Summary

Objectives > In France, too few general practitioners (GP) follow the training about suicide prevention and risk. This study aimed at reviewing international publications regarding GPs training on suicide risk, in order to inform us about the training practices in the world and potentially discover new methodologies.

Methods > We performed bibliographic databases searches on GPs training about suicide prevention and risk, for practicing GPs, excluding studies about particular population groups, following the PRISMA statement guidelines. Training duration, educational program, content, time of assessment, tools, and information about train the trainers or kirkpatrick's level were identified for each selected study.

Results > This review revealed that there is no consensus on the training program or on the assessment tools in GP's training about suicide prevention and risk. Nevertheless, it reveals a similar framework including a theoretical part, with a fundamental knowledge content, and an interactive part.

Conclusion > If reaching standardized training practices seems difficult to achieve, standardizing assessment tools might be a relevant purpose. Indeed, using the same tools would allow proper training comparison. Practically speaking, this review inspired us in the implementation of in situ training and convincing us to undertake a French translation of an assessment scale.
Résumé

Formation des médecins généralistes à la prévention du risque suicidaire : revue de littérature

Contexte > Il est constaté qu’en France, trop peu de médecins généralistes (MG) se forment à la prévention du risque suicidaire.

Objectif > Ce travail consiste en une revue de littérature de publications internationales traitant de la formation des MG à la prévention du risque suicidaire. L’objectif est de s’informer sur les différentes pratiques de formation de par le monde afin de découvrir de nouvelles méthodes pédagogiques qui pourraient être pertinentes sur notre territoire et susciter davantage l’intérêt des MG.

Méthode > Une recherche bibliographique méticuleuse a été menée, sélectionnant toutes les études relatives à la formation des MG à la prévention du risque suicidaire dans le monde, suivant la méthode PRISMA. Les études retenues s’appliquent à des MG libéraux en exercice ayant une patientèle hétérogène, et excluent les travaux relatifs à des groupes homogènes de patients. La durée de formation, le programme éducatif, son contenu, l’évaluation de la formation, les outils pédagogiques utilisés, les méthodes de formation de formateurs mises en œuvre ainsi que le niveau d’évaluation selon Kirkpatrick des formations ont été précisés pour chaque étude sélectionnée.

Résultats > Ces travaux révèlent qu’il n’existe aucun consensus dans la réalisation de ces formations, que ce soit au niveau du programme ou de son évaluation. Néanmoins, une similarité de contenu est retrouvée avec une partie théorique cognitive et des ateliers interactifs.

Conclusion > Il semble difficilement réalisable de proposer une standardisation de ces formations de par le monde, celles-ci étant nécessairement adaptées au territoire et sa culture. Néanmoins, une standardisation des outils d’évaluation serait pertinente : cela permettrait une réelle comparaison de l’efficacité de ces formations. Par ailleurs, sur le plan pratique, cette revue nous a incité à proposer des formations in situ en réalisant une étude expérimentale comparative de deux formats pédagogiques, et à réaliser une traduction française d’une échelle d’évaluation des compétences cliniques en suicidologie, premier outil d’évaluation dans ce domaine en France.

Introduction

Suicide is a major public health issue all over the world. According to the World Health Organization (WHO), suicide stands among one of the prevalent causes of premature death worldwide, accounting for approximately 800,000 deaths annually [1]. WHO advocated for the necessity of making suicide prevention a major worldwide public health goal. Suicide rates vary from one region of the globe to the other. Developing countries being left aside, the highest suicide annual rates are encountered in Eastern Europe [2] but France also presents high rates according to the 2016 national report of the National Suicide Observatory (Observatoire National du Suicide, ONS) [3,4].

Most people committing suicide had contact with a general practitioner (GP) of the last month before death [5,6]. In France, consultation of GP in this timelapse is about 45% with 25% of them visiting their GP the week before [7]. Another study indicates that at least a suicide occurred in 92% of French GP’s clients [8]. It has been proved that suicidal thoughts are not systematically explored during consultation with a depressed patient [9]. Accordingly, different studies emphasized that suicide prevention training for primary care is an effective method of reducing suicide rates in the population [4,10].

