

INPLASY

How is stress defined and measured in research on Chronic Spontaneous Urticaria, and what is the reported impact of stress on the condition

INPLASY202470071

doi: 10.37766/inplasy2024.7.0071

Received: 19 July 2024

Published: 19 July 2024

Corresponding author:

Jennifer Donnelly

jenniferdonnelly21@rcsi.com

Author Affiliation:

Royal College of Surgeons in Ireland.

Donnelly, J; Lim, M; Dunne, P.

ADMINISTRATIVE INFORMATION

Support - RCSI.

Review Stage at time of this submission - Data extraction.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202470071

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 July 2024 and was last updated on 19 July 2024.

INTRODUCTION

Review question / Objective How is stress defined and measured in research on Chronic Spontaneous Urticaria, and what is the reported impact of stress on the condition Identify the existing stress management tools used to measure stress in the context of CSU Explore how stress is defined and measured in the existing tools Identify the reported impact of stress in CSU patients.

Background Chronic spontaneous urticaria (CSU) is defined as a mast cell-driven condition where patients present with a spontaneous occurrence of wheals with or without angioedema for six weeks or more¹. Its prevalence is twice as high in females compared to males and affects 0.5-1% of the population with the most common age group being 20-40 years². The burden of CSU is significant due to its chronic nature as patients' sleep, daily tasks, job performance and relationships are affected,

resulting in their overall wellbeing deteriorating³. With CSU, there is no single factor which precipitates the condition however many triggers such as stress have been suggested to exacerbate symptoms or even cause them.

References

- 1: Dabija D, Tadi P, Danosos GN. Chronic Urticaria. [Updated 2023 Apr 17]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK555910/> [accessed 09/07/2024]
- 2: Barzilai A, Baum A, Ben-Shoshan M, Tzanani I, Hakrrouch R, Coster D, Solomon M, Greenberger S. Epidemiological and Clinical Characteristics of Adult and Pediatric Patients with Chronic Spontaneous Urticaria. *J Clin Med.* 2023 Dec 3;12(23):7482. doi: 10.3390/jcm12237482. PMID: 38068533; PMCID: PMC10706916. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/>

P M C 1 0 7 0 6 9 1 6 / # : ~ : t e x t = Acuteurticariaiscommonand,20402. [accessed 09/07/2024]

3: AJMC, CSU can affect all aspects of patients' lives, AJMC staff, 2024 available from: <https://www.ajmc.com/view/csu-can-affect-all-aspects-of-patients-lives-explained-dr-jonathan-bernstein> [accessed 09/07/2024].

Rationale Chronic spontaneous urticaria (CSU) is defined as a mast cell-driven condition where patients present with a spontaneous occurrence of wheals with or without angioedema for six weeks or more¹. Its prevalence is twice as high in females compared to males and affects 0.5-1% of the population with the most common age group being 20-40 years². The burden of CSU is significant due to its chronic nature as patients' sleep, daily tasks, job performance and relationships are affected, resulting in their overall wellbeing deteriorating³. With CSU, there is no single factor which precipitates the condition however many triggers such as stress have been suggested to exacerbate symptoms or even cause them.

References

1: Dabija D, Tadi P, Danosos GN. Chronic Urticaria. [Updated 2023 Apr 17]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK555910/> [accessed 09/07/2024]

2: Barzilai A, Baum A, Ben-Shoshan M, Tzanani I, Hakrrouch R, Coster D, Solomon M, Greenberger S. Epidemiological and Clinical Characteristics of Adult and Pediatric Patients with Chronic Spontaneous Urticaria. *J Clin Med*. 2023 Dec 3;12(23):7482. doi: 10.3390/jcm12237482. PMID: 38068533; PMCID: PMC10706916. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10706916/> [accessed 09/07/2024]

3: AJMC, CSU can affect all aspects of patients' lives, AJMC staff, 2024 available from: <https://www.ajmc.com/view/csu-can-affect-all-aspects-of-patients-lives-explained-dr-jonathan-bernstein> [accessed 09/07/2024].

METHODS

Strategy of data synthesis Data will be summarised and formatted into tables and graphs once data extraction is completed on Covidence.

Eligibility criteria

Inclusion criteria:

Chronic spontaneous urticaria (CSU) / chronic idiopathic urticaria (CIU) as the primary disease
Patients with an established diagnosis of CSU / CIU prior to study
Standardized biological or psychological measures of stress
Studies which measure stress as a precipitant of CSU / CIU
Articles which establish a link between stress and CSU / CIU but lack a standardized method of assessing stress

Exclusion criteria:

Incomplete papers
Literature that is not translatable to English
Opinion or review articles
Articles with only an abstract available
Stress measured on animals.

Source of evidence screening and selection All articles were uploaded onto Covidence and screened independently by two reviewers at title and abstract level. Any conflicts were resolved through discussion and the remaining articles underwent full text screening and those included went on to data extraction.

Databases to be searched: PubMed, Embase, Google Scholar
Restrictions: Articles must be translated to English, articles must be complete, opinion and review articles will not be accepted, chronic spontaneous urticaria (CSU) / chronic idiopathic urticaria (CIU) must be the primary disease, patients must have a diagnosis of CSU / CIU prior to the study, articles must mention a standardised measure of stress.

Data management One author will develop a data extraction form using