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IN DEPTH ARTICLE: SYSTEMATIC AND OTHER REVIEWS

Standardized Patients in Clinical Psychology and Psychotherapy: a Scoping Review of Barriers and Facilitators for Implementation

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Abstract

Objectives The use of simulated and standardized patients (SP) is widely accepted in the medical field and, from there, is beginning to disseminate into clinical psychology and psychotherapy. The purpose of this study was therefore to systematically review barriers and facilitators that should be considered in the implementation of SP interventions specific to clinical psychology and psychotherapy.

Methods Following current guidelines, a scoping review was conducted. The literature search focused on the MEDLINE, PsycINFO and Web of Science databases, including Dissertation Abstracts International. After screening for titles and abstracts, full texts were screened independently and in duplicate according to our inclusion criteria. For data extraction, a pre-defined form was piloted and used. Units of meaning with respect to barriers and facilitators were extracted and categorized inductively using content-analysis techniques. From the results, a matrix of interconnections and a network graph were compiled.

Results The 41 included publications were mainly in the fields of psychiatry and mental health nursing, as well as in training and education. The detailed category system contrasts four supercategories, i.e., which organizational and economic aspects to consider, which persons to include as eligible SPs, how to develop adequate scenarios, and how to authentically and consistently portray mental health patients.

Conclusions Publications focused especially on the interrelation between authenticity and consistency of portrayals, on how to evoke empathy in learners, and on economic and training aspects. A variety of recommendations for implementing SP programs, from planning to training, monitoring, and debriefing, is provided, for example, ethical screening of and ongoing support for SPs.

Keywords Standardized patients · Simulated patients · Systematic review · Psychotherapy research

Since the original use of simulated patients in the 1960s, their application has expanded progressively in medical education, training, and research [1]. Simulated patients may present symptoms repeatedly and in a standardized manner, which is why they have become an important part of assessing clinical skills. They are well established in teaching interviewing and communication skills and in the education of difficult medical encounters such as ethical dilemmas or the disclosure of a palliative prognosis. Hence, they have also become popular and common in psychiatric education and clinical examinations, but in the context of psychotherapy training and research, they are still regarded with skepticism [2].

Although a wide array of terms exists, from programmed and prepared to trained patients, the concepts of simulated and of standardized patients have prevailed [3]. Simulated patients are trained laypersons role-playing a patient, whereas standardized patients additionally provide learners with consistent, unvarying responses during the interaction [3–5]. There is some disagreement as to whether or not simulated or standardized patients (SPs) should refer to their own illnesses, and there is also disagreement about whether SPs should be used only in learning or also in testing encounters [3–5]. In contrast to role-plays, which are mostly improvised interactions, SPs receive coaching and preparation [5]. SPs facilitate experiential learning and modeling, where skills practice and feedback are supported in the context of a social learning background [6]. SPs possess a number of advantages, including availability, repeatability, and the possibility to exercise newly developed skills [5]. Nevertheless, SPs are associated with high costs and training efforts and with problems in providing a

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convincing portrayal of symptoms [5, 7]. Yet SP programs have disseminated widely through the medical field due to their many advantages [3, 7].

From a theoretical point of view, Miller [7] presented a much-cited framework for the assessment of clinical skills considering four successive levels: knowledge (knows), competence (knows how), performance (shows how), and action (does). The framework was adapted by Muse and McManus [8] for psychotherapy research, underscoring the importance of the practical application of knowledge within the competence level, i.e., whether a therapist can really demonstrate a specific skill. Thus, the upper two levels are particularly important, since they include the therapist's behavior in training situations or in routine care. Since real patient interactions are associated with practical, ethical, and testing difficulties, one possible method for the assessment of therapeutic skills is to refer to the "performance" level and to use SPs [7, 8]. SPs facilitate predictable and controlled training sessions as well as safe learning environments [4]. Mistreatment of real patients may be reduced, as learners can develop their skills gradually, using them with real patients later on [5].

However, compared with the medical field, SPs are underutilized within health education in general and empirical evidence on their effectiveness is comparably scarce [6]. This is especially true for clinical psychology, psychotherapy training, and the associated research. Initial randomized studies applied SPs for assessment purposes in psychotherapy research (e.g., [9, 10]). Nonetheless, with regard to the implementation of an SP program in clinical psychology or psychotherapy training and education, little synthesized evidence is available on specific barriers and facilitators.

