hope, and decrease in depression, anxiety and stress	Senior high school students	Quantitative	The intervention increased hope and cognitive hardiness (linked to resilience) and decreased depression.	Trait Hope Scale; Cognitive Hardiness Scale; Depression anxiety and stress scale;
6	Hart Abney et al.	Decreasing Depression and Anxiety in College Youth Using the Creating Opportunities for Personal Empowerment Program (COPE)	2019	North America	Examining the effectiveness of the COPE intervention on depression and anxiety levels.	Students	Quantitative and Qualitative	The intervention reduced feelings of depression and anxiety.	Back Depression Inventory-II; State-Trait Anxiety Inventory; COPE evaluation form

No.	Article	Title	Year	Research context	Aim	Target Group	Quantitative Qualitative	Relevant results	Measuring instruments
7	Kallianta et al.	Stress management intervention to enhance adolescent resilience: a randomized controlled trial	2021	Europe	Enhancing resilience and coping techniques and decreasing stress in adolescent students	Teenager 11–18	Quantitative	The intervention increased resilience and reduced stress and anxiety.	Adolescent Stress Questionnaire; Spence Children's Anxiety Scale' Child and Youth Resilience Measure; Self-report about school performance; Assessment of frequency use of social media; Cognitive skills assessment (symbol digit modalities, California verbal learning); Brief visuospatial memory test–revised
8	King		2018	Europe	Researching the effectiveness of one-minute papers in building partnerships between teachers and students to enhance learning	Students	Quantitative and qualitative	The intervention increased feelings of empowerment towards learning.	Questionnaire that reflected my view of teaching". Diary
10	de Kleijn		2021	Europe	Helping students and teachers with feedback literacy and their interplay	Students (and teachers)	Descriptive	Not applicable	None

No.	Article	Title	Year	Research context	Aim	Target Group	Quantitative Qualitative	Relevant results	Measuring instruments
11	Koerber et al.	Building resilience in the workforce	2018	North America	Building on someone's personal resources (i.e. resilience) to be able to manage stress	Employees	Descriptive	Not applicable	None
12	Ouweneel et al.	Do-it-yourself: an online positive psychology intervention to promote emotions, self-efficacy, and engagement at work	2013	Europe	Focussing on the employee so they can flourish and thrive at work by focusing on what they can do to achieve this	Employees	Quantitative	The intervention improved self-efficacy, positive emotions, and work engagement in those with low initial work engagement.	Job-related affective well-being scale; Utrecht work engagement scale
13	van der Pol et al.	Personal-professional Development Program Fosters Resilience During COVID-Pandemic	2022	Europe	Strengthening the well-being and support of the whole student via an evidence-informed longitudinal program on personal professional development (LPPD), which is integrated in the curriculum.	Students	Descriptive	The program enhanced personal and professional development and well-being for students, particularly during challenging times that require resilience.	None

No.	Article	Title	Year	Research context	Aim	Target Group	Quantitative Qualitative	Relevant results	Measuring instruments
14	Rose and Steen	The achieving success everyday group counselling model: Fostering resiliency in middle school students.	2014	North America	Increasing the grades of the students and enhancing their personal social development by improving their capacity to exhibit personal and educational resilience	Teenagers (11+)	Quantitative and qualitative	For several students, the intervention increased personal social functioning.	none
15	VanZille – Tamsen	Assessing and Promoting Self-regulated Strategy Use	2022	North America	Designing academic counselling interventions that are tailored towards the needs of each student	Students	Descriptive	Not applicable	None
16	Wang et al.	Awareness and Awakening: A narrative-oriented inquiry of undergraduate students' development of mindful agency in China	2017	Asia	Developing mindful agency as a positive learning disposition	Undergraduate students	Quantitative	Students viewed coaching as supportive, leading to increased self-identity, reflection, mindfulness, and self-determination.	Diary