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# Covid-19 hotlines, helplines and call centers: A systematic review of characteristics, challenges and lessons learned

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#### **ADMINISTRATIVE INFORMATION**

Support - IUMS/SHMIS 1401-2-37-23743.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 February 2024 and was last updated on 12 February 2024.

#### **INTRODUCTION**

Review question / Objective The objective of this study was to investigate the characteristics, challenges and lessons learned of implementing Covid-19 hotlines/helplines/call centers during the pandemic.

Condition being studied On 11th March 2020, the World Health Organization (WHO) declared Covid-19 a global pandemic. During the outbreak of the disease, different countries implemented various strategies including helplines to control the spread of the disease. phone lines are an important and accessible resource for providing information and helping to reduce public panic. However, investigating the features, challenges, and lessons learned from implementing phone lines and call centers during the Covid-19 pandemic, will be useful in improving these types of services.

#### **METHODS**

**Participant or population** Covid-19 patients and public.

**Intervention** Telephone interventions.

**Comparator** Traditional health services.

Study designs to be included Interventionalqualitative, quantitative and mixed methods studies.

Eligibility criteria All research papers, reviews, conference papers, theses, and dissertations which were related to Covid-19 hotlines, helplines and call centers, published in English, and their full-text was available were included in the study. However, protocols, reports, letters to the editor, and studies in which hotlines, helplines or call centers were used in fields other than Covid-19,

published in languages other than English, and their full text was not available were excluded from the study.

**Information sources** Searching articles was conducted in PubMed, Web of Science, Scopus, the Cochrane Library, IEEE Xplore, and ProQuest databases, as well as Google Scholar. If the full text of an article was not available, the corresponding author would be contacted.

Main outcome(s) The timeframe of the study was between 1st January 2020 and 31th December 2023. Data were extracted using a data extraction form which consisted of the name(s) of the author(s), year of publication, country, research objective, research methods, name of the hotline, target users, activation period, hotline access time, purpose of implementing the hotline, reasons for call, key findings, challenges, and lessons learned.

Quality assessment / Risk of bias analysis Quality assessment was performed by two researchers (MEJ and HA) independently and any disagreement between the researchers was resolved by discussion. As different research methodologies were used in the reviewed articles, the Appraisal tool for Cross-Sectional Studies (AXIS) was used to assess the risk of bias, quality of design, and quality of reporting in quantitative studies [25]. The tool had 20 questions, and each question had three responses (ves (1), no and don't know (0)). Each individual study received a score between zero and 20. Based on these scores, the individual studies were categorized into three groups: Good (>15), fair (10-15) & poor (<10). As mixed-methods methodology was used in one study, its quality was assessed using the Mixed Methods Appraisal Tool (MMAT) [26]. It consists of five questions with "yes", "no" and "can't tell" as the response options. Using this tool, the quality of an article can be assessed as zero, 25%, 50%, 75% and 100% (zero (no criterion met), 25%, 50%, 75% and 100% (all criteria met)). Indeed, a higher score indicates higher quality. As some of the included studies used qualitative designs, the Critical Appraisal Skills Programme (CASP) Checklist were used to assess the quality and risk of bias for these papers [25]. It consists of 10 questions, with "yes," "no," or "can't tell" as the answer options. The calculated scores showed the quality of each study as high (7-10), medium (4-6), or low (1-3).

**Strategy of data synthesis** After searching databases, the articles were entered into the EndNote, and duplicates were removed. Articles were also screened in terms of title, abstract and

full text consistency with the aim of the research using the PRISMA checklist. Both researchers reviewed the retrieved articles independently. Any disagreements were resolved through discussion between the two researchers. Finally, the findings of the study were reported and synthesized narratively.

Subgroup analysis No subgroup analysis.

Sensitivity analysis No sensitivity analysis.

Country(ies) involved Iran.

Keywords Call centers; Covid-19; Hotlines.

#### **Contributions of each author**

Author 1 - Maryam Eslami Jahromi - MEJ designed and conducted the study. She also prepared the first draft and revisions of the manuscript.

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Author 2 - Haleh Ayatollahi - HA helped with conceptualizing the research, conducting the study, and finalizing the manuscript.

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Author 3 - Ali Ebrazeh - AE helped with conducting the research and commented on the manuscript. All authors approved the manuscript.

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