Therefore, the aim of the current study was to systematically review which specific barriers and facilitators to consider in the use of SPs in clinical psychology and psychotherapy research, training, and education. In order to enable the transfer of experience from medicine and nursing to psychology-related disciplines, recommendations will be given based on the review results.

Methods

This study used a scoping review methodology. Through scoping reviews, evidence is synthesized exploratively and economically, revealing central concepts, the current evidence, and relevant research gaps [11, 12]. Unlike systematic reviews, efficacy is not the main focus of scoping reviews, but rather comprehensively revealing the current evidence. Although the literature search focuses on central steps, the processes of data search, extraction, and synthesis are conducted systematically [13]. We used our experience gathered during another current scoping review [14]; the findings are reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement [15].

In accordance with our research question, publications referring to standardized and simulated patients and to face-to-face interactions were included. Other populations, such as real patients or role play partners as well as telephone or other remote contacts were excluded. In order to reduce complexity and heterogeneity, we focused on adults. Further, we included studies in the fields of clinical psychology, psychotherapy, psychiatry, psychosomatics, or mental health that reported barriers or facilitators for SP implementation. In accordance with Dogherty and Estabrooks [16], we understood barriers as factors that may have a negative effect on implementation and facilitators as factors that may have a positive effect on implementation, whereas the same factor may be regarded as both a barrier and a facilitator. Thus, the study did not focus on the impact of SPs (e.g., student's learning experiences or the emotional impact of the scenarios on SPs). The languages in which the authors were proficient (i.e., English, German, Turkish) could be considered. There were no restrictions in terms of document type (e.g., empirical study, review, or commentary) and year of publication.

The electronic database search was conducted in April 2017 and comprised MEDLINE (Web of Science™), PsycINFO (EBSCOhost), and Web of Science (Core Collection, Web of Science™). Via PsycINFO, Dissertation Abstracts International (Sections A and B) were covered as well.

Keywords used for the database search included an SP component ("standard* patient", "simulated patient*") combined with a mental health component (psych*, psychiatr*, psycholog*, psychotherap*, "mental health") in titles, abstracts, or keywords. Keywords were adapted to the particular database. After one reviewer (MO) screened all publications for titles and abstracts, full texts were screened independently by two reviewers for possible inclusion (FK, MO), considering recommendations in the Cochrane Handbook for Systematic Reviews of Interventions [17]. Discrepancies were resolved by discussion within the review group, and the reasons for exclusion were documented. If full texts were not available from various sources (e.g., research networks, inter-library loans), a copy was requested from the corresponding author, which was not successful for just one publication. For data extraction, a pre-defined form was developed and independently piloted by three reviewers (FK, DA, MO) with respect to five studies. Afterwards, it was adapted, so as to enhance comprehensibility for the reviewers.

We extracted units of meaning on barriers and facilitators from the included publications regardless of the part of the publication in which they were mentioned. Since we included heterogeneous publications ranging from commentaries to empirical studies, we decided to focus on extracting as many units of meaning as possible. We then categorized the

extracted units of meaning inductively using content-analysis techniques [11,18]. On that basis, the reviewers again discussed categories based on the first five studies in order to provide a common understanding of each category. One unit of meaning was classified within the most appropriate category but not repeatedly. During categorization (by FK DA or MO), the category system was modified in an iterative process inductively refined and the units of meaning were reduced to bulleted items. We proceeded until saturation throughout this analysis which implies that no new categories emerged by incorporating further units of meaning. After reconciliation between reviewers and the refinement of some category labels, the comprehensive category system now summarizes topics and contrasts key barriers and facilitators for implementation. It is available from the corresponding author upon request. As one example Pheister and colleagues [4] describe that the "primary considerations when using simulation are the development of a scenario and the cost" (p. 116) which was extracted as the unit of meaning "Due to setting up a scenario" under the category "SP programs are cost-intensive." Table 1 shows the respective super- and subcategories.

From the results, we aimed to derive SP implementation recommendations for trainers and researchers in mental health care. We therefore compiled a matrix of interconnections between facilitator categories which is also available from the corresponding author upon request. As with an intercorrelation matrix, we noted each category in a line and in a row. Two authors (FK, DA) then went through the detailed category system in order to find items that addressed interconnections between categories. Whenever an interconnection occurred, this was registered in the matrix and counted as one, regardless of the number of units of meaning that were interconnected within a certain category. Disagreements were discussed and resolved; all interconnections were added; lines and rows without interconnections were deleted; and a network graph of interconnections was compiled (see Fig. 2).