Previous studies have demonstrated that training can improve clinicians’ attitudes and confidence [11-14]. Furthermore, a French study carried out in Maine-et-Loire department revealed that GP enquired training about suicide [8]. In France, in every region, training sessions are being organized by professors Monique Séguin and Jean-Louis Terra for the National Plan for the Prevention of Suicide (Plan National de Prévention du Suicide), called Gatekeeper training [15]. This training lasts two consecutive days. These trainings sessions are not widely followed by GPs. Among the reasons accounting for the poor success of these sessions, some reasons are worth being mentioned such as the format of the training, which is not compatible with their practices, the fee for the formation, and the fact that suicide is being considered as a rare event which is not always believed to deserve a dedicated formation [16].
In an attempt to advance the training of French GP’s, with a relevant format, and a fitting content as to both length and content, we undertook a review of trainings existing worldwide for GP about suicide, to imagine new pedagogic strategies. This work followed a two-step approach: a first step was dedicated to drawing up an inventory about GPs training all over the world. In a second part, educational program, pedagogical format, and training assessment were identified with the aim of proposing relevant trainings for GP about suicide risk. In this study, we focused on all trainings proposed to GP, either following a mono-disciplinary approach or not; and on studies with a possible impact on global population and not on specific sub-group. This original review provides a complementary insight compared to that Milner et al. review in 2017 [17] in which GPs interventions were analyzed to compare their public health impact. The current work rather focuses on educational programs and their assessments.

Methods

Focused question

The objective of the study was review international publications about GP’s training on suicide risk, in order to inform us about the training practices in the world and potentially make us discover new methodologies. Accordingly, this study is halfway between a systematic review and a non-systematic review [18]. This review followed the Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) statement guidelines [19-21]. Databases were investigated independently by two authors with pre-defined keywords (YAM and CK6). Relevant studies which match the inclusion criteria specify the educational program, pedagogical format and the training assessment.

Search strategy

This review was carried out without date restrictions. Only studies published in English or French were included. PubMed (National Center for Biotechnology Information), Cochrane, OVID, ScienceDirect, PsycINFO, PsycBOOKS, PsycCRITIQUES, PsycARTICLES and PsycEXTRA databases (American Psychological Association), Eurdit, Wiley, Sage and CAIRN databases were searched in May and June 2016. Because GPs could be part of a health professionals group trained, database request was voluntarily extensive. Selected MESH prompts were “education” and “suicide”. “Education” is defined in PubMed as an acquisition of knowledge as a result of instruction in a formal course of study, to imply “training program”; “workshop”; “learning” and all derivative terms. Free text was used too (see queries in figure 1). As usual, search command was developed using “AND” and “OR” in different queries (figure 1). The other sources investigated were directly related with suicidology experts or recent French MD theses [16]. Each title was read to proceed to inclusion, or abstract if title was not clear enough. Each proposition was considered, including editorial or free communications session’s abstract.

Selection criteria and data abstraction

As to suicide risk prevention, only studies about GP training were selected, whether in multi-professional or mono-professional training. Consequently, specific studies about nurses, social workers or others were immediately excluded, while titles or abstracts containing the prompt “health professional” were retained, in order to determine the participants’ group composition in a second step. Because in France, GP is the first speaker sought in an attempted suicide out of two [22], we focused on studies about GP practicing and not student (in initial learning) or hospital practitioner. Studies about particular population’s group (like veterans; gatekeepers; air-force one personnel…) were excluded from this review because we focused on GP’s training for the management of their entire patient base. The same applies for specific groups like young or elderly people, or deliberate self-poisoning or self-harm patient. Thus, for example, Grimholt et al. or Pfaff et al. studies were excluded [23,24].

Final analysis

Training duration, educational program, content, time of assessment, tools, information about train the trainers or kirkpatrick’s level was identified for each selected studies [25-27]. Specificities of each study was notified as a risk of bias.

Results

Trial flow

No item is found in Pubmed with associated keywords "suicide, attempted/prevention and control" or "training" and "suicide" and "Health professional"; even with such an extended prompt like "Health professional". Results of different queries are shown in figure 1. Database searching with these queries identified 520 studies, 16 additional records were found in other sources (see Methods). After having removed duplicates and screened all titles, 79 studies were selected. Among them, studies about training needs or without training information or about social workers and not health professionals were subsequently excluded. Among the 50 full-text articles assessed for eligibility, 32 full-text articles were excluded because groups of trained Health Professionals are either students, specialists or other position in hospital department or not, with no GPs.

