

# Guidelines for Preparing a Medical Research Abstract for Publication

## Sample Health/Medical Research Abstract

### →Objective

Objective To **establish** the **challenges Boston general practitioners (GPs) encounter** while treating **patients with myelodysplastic syndromes (MDS)**

**Objective:** State the purpose of your research.

-Use a **verb** that describes the action of your study.

-Use **object terms and phrases** that connect to the **central elements** and goal of your study.

### →Methods

Methods A **qualitative analysis of transcripts** from **three focus groups in Boston public hospitals (16 GPs)**, using a **four-level data coding process**, was performed. GPs with no MDS patients in the past three years served as the **control group**.

**Methods:** Explain how the research was conducted.

-Describe the **study design, methods, and analysis**.

-Include **key details**: sample group and size, variables, procedures, and controls.

### →Results

Results **Four main challenges contributing to high stress levels among the GPs emerged in the analysis**: insufficient training in the management of patients with MDS, a lack of internal hospital guidelines for patient treatment, hurdles to establishing a trustful doctor-patient relationship, and decreased access to resources and specialists in a primary care team. **These factors remained significant on comparative analysis** of responses from GPs in the focus groups and control group, **and accord with our hypothesis that...**

**Results:** Summarize the data.

-Include **results that answer the research question** and that were derived from the stated methods.

-Examine data by **qualitative or quantitative means**.

-State whether **research question or hypothesis** was proven or disproven.

### →Conclusions

Conclusions **This study confirms that** treatment of patients with MDS is directly impacted by the hospital-system support of GPs providing care for these patients within the Boston health care system. **These findings indicate** that physicians' stress may be reduced and their adherence to treatment guidelines may improve by providing education in the biopsychosocial model during medical education and establishing a GP hierarchy that can address adverse circumstances in hospitals where GPs treat MDS patients. **Repeating the survey** after allocating more financial resources for city health care and granting easier access to rehabilitation services **would be useful for assessing the impact of these measures**.

**Conclusions:** Describe the key findings.

- Summarize your **Interpretation of** the results.
- Explain **the importance of this research** to the area of research or medicine.
- Explain the wider implications for medical science, patient health, public health policy.
- Discuss major limitations of the study and **further research or actions that should be carried out.**

## Guidelines for Structured Abstracts\*

Total Word Count: ~200-300 words (depending on the journal)

Content: Abstract should reflect only the contents of the original paper (no cited work)

Most social, behavioral, biological, and clinical journals follow the conventional structured abstract form with the following four major headings (or variations of these headings):

- **OBJECTIVE** (Purpose; aim; goal): Tells reader the purpose of your research and the questions it intends to answer
- **METHODS** (Setting; study design; participants): Explains the methods and process so that other researchers can assess, review, and replicate your study.
- **RESULTS** (Findings; outcomes): Summarizes the most important findings of your study
- **CONCLUSIONS** (Discussion; implications; further recommendations): Summarizes the interpretation and implications of these results and presents recommendations for further research

*\* Always follow the formatting guidelines of the journal to which you are submitting your paper.*

## Useful Terms and Phrases by Abstract Section

### **OBJECTIVE: State your precise research purpose or question (1-2 sentences)**

- Begin with “To”: “We aimed to...” or “The objective of this study was to...” using a verb that accurately captures the action of your study.
- Connect the verb to an object phrase to capture the central elements and purpose of your study. Include details about the setting, demographics, and the problem or intervention you are investigating.

Element	Examples
<b>Frequently Used Verbs</b>	<i>To/We aimed to/The objective of this study was to...</i> analyze, ascertain, assess, characterize, collect, describe, determine, establish, evaluate, examine, explain, identify, investigate, measure, present, produce, validate
<b>Frequently Used Object Phrases</b>	The role of <u>[method/item]</u> , a reliable and valid measure of <u>[item/quality]</u> , the process undertaken in <u>[procedure]</u> , the degree of <u>[item/quality being measured]</u> , the amount/number of <u>[item]</u> , the outcome of <u>[therapy/procedure]</u> , the differences in the quality of <u>[variable being measured]</u>

## **METHODS: Explain the tools and steps of your research (1-3 sentences)**

- Use the past tense if the study has been conducted; use the present tense if the study is in progress.
- Include details about the study design, sample groups and sizes, variables, procedures, outcome measures, controls, and methods of analysis.