Results

From 1081 records identified through the electronic database search, 803 were screened for titles and abstracts after duplicates had been removed. Following full-text screening of 113 publications, 41 were included in the current review (see Fig. 1; [1, 2, 4, 6, 18–23, 25–37, 40–57]). Publications were mainly excluded if they did not report barriers or facilitators for the implementation of SP programs or did not refer to psychology-related subjects.

The included studies were published between 1994 and 2017, mostly in North America ($n = 17$ USA, $n = 4$ Canada) or Europe ($n = 7$ Germany, $n = 3$ UK, $n = 1$ Netherlands). Regarding the type of publication, 19 were classified as overviews (i.e., narrative review, commentary, debate article, or letter to the editor), whereas didactic models (e.g., [19]), one's own implementation experiences (e.g., [4, 20]) or individual opinions (e.g., [21, 22]) formed the focus. Another 18 publications were cross-sectional studies, using mainly questionnaire or qualitative methodology. The authors' professional backgrounds were mostly in psychiatry ($n = 20$) or mental health nursing ($n = 12$). The vast majority of publications referred to undergraduate or postgraduate training and only one publication each considered SP programs in education and routine care [23], in research [24], or in education and research [6].

The category system contrasts corresponding supercategories of barriers and facilitators, but subcategories may diverge (Table 1). Thus, the results will be presented according to the supercategories which are ordered along the implementation process, disregarding the frequencies of items within each category. In the following, we will present categories underlined by selected examples.

Supercategory 1: Organizational and Economic Aspects

Referred to as barriers in the publications, "SP programs are cost-intensive" regarding planning, recruitment, training, or compensating SPs. They "require time" for the development of scenarios or organizational tasks and "require logistical support and staff" (e.g., ancillary staff or time taken away from normal duties).

Facilitators were described regarding "economically efficient SP recruitment" (e.g., information sessions, casting interviews), "economically efficient involvement of staff" executing the SP program (e.g., student/research assistants, psychiatry trainees/residents), and "economically efficient organizational aspects" (e.g., networks or groups to support motivation or learning and to save resources, multiple use of SPs or scenarios). Referring to the "pros and cons of incentives," suggestions ranged from paying no compensation at all to providing intangible or monetary incentives. Altogether, organizational and especially economic aspects were seen as important general prerequisites that need to be clarified from the beginning to facilitate sustainability of SP programs.

Supercategory 2: SP Eligibility Criteria

Concerning "eligibility," authors discussed problems associated with faculty members being SPs (e.g., confusing clinical knowledge with role descriptions or drawing their own conclusions), but also discussed problems finding SPs with both acting skills and psychological knowledge. Recommendations as to which type of people could act as SPs varied from lay persons to students, faculty, or professional actors.

Q2 **Table 1** Category system of specific barriers and facilitators for implementation of simulated and standardized patients (SPs) in psychology or psychotherapy training