Studies characteristics

The final 18 publications were summarized in Table 1. There are 11 different trainings proposed overall, 7 in Europe, 3 in USA and 1 in Iran with specific formats for each of them. Excepted in Gotland (and Gotland-like) or in Slovenian work [28-31] where participants are exclusively GP, participant's groups are multi-professional. Group compositions differ according to studies,
Figure 1
Flow diagram: the different steps of the systematic reviews according to the PRISMA methodology [19]
<table>
<thead>
<tr>
<th>Study's name</th>
<th>Location and period</th>
<th>Total participant's number and profiles</th>
<th>Training duration</th>
<th>Educational program and content</th>
<th>Modalities</th>
<th>Timing of Assessments</th>
<th>Assessment's tool</th>
<th>Kirkpatrick level</th>
<th>Studies specificities</th>
<th>References</th>
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<tbody>
<tr>
<td>OSPI-Europe Intervention</td>
<td>Germany; Hungary; Ireland; Portugal</td>
<td>215 GP</td>
<td>Hungary 8 h; Portugal 4 to 8 h; Ireland 3 h; Germany 2 to 4 h</td>
<td>Same content in each country: about knowledge on depression and suicidal behavior (about depression: prevalence; symptoms and treatment/about Suicide behavior: prevalence, warning signs and risk factors, and skills to motivate help-seeking behavior); distinction mental health/mental health suffering; crisis intervention; bereaved relatives information. There is slightly difference in training procedure between countries</td>
<td>Group size of 20 participants average; passive listening and role-plays to close the training</td>
<td>Pre- and post-training; three months follow-up</td>
<td>Depression Attitude Questionnaire; attitude toward Suicide Prevention scale; Morris Confidence Scale</td>
<td>2a Drop-out most pronounced in Ireland (98%), followed then by Hungary (86%), Germany (63%), and Portugal (15%)</td>
<td>[36]; [45]</td>
<td></td>
</tr>
<tr>
<td>Study 1: ASIST: Applied Suicide Intervention Skills Training</td>
<td>Study 1: Phoenix, Arizona (USA)</td>
<td>Study 1: 1337 (26.3% SS/25.9% Clinician/24.2% CM/13.6% A/6.2% Nurse/3.8% Physician)</td>
<td>Study 1: a 2-day (14 h) workshop</td>
<td>Study 1: about skill development and attitudes toward suicide intervention</td>
<td>Study 1: simulation</td>
<td>Study 1: one year after training</td>
<td>Suicide Knowledge and Skills Questionnaire, based on the Suicide Opinions Questionnaire (SOQ); Knowledge and Suicide Skills Scales</td>
<td>1; 2a; 2b Participants who chose to provide their e-mail addresses were entered into a drawing for a $100 gift card. Sample bias limitation in study 1 with participants from Arizona, study 2 participants from a different region of the United States</td>
<td>[37]</td>
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<tr>
<td>Study 2: essential learning's suicide prevention (Online) training/ QPR: question, persuade, and refer training</td>
<td>Study 2: Georgia (USA)</td>
<td>Study 2: 1507 (27.4% Para/15.6% Professional counselor/14.1% SS/8.3% Nurse/8.2% A/1.9% Physician/16.2% Other)</td>
<td>Study 2: online learning = 2 credit h/ QPR = 1 h face-to-face and a 8 h programs</td>
<td>Study 2: about suicide risk: prevalence, risk factors, relationship between depression and suicide, signs and symptoms of suicidal behavior and skills; QPR = to recognize the warning signs and how to &quot;question, persuade, and refer&quot; + standardize detection, assessment, documentation and management of patients</td>
<td>Study 2: online learning/QPR = face-to-face + lectures, discussion, and role-playing</td>
<td></td>
<td></td>
<td></td>
<td>[37]</td>
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<tr>
<td>Suicide prevention toolkit for rural primary care</td>
<td>USA, rural communities, 2012-2014</td>
<td>454 primary care providers (including GPs)</td>