Element	Examples
<b>Study/Analysis Type</b>	"We conducted a qualitative analysis of..."; "A three-year longitudinal study of diabetic patients was performed..."; "We conducted a systematic review searching databases for..."; "We interviewed 34 Dutch general practitioners..."
<b>Description of Patient Sample Groups</b>	"All cancer patients >40 years of age were eligible for the study"; "We analyzed data of the American Project on Patient Evaluation of Palliative Practice Care (APPEPPC)"; "Elderly patients with late-stage Alzheimer's disease were identified..."; "Sample groups were limited to patients with a history of smoking"
<b>Setting/Location</b>	"...in hospitals around the State of New York..."; "...at urgent care centers in three hospitals in Taipei, Taiwan..."; "...at Pyeongchang Regional Care Facility..."
<b>Number of Participants/ Duration of Study</b>	"We surveyed 2,136 patients over the course of three years..."; "The frequency of consultations, symptoms, presentations, referrals, and prescription data during the four years prior to diagnosis were recorded..."
<b>Controls</b>	"Age- and sex-matched controls were identified..."

## **RESULTS: Summarize the data you obtained (3-6 sentences)**

- Use the past tense when describing actions and outcomes of the research.
- Include results that answer the research question and that were derived from the stated methods; examine data by qualitative or quantitative means.
- State whether the research question or hypothesis was proven or disproven.

Element	Examples
<b>Frequently Used Verbs and Phrases</b>	"participated in the study/completed the treatment"; "changed/did not change significantly"; "had greater/lesser odds of..."; "were associated with..."; "response rate was..."; "The likelihood of _____ was found to be increased by..."; "adverse events occurred..."; "[number/kind of outcomes] were identified, including..."; "was/was not associated with..."
<b>Quantitative Results</b>	"Symptoms of...were reported by 3,811 (80%) of 4,764 patients"; "Patients refusing antibiotics increased 23% from 2013 to 2016"; "One in four infants were kept at the hospital longer than two days"
<b>Qualitative Results</b>	"Many patients reported a long history of chest infection"; "Doctors reported generally high levels of workplace satisfaction"; "The results of the physiotherapy analysis were reproduced"

## **CONCLUSIONS: Describe the key findings (2-5 sentences)**

- Use the present tense to discuss findings and implications of the study results.
- Explain the implications of these results for medicine, science, or society.
- Discuss major limitations of the study and suggest further actions or research that should be undertaken.

Element	Examples
<b>Analysis of Results</b>	"This study confirms that..."; "[Result] indicates that..."; "...leads to fewer prescriptions for...;" "...was reliable/accurate"; "...is safe/well-tolerated/effective"
<b>Implications for Area of Medicine/Research</b>	"...valid and reliable for routine use"; "...is drastically decreased after transplantation"; "...may result in functional improvement of the..."; "Our preliminary results indicate potential benefits of using [procedure/drug] in this group of patients"
<b>Wider Implications</b>	"...which could increase the number of potential liver donors"; "antibiotic-resistant strains are an emerging threat"
<b>Further Suggestions/ Limitations</b>	"Additional studies on [area of study] are recommended to [aim of additional research]"; "However, this evidence should be further assessed in larger trials"; "This diagnostic accuracy may not be generalizable to all office laboratories"
<b>Analysis of Results</b>	"This study confirms that..."; "[Result] indicates that..."; "...leads to fewer prescriptions for...;" "...was reliable/accurate"; "...is safe/well-tolerated/effective"

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