Barriers	Facilitators
1 Organizational and economic aspects	1 Organizational and economic aspects
SP programs … … are cost-intensive [1, 2, 4, 19, 23, 30, 34, 37, 47, 53, 54] … require time [1, 4, 19, 30, 41, 53] … require logistical support and staff [6, 23, 28, 30, 31, 41, 46, 54]	Economically efficient SP recruitment [28–31, 38, 47, 48, 52] Economically efficient staff involvement [4, 28, 38, 54] Economically efficient organizational aspects [1, 2, 28, 29, 37, 38, 57] Pros and cons of incentives [23, 28, 29, 51, 52, 55, 56]
2 SP eligibility criteria [4, 19, 20, 30, 41, 46, 52, 54]	2 SP eligibility criteria [1, 6, 19, 23, 27, 30, 37, 41–43, 52, 54]
3 Characteristics of scenarios	3 Characteristics of scenarios
Disadvantageous scenario [1, 4, 50, 58]	Define use for teaching or evaluation [30, 36, 37] Definition of scenario aims and piloting [6, 27, 28, 30, 43, 57] Incorporate rich details into scenarios [4, 6, 21, 23, 24, 30, 32, 36, 37, 47] Incorporate spontaneous SP reactions [19, 26, 36, 48] *Development of scenarios …* … by experts [6, 23, 28, 30, 54] … by patients [4, 20, 33] … by SPs [28, 30, 43, 46]
4 Portrayal of patient cases	4 Portrayal of patient cases
4.1 Authentic portrayal	4.1 Authentic portrayal
Specific challenges in portrayal [6, 21, 22, 37, 45–47, 51, 57, 58] Difference to real patients [35, 45] Specific interpersonal challenges [26, 36] Technical obstacles [36, 45]	SP training … [2, 4, 6, 23, 29–31, 37, 38, 43, 46, 47, 53–55, 58] Clinical expertise of staff … [19, 41] Congruence between role and SP … [24, 56] Proper conduction and evaluation … [24, 47, 56] *… facilitate(s) authenticity*
4.2 Simulation of mental disorders [1, 22, 23, 26, 27, 29, 38, 43, 46, 47, 49–52, 55]	4.2 Simulation of mental disorders [2, 27, 32, 38, 56]
4.3 Evoking empathy [2, 21, 26, 44, 47, 51, 53, 58]	4.3 Evoking empathy [46, 47]
4.4 Consistent portrayal [6, 24, 30, 34]	4.4 Consistent portrayal [6, 23, 30, 33, 36, 38, 43, 54]
4.5 Acting requirements	4.5 Acting requirements
Acting skills determine portrayal [1, 26, 45, 47] Personal characteristics determine portrayal [4, 26, 29, 52] Acting consequences on SPs [4, 46, 52] Role difficulty determines learning [1, 37] Problems staying in the role [23, 49] Problems moving out of the role [29, 46, 52]	Include SP experiences [4, 29, 32, 58] Provide SPs with support [28, 29, 46, 56] Enable regular breaks [6, 23, 27, 30, 52, 56] Check acting quality [21, 23, 47] Teach acting techniques [19, 23, 29, 31, 38, 46, 51, 57]

Whereas regarding supercategories (bold type), barriers and facilitators do correspond to each other, regarding subcategories, they do only partly. Categories are ordered content wise, not due to their importance

Supercategory 3: Characteristics of Scenarios

Only a few publications mentioned barriers in terms of "disadvantageous scenario" properties (e.g., textbook-like, unrealistic, outdated, repetitive). Far more often, facilitating aspects for sound role descriptions were described. First of all, it is important to "define their use for teaching or evaluation" (i.e., teaching and formative evaluation or summative evaluation). This then guides the "definition of scenario aims (e.g., objectives or teaching aims) and their piloting." Whereas most authors argued for scenarios that are "rich in detail," providing, for example, a clear description of symptoms, a detailed life-history, or quotations for SPs, others suggested providing distracting or little information or "incorporating spontaneous SP reactions." Proposals also differed regarding those who should "develop scenarios," ranging from experts to patients and SPs.

Supercategory 4: Portrayal of Patient Cases

Most publications mentioned barriers to and facilitators of "portraying patient cases." As a barrier, "authenticity" was of major concern. Authors highlighted "specific challenges" in realistic and authentic portrayal, for example, due to over- or underacting, possibly resulting in empathy or assessment difficulties. They acknowledged a "difference" or gap between real patients and SPs, and stressed that "specific interpersonal" aspects are difficult to simulate. "Technical obstacles" resulting from equipment or video recordings may create an artificial situation as well.

A key facilitator of authenticity can be provided by "SP training," including, for example, preparatory sessions, a manual, coaching, rehearsal, feedback, progress meetings, quality checks, or retraining. The "clinical expertise of staff"