<td>Adjustment according to the training participant profile</td>
<td>Six sections: getting started, educating clinicians and office staff, developing mental health partnerships, patient management tools, state resources, policy, and billing, patient education tools/other resources</td>
<td>Curriculum guidance for medical residency programs that train GP, documents to read, and tools like summary-card or guides</td>
<td>Pre- and post-training surveys</td>
<td>Using both quantitative and qualitative methods with scales and questionnaire about knowledge and skills acquisition and opinion</td>
<td>2a</td>
<td>[30], [31]</td>
<td></td>
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<tr>
<td>The Gotland Educational program</td>
<td>Swedish island of Gotland, 1982-1986</td>
<td>18 GP</td>
<td>20 h, two days for part 1 and one day for part 2</td>
<td>Part 1: lectures on classification and symptoms, etiology, pathogenesis, diagnosis, disease evolution, epidemiology and treatment. Part 2: lectures on depressive disorders in childhood and adolescence, suicidology, psychosocial background factors, psychotherapy of depressions for patients and their family</td>
<td>Lectures, discussions, videotapes</td>
<td>Pre-test, post-test at the end; one then five years after</td>
<td>Inquiring about general knowledge of pathology and treatment; global evaluation of the quality of the program; public health indicators (prescription of antidepressants, hospitalisation rate, suicide rate)</td>
<td>1, 2a, 2b, 3, 4a, 4b</td>
<td>Highly motivated group</td>
<td>[25], [32]</td>
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<tr>
<td>The Gotland Educational program-like</td>
<td>Hungary, the first half of 1998</td>
<td>27 GP</td>
<td>4 sessions in a half year</td>
<td>Interactive presentation involving real cases, written materials and self-rating depression scales were distributed, information on dosage and side effects of the major antidepressant</td>
<td>Lectures, presentation and written medium</td>
<td>One year after training</td>
<td>Public health indicators (prescription of antidepressants, hospitalisation rate, suicide rate)</td>
<td>3, 4a, 4b</td>
<td>Comparison between group</td>
<td>[27]</td>
</tr>
<tr>
<td>The Gotland Educational program-like</td>
<td>Sweden, 1995-2002</td>
<td>85 GP (including residents)</td>
<td>A two 2-days seminars with an interval of one year</td>
<td>Epidemiology diagnosing depression (globally and specifically according to patient profiles); classification suicidology treatments attitudes psychopharmacology anxiety disorders</td>
<td>Less than 20 GP per seminar: Lectures, case discussions and videotape presentations</td>
<td>After seminars</td>
<td>Questions about their attitude towards the treatment of depression; questionnaire regarding educational content; public health indicators (prescription of antidepressants, suicide rate)</td>
<td>1, 2a, 2b, 4a, 4b</td>
<td>Some GPs, psychiatrists and internists who prescribed antidepressants did not participate in the programme – but contributed to the antidepressant prescription rates. Accommodation, travel expenses and lecture fees are paid by the pharmaceutical company. GP are county employees</td>
<td>[28]</td>
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<tr>
<td>Suicide prevention program</td>
<td>Hungary from 10/2000 to 09/2004</td>
<td>27 GPs and their nurses, 4 psychiatrists and 1 psychologist</td>
<td>2 alternative times for training + 3 times per year during the 5 years for 1-h lecture</td>
<td>Epidemiology recognition evaluation and treatment of depression; role of GPs in suicide prevention Suicide risk recognition and appropriate response</td>
<td>First: a didactic lecture format. Later: interactive questionnaire and answer sessions, including case discussions + lecture</td>
<td>None for participants</td>
<td>None to assess participant's training, it's more about public health indicator (suicide rate and antidepressant use)</td>
<td>3; 4b</td>
<td>No training assessment; participants from a largely rural region with a very high suicide rate</td>
<td>[33]</td>
</tr>
<tr>
<td>NAD: Nuremberg alliance against depression</td>
<td>Nuremberg, 2 year program</td>
<td>77 primary care physician = 6P, family physicians, specialists in internal medicine</td>
<td>12 training sessions during 2 years with a maximum of 15 participants and duration of 4h</td>
<td>Diagnosis (based on ICD-10 diagnostic criteria) and especially therapy, with a strong focus on pharmacotherapy based on the guidelines of the “Drug Commission of the German Physicians”</td>
<td>Interactive educational package: role-playing, handouts, videos + a specialist hotline to consult</td>
<td>None for participants</td>
<td>None to assess participant's training, it's more about public health indicator (following official suicide numbers)</td>
<td>4b</td>
<td>Control with an other region</td>
<td>[9]</td>
</tr>
<tr>
<td>German alliance against depression (like Nuremberg alliance against depression)</td>
<td>Germany, 1998-2007</td>
<td>4 strategies, more than 350 participants</td>
<td>8 continuing medical education and 1 conference</td>
<td>About depression</td>
<td>Teaching videos and patient videos, information brochures, screening sheets and lectures</td>
<td>Suicide rate: 5 years before the intervention and the five subsequent intervention years</td>
<td>Public health indicators (suicide rate)</td>
<td>4b</td>
<td></td>
<td>[40]</td>
</tr>
<tr>
<td>RSRU: recognizing and responding to suicide risk</td>
<td>USA, 2008-2009</td>
<td>322: 26% professional counselors, 22% social workers, 18% psychologists, 17% nurses, 2% psychiatrists, 1% medical doctors (n = 4)</td>
<td>Intensive 2 days in 31 possible training sessions</td>
<td>Case vignettes describing a client at risk of suicide</td>
<td>Online learning module</td>
<td>Online pre-test; post-test at the end; 4 months after</td>
<td>ASP; process and difficult client behaviors sub-scales of the COSE; 4 items of the S&amp;Q; Clinical Risk Management scale; additional questions from the STORM training survey; composite scales about clinical assessment skills to identify suicide risk and intent; Suicide Risk Management Scale; vignettes</td>
<td>2a; 2b</td>
<td>After completing all three surveys, participants (n = 194, 42%) received a $20.00 Amazon.com gift certificate</td>
<td>[38]</td>
</tr>
<tr>
<td>Impact of two types of training courses, workshop or lecture</td>
<td>Birmingham (UK)</td>
<td>109: psychiatrist; psychiatric nurse; social worker; psychologist; occupational therapist; other mental health worker; G.P. (6); other non-mental health worker</td>
<td>2 identical full-day workshops or a half-day event for a lecture</td>
<td>Workshop: introductory lecture about detailed local suicide statistics and the principles of suicide assessment. Then sessions in small groups about assessing risk after deliberate self-harm; assessing risk in the hospital setting in a patient</td>
<td>Online pre-test; post-test at the end; 2 months later</td>
<td>SIRI-2; confidence in clinical management scales; attitude to training scale; at the end of each course: general feedback; at 2 months post-training questions about training impact on practice</td>
<td>One of the few study to clarify the training's trainers</td>
<td>1; 2a</td>
<td></td>
<td>[11]</td>
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<tr>
<td>A training pilot study, brief training package</td>
<td>UK, 1997</td>
<td>33 front-line workers: emergency room nurse/primary care worker/1GP/social workers</td>
<td>A four 2h-sessions</td>
<td>Session 1: assessment, 2: crisis management, 3: problem solving, 4: crisis prevention</td>
<td>First hour the class, second hour a videotape of interviews of actors playing roles of suicidal patients, then live role play with feedback</td>