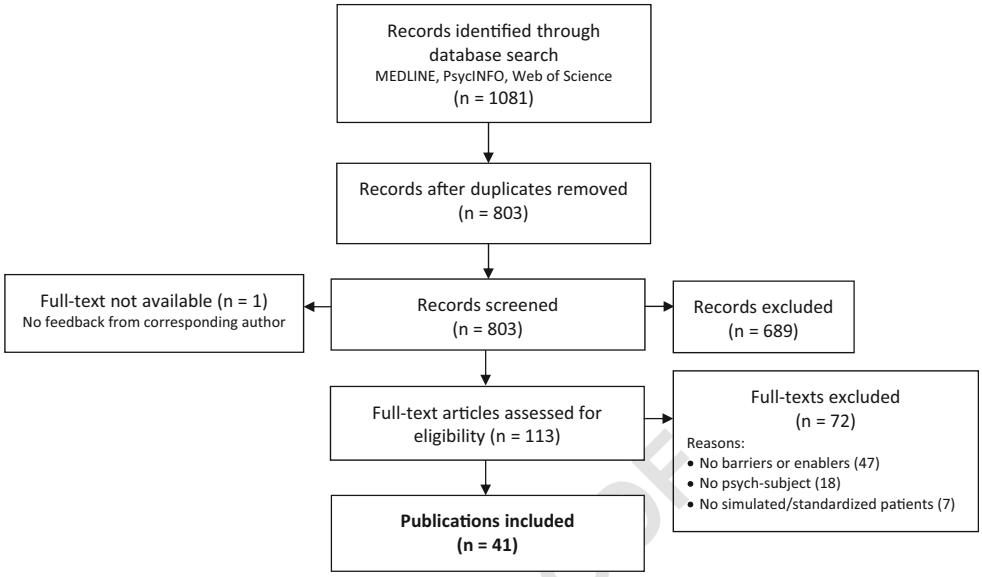

Fig. 1 Study flow diagram (according to Moher et al. 2009)

supporting the SP program and sociodemographic and language "congruence between role and SP" were also mentioned. To ensure the proper "conduction and evaluation" of SP programs, authors recommended, for example, reevaluations or the use of experienced staff.

Associated with authenticity, the "simulation of mental disorders" was described as emotionally demanding, taking much energy, and being especially difficult for certain disorders (e.g., psychoses or mania). Using faculty members, training SPs, or alternating scenarios was perceived as corresponding facilitators.

Furthermore, authors mentioned that authenticity also influences how much "empathy is evoked." Using students as SPs and providing training was perceived as a facilitator. Likewise, "consistent" and comparable portrayals were seen as a challenge to SPs, with group rehearsals, feedback, training, or regular breaks as examples of facilitators.

Lastly, "acting requirements," specifically insufficient "acting skills" or "personal characteristics" like fatigue or one's own experiences and associated problems being triggered, determine the effectiveness of portrayal. Acting may have "consequences on SPs," as certain types of portrayal might induce stress or vulnerability for SPs. According to some publications, the performances of certain SPs were too "difficult" for the learners. According to others, SPs might have had "problems staying in" or "moving out of the role." As facilitators, it may be helpful to "include experiences of SPs" in developing scenarios or choosing the type of patient to portray and to "support" them during their engagement (e.g., by practice sessions, supervision, or counseling). "Regular breaks" were described as important for recreation and authentic portrayal, in common with occasional "checking of acting quality." As facilitators for this, several "acting techniques" were described (e.g., method acting, de-roling, or debriefing techniques).

Interconnections among Facilitators

In order to derive implementation recommendations, we report the most prominent interconnections between facilitator categories. As evident from the resulting network graph (see Fig. 2), "economically efficient staff involvement" (e.g., who should make appointments, conduct training, or act as an SP), "SP training to facilitate authenticity" (e.g., purposes, forms, and means of training), and "consistent portrayal" of patient cases (e.g., ways to support consistency) were most often associated with other categories and were thus of major concern to the authors of included publications.

Discussion

In the current study, we systematically reviewed clinical psychology and psychotherapy-specific barriers and facilitators to the implementation of SP programs. We used a scoping review methodology that is characterized by feasibility issues, especially if researchers formulate relatively broad research questions or simply assume that there is a large body of literature in a certain field of study [11]. Accordingly, we focused our literature search on electronic databases and did not conduct additional forward or backward reference tracking. In this respect, the review purpose was not to include all available evidence, but to achieve content-related saturation. We conducted our search and extraction processes systematically, worked in a team of reviewers, and piloted and coordinated our procedures. Since we wanted to include all publication types, we did not specify a quality criterion for inclusion and did not assess the risk of bias, both of which are typically not central to scoping reviews [13].

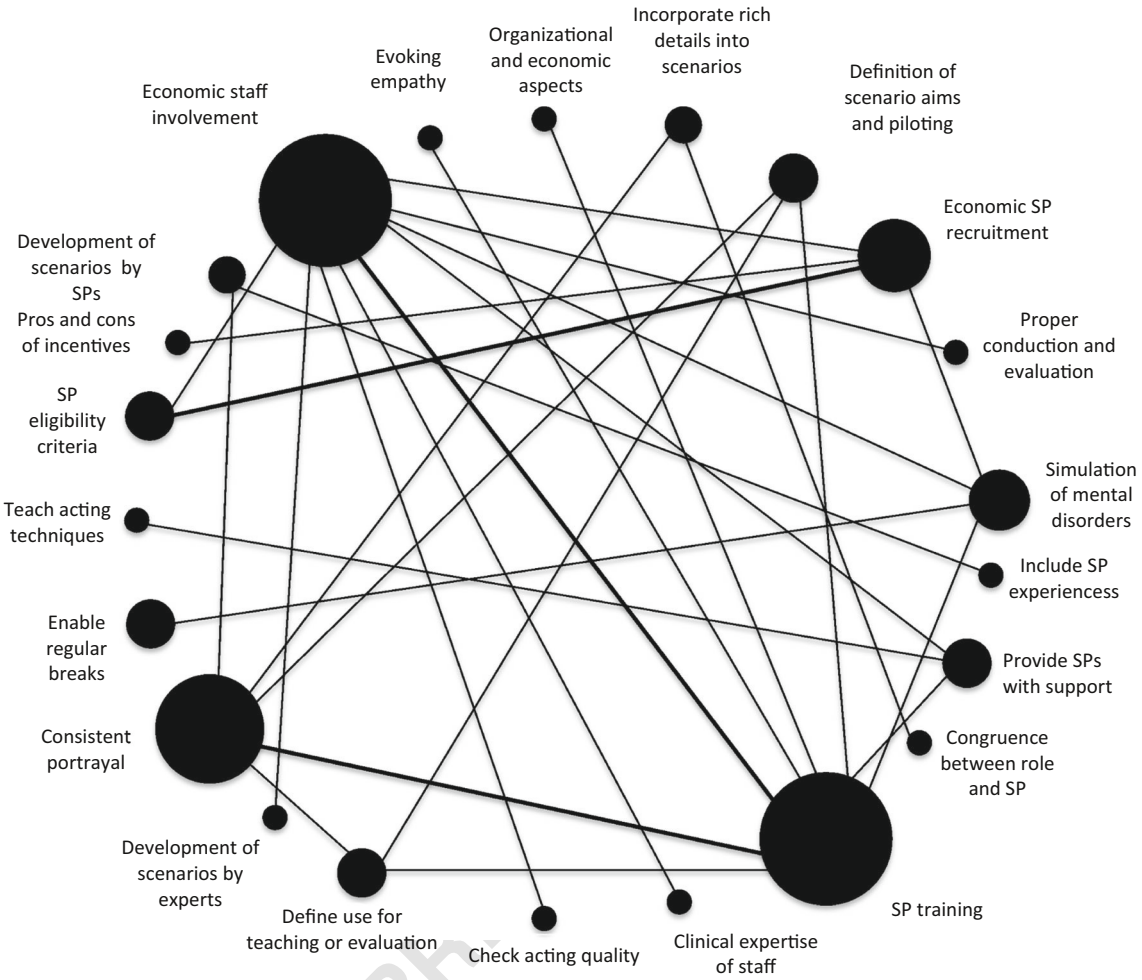

Fig. 2 Network graph of interconnections between categories not primary studies (line width represents the number (1 or 2) of interconnections between two categories, circle size represents the number of interconnections one category is part of)

One strength was our application of a mixed methods approach, using qualitative content analysis techniques, as well as quantifying and mapping interrelations between single categories. Thus, our implementation recommendations are not only given narratively, but are derived from the category system and the network graph (see Table 2 and Fig. 2). The focus of our study was not on the effects of SP interventions. Further efficacy or effectiveness reviews provided with more resources could relate qualitative to quantitative results on independent, moderating, and outcome data, for instance, by the development of a logic model [25].

A major contribution of the current review is the emergence of various barriers to implementation and concrete and helpful facilitators that may be effectively adapted to the specific context of clinical psychology or psychotherapy. First of all, the scoping review highlights the importance of the careful conceptualization of SP programs, from planning and ensuring organizational and economic resources via eligibility, recruitment, and the development of scenarios, to issues related to the portrayal of mental disorders. Certain aspects were paid special attention, which is underlined by the fact that some supercategories were divided further (i.e., organizational and economic aspects, scenarios, authenticity, and acting), whereas others were not (i.e., eligibility, simulation of mental disorders, empathy, and consistency). Likewise, interconnections occurred between specific categories, suggesting that the training of SPs is important to consistent portrayal but also depends on the economic resources provided. Insofar, successful implementation depends upon consideration of needs versus feasibility.