<td>Pre-test and post-test, 3 months after for one cohort</td>
<td>SIRI-2: confident visual analogue scales, Interviewer's score</td>
<td>2a</td>
<td>Only one GP</td>
<td>[29], [48]</td>
</tr>
<tr>
<td>STORM: Skills Training on Risk Management Project</td>
<td>South Lancashire</td>
<td>167 health professionals, from primary care (with 62 GPs), emergency service or mental health service</td>
<td>6 h (for primary cares and emergency staff) or 8 h (for mental health staff) broken into 2 h sessions on 6 months</td>
<td>Assessment of suicide risk, mental state and psychological problems, clinical management of suicide risk; clinical management of emotional crises by &quot;pb-solving&quot;; prevention of further crisis (for mental health staff only)</td>
<td>Written handouts, oral presentations, discussion, videotaped presentation and role-plays with feedback</td>
<td>Videotapes were made pre-training and &gt;2 months post-training</td>
<td>SIRI-2: confident visual analogue scales, Interviewer's score</td>
<td>2a</td>
<td>They also estimate the cost of district-wide training. Participation was about 47% of eligible participants</td>
<td>[35], [48]</td>
</tr>
<tr>
<td>Recognition and treatment of depression and suicide prevention</td>
<td>3 Slovenian neighboring regions, 01/2003 to 03/2003</td>
<td>82 GP</td>
<td>4 h</td>
<td>Theoretical information about depression and suicide (etiology, prevalence, etc) and practical guidelines about treatment of depression</td>
<td>Two lectures/a longer workshop including a role play</td>
<td>None for participants</td>
<td>None to assess participant's training, it's more about public health indicator (suicide rate and antidepressant prescription)</td>
<td>3, 4b</td>
<td>comparison between groups</td>
<td>[26]</td>
</tr>
<tr>
<td>Suicide prevention program</td>
<td>Iran, 04/2010 to 03/2011</td>
<td>Private sector: 50 GPs; Health services: 118 GPs, 79 health technicians, 230 behaves and suspected patient and relatives</td>
<td>Private sector: 2 days, Health services: 25 to 30 participants by group in one-day training workshop</td>
<td>Private sector: methods of identification of the depressed and at risk of suicide patients, management and pharmacotherapy, referral to the Suicide Prevention Consultation Office (SPCO); Health services: waterfall model of Primary Health Care</td>
<td>Private sector: training package = training manual + protocol of pharmacotherapy of depressed patients + educational brochures and the phone number and address of SPCO</td>
<td>Pre-test and post-test in the first 6 months</td>
<td>Created screening questionnaire to identify depressed and at risk individuals to suicide; knowledge assessment, committing suicide and attempt suicide rate. No data collected in private sector</td>
<td>2b, 4a, 4b</td>
<td>Without control group. In private sector, the data could not be registered in GP office and hence no registered data was collected out there</td>
<td>[34]</td>
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<tr>
<td>Suicide prevention program</td>
<td>Iran 10/2005 to 05/2006</td>
<td>Private sector: 50 GPs; Health services: 49 GPs/180 health technicians/120 behaves</td>
<td>Short training manual, the pharmacotherapy protocol for treatment and management of symptoms and the referral of suicidal patients and their families to the Suicide Prevention Consultation Office (SPCO); Health services: waterfall model of Primary Health Care.</td>
<td></td>
<td></td>
<td>Pre- and post-test, Committing suicide and attempt suicide rate + prevalence of major depressive disorder (no knowledge assessment)</td>
<td>4a; 4b</td>
<td>Versus the control community with no such exposure, with 2 GPs in Health services and 0 GP in private sector</td>
<td>[39]</td>
<td></td>
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</table>