Authors of included publications especially debated whether the use of SPs is suitable and feasible in the context of mental health [2, 26] or under which circumstances authenticity can be accomplished [4]. They acknowledged that simulating mental disorders is energy-consuming [27], especially if the portrayal is confused with an SP's own disease-related experiences [1]. Whereas SPs may make positive use of their own life-experiences when creating or understanding the scenario [28], it also seems important to include them, for example, in choosing a particular patient they feel comfortable

Table 2 Selected implementation recommendations (SP … simulated and standardized patients)

Planning

- Define the purpose of the SP program (e.g., formative, summative, education, research)
- Ensure budget, logistics, staff
- Carefully screen SPs (e.g., on motivation, acting skills, reflective abilities, disease experiences, reliability)
- Prepare and pilot clear scenarios (e.g., with the aid of experts, patients or SPs)

Training

- Train SPs (e.g., for authenticity, consistency, standardization) as a form of quality management
- Use e.g., manuals, videos, observations of real patients, discussions, feedback
- Take care of congruence between SP and role and of clinical expertise of associated staff
- Observe SP's portrayal, if necessary retrain

Monitoring

- Note potential adverse effects of simulating mental disorders
- Review whether portrayal causes empathy and enables learning
- Make sure that SPs use breaks and get support during portrayals

Debriefing

- Teach SPs acting skills and de-roling techniques
- Install debriefing sessions, individually or in group
- Provide SPs with additional support (e.g., via coaching, supervision or feedback)

playing [4]. Authors also argue in favor of protecting those with disease-related experience from becoming overwhelmed by their emotions [29]. Altogether, (a) authentic and (b) consistent portrayals by SPs and the development of (c) empathy in the learners were characterized as indispensable and interwoven. Consequently, a variety of recommendations was given, for example, careful recruitment and training, providing coaching, rehearsals, supervision, feedback, monitoring or demonstrations, ongoing meetings, alternating scenarios, planning breaks, or installing debriefing sessions. Which specific support strategy to choose will depend substantially on the context in which the SP program is to be implemented.

This is also reflected in another debate evident in the publications reviewed. As with any intervention objective, whether an SP program is conceptualized in a training (formative) or assessment (summative) context should be explicated and clarified from the beginning [30]. The purpose determines the guidance learners receive, and the significance attributed to reliability, validity, and replicability of the portrayal [30]. Thus, some authors advocate detailed scenarios [4, 6], whereas others argue against standardization in order to enhance spontaneous interactions [19, 26]. Similarly, whether acting relies on improvisational techniques or more standardized forms will depend on the aim of the interaction [31].

Because our objective was to outline a comprehensive review of barriers and facilitators, we ignored other recurring results. One such result was that SPs should receive special training if they are to give feedback on their interaction to learners [28]. Giving feedback may be enhanced by well-formulated feedback protocols [32], by an observer participating in feedback rounds [32], or by written feedback [33]. Another recurrent result was that SP interactions induced anxiety and stress in learners [33–35] and SPs alike [4], especially if the interactions were video-taped [30, 36]. Giving detailed information [37], carefully explaining expectations, providing adequate practice sessions [30], or setting achievable goals [37] may reduce performance anxiety.

Altogether, the criticism regarding role-plays and SP interactions in clinical psychology and psychotherapy [8] is equivalent to the debate in medical subjects; as even after their first uses, SP programs have been criticized for limited authenticity and high costs [1, 7]. This is also reflected by our network graph, which highlights financial aspects, training, and consistency issues as particularly relevant. Concerning these points of criticism, we describe diverse and specific proposals. In brief, it takes thorough screening, training, monitoring, and debriefing of learners and of SPs [38]. Hence, if disseminated in psychology-related disciplines further, program developers should be aware of implementation issues from the beginning. This includes promoting sustainable learning effects beyond the actual SP encounter, for example, by reflective observations and abstract conceptualizations [39]. However, it is premature to draw conclusions on the efficacy of SP interactions compared with other teaching modalities such as role-plays in clinical psychology; so in the future, more rigorous empirical studies are warranted [40].

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Compliance with Ethical Standards

Disclosures On behalf of all authors, the corresponding author states that there are no conflicts of interest.

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