GP: general practitioners; SS: support staff; CM: case manager; A: administrator; Para: paraprofessional; COSE: Counseling Self-Estimate Inventory; SBAQ: Suicide Behavior Attitude Questionnaire. About NAD, media was used to train lay community and health professional. Community facilitators and depressed persons, suicide attempters and their relatives were trained too. The characters in bold differentiate subgroups in same study.

1For methodology.
2This study was find reading Dehay publication.
with a number of GP from 1 to dozens [32–34]. The percentage of trained GP in relation to the territory number of GPs was calculated when the data were specified. GP’s trained ratio ranged from 20% to 100%; 100% in Gotland with 18 trained GPs [28,35]; 96.6% in the Gotland-like project in Sweden with 85 trained GPs [31]; 90% in Hungary with 27 trained GPs [36]; 79% in the Gotland-like project in Hungary with 27 trained GPs [30]; 55% in Iran with 50 trained GPs from private sector [37]; 43% in Slovenia with 82 trained GPs [29]; 39% in England with 62 trained GPs [38] and 20% in Nuremberg with 77 trained GPs [10]. Training observance was then calculated for them when it was possible: 60% in Gotland; 69% in England with the STORM project and 44% in Nuremberg.

Among these 11 training formats, 7 are focused on suicidal risk [11,32,33,37–42], and 4 on depression [10,28–31,35,36,43]. In all these studies, the training program presents a multi-modal approach, as in Hegerl et al. with 4 strategies (for GPs, medias, community facilitators and patients and their relatives) [10] or a mono-modal approach as in Rutz et al. [28].

Studies methodologies

Regarding studies methodology, some of these studies use a control group, whereas others do not [38]. For example, control is made by another region in Hegerl study [10] or a “not-trained group” in Roskar et al. [29]. In Iran, the same training format use a control community in one of the two studies [42]. Only 2 GPs work in the control community in Health Services and 0 in private sector compare to dozens in experimental population. About training assessment, no training assessment is made for 3 of the 11 different trainings and the majority of assessed studies realize a pre-test and post-test after a long period (Table I). Assessment’s tools are standard or original (Table I). Standard scales or questionnaires deal with suicide, depression or confidence (Suicide Opinion Questionnaire [SOQ] [44,45], Suicide Intervention Response Inventory [SIRI-2] [46], Suicide Behaviour Attitude Questionnaire [SBAQ] [47], Attitude toward Suicide Prevention scale [ASP], Depression Attitude Questionnaire, Morris Confidence Scale, the Process and Difficult Client Behaviors sub-scales of the Counseling Self-Estimate Inventory [COSE]). SAQ, ASP and SBAQ assess self-confidence, but also attitudes or opinions about suicide. SIRI-2 is the only clinical assessment tool for the relational skills of clinicians for those who think about suicide. Other assessments’ tools are or original scales or questionnaires (for example, The Clinical Risk Management scale or the Suicide Risk Management Scale in Jacobson et al.). Opinion about training quality is asked in 4 studies (level 1 of Kirkpatrick pyramid, Table I); majority of studies (10/18) reach Kirkpatrick pyramid’s level 2 (with an impact assessment on attitude and knowledge modifications). Only Gotland’s study reaches all the levels, and 3 studies just reach level 4 and not the others (the Nuremberg or German Alliance Against Depression studies [10,43] and one of the Iran study [42] Table I). There is information about training-the-trainers in only 4 studies [11,38,40,48].

Discussion

This review sheds light upon 18 studies on GP’s training about suicide prevention and risk since the end of the 1990s years (1989 for the Gotland study). They take place all over the world, each one with its procedure, which demonstrate the recent awareness about importance of GP’s place and role in patient care.

About methodology

Results show that title (or sometimes abstract) selection is not accurate enough because only the full-text revealed details like health professional groups composition, which is the major selection criteria in this work (50 full-text articles eligible on 79). Then, diploma and profession equivalency differences between countries could explain the difficulties to finally select full-text articles. About databases, we can notice that this type of subject is simultaneously clinical and educational, which led us to spontaneously search against Cochrane database, with a result of 380 publications for “education” and “suicide” keywords. Only one publication could be selected but no GP were involved in it. Actually, Cochrane database collects care-oriented research to propose evidence-based health care resources, most likely accounting for the low rate of relevant results in this database for our specific request. In addition, our requests did not find some of studies garnered in Milner et al., 2017’s review [17]. We conclude that our Mesh request was not exhaustive emphasizing the need for a free text request too. A collaboration with an information professional would have been useful, as recommended by Maggio et al. in its checklist of analysis of medical education reviews [49,50]. Among these 11 studies, 7 are focused on suicidal risk, which was one of the selection criteria; and 4 on depression. The use of “suicide” as a keyword and not “depression” could probably explain these results and perhaps our queries did not find further work on suicide because classified under the single keyword “depression” in databases.

Limitations

Perform a comparison between selected studies is difficult because of the variety of pedagogical methodologies; cohort sizes (e.g., about one GP in Morris et al. studies [32,51]); motivation levels (economic motivation in Jacobson et al. [41] or Smith et al. [40]); control group existence (like in Hegerl et al. [10]) or impact requirement level (assessed by Kirkpatrick hierarchy). There are multi-modal trainings (where the training depends of the participant target) [33] or standard trainings for all, as in Coppins Communication where OSPI-Europe training program was the same in each different European countries (Hungary, Portugal, Germany, Ireland) [52]. In this study, every country implemented the intervention via the training...
procedure that was most commonly used in the context of their local health care system. About assessment’s tool, studies used both standard or specifically-designed tool made for the study purposes. If reaching standardized training practices seems to be difficult to achieve, standardizing assessment tools might represent an important achievement to enable proper comparison and thus unveil differences in pedagogical practices. Relevant standard assessment tools exist. SIRI-2 is referenced by 4 studies in Table I [53]. Its specificity is to evaluate the comparison techniques with the suicidal patient and to analyze the levels of expertise in the field of counseling to people in crisis. But these type of tool needs to be translated into the appropriate language. The interest of SIRI is such that it has been translated into Japanese, Danish and Spanish, and short versions exist. This is how our team made a French translation of SIRI-2, with the aim of developing a level 2b evaluation tool according to the Kirkpatrick pyramid [54]. Evaluation of trainings thanks to Kirkpatrick’s levels show variations between studies, which emphasized differences. Only one of them reaches all levels: the study in Gotland Island for all island GPs [55,56]. Others studies are at the extreme or single levels: there is no participation’s assessment and just modification of attitudes or perceptions are assessed (for example in Dehay et al. [33]), or assessment consists of following official suicide numbers, like in Hegerl et al. [10]. The same program is evaluated differently: no hospitalization rate in Henriksson and Isacsson [31] for example, compared to Zonda and Lester study [30] and Rutz et al. [28] in the Gotland-like program; or no level 1 estimate for Zonda and Lester study while Rutz et al. did so; or a 5-years evaluation period in Hubner-Liebermann et al. [43] study compared to 1-year timeframe in Hegerl study in the Nuremberg Alliance Against Depression program. A five-year period appears to be a more relevant option due to possible year-over-year variations. Again, as there is no standardization regarding level assessment, training impact is unfortunately difficult to compare. Finally, we can notice too that there is globally no training-the-trainers information, with no information in 3/4 of the studies as per this specific point. Only 4 out of the 11 studies give information [11,38,40,48] as to this critical point rendering the reproduction of these trainings impossible.

Integration
This review shows that there is no consensus about the training program or the assessment’s tools in GP’s training about suicide prevention and risk: each project has its own. Nevertheless, these reviews reveal a similar framework for these trainings including a theoretical part, with a fundamental knowledge content (diagnosis, prevalence, attitude…), and an interactive part (discussions, role-plays…). This variety of programs most likely stems from differences in country culture, pedagogical history, experiences and needs.

Considering public health impact, a very short training (3 or 4 x 2 h trainings) may be an explanation about unchanged suicide rates as can be seen in STORM project [38,51,57]. Therefore, the best duration seems to be 3 to 4 sessions up to 3 h [58]. In addition, a GP mono-modal approach could maybe increase GP adhesion to the training project, with the percentage of trained GPs in relation to the total GP number in the territory spanning from 20% in the Hegerl multi-modal study, to 100% in the Rutz study in Gotland. In these studies, training compliances are respectively 44% and 60%. A critical threshold of trained GPs seems to be important, certainly because trained GP could prescribe and refer to a specialist, which differs from a health professional awareness or information. Thus, the best training seems to be extended to depression, on a day or a half-day for a small mono or pluri-professional group. It should be recurring, focused on practice, territorialized and associated with a community facilitator’s awareness.

Other systematic reviews are complementary, defining GP’s training role in prevention of suicide risk [57,58], or global GP’s intervention, with psychoeducation for example [17]. Our review is the only one to have exclusively focused on studies on GP’s training in relation to the general population in the goal to detail each proposed training.

Conclusion
The goal of our review was to compile different pedagogical method in the world to eventually be inspired or convinced, as a prerequisite before construction of something new. This review inspired us in the implementation of in situ training with interesting results [16].

To conclude, it is interesting to see how important suicide risk assessment training or education is for many countries (UK; Japan…) and how few are the studies about GP training. There are certainly many formations that have simply not been published, precluding us from concluding that there is a GPs training lack. Nevertheless, this few published studies already revealed a too wide range of evaluation method and the need for an assessment standardization, convincing us to undertake a French translation of the SIRI-2 [59].

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References


General practitioners training about suicide prevention and risk: A systematic review of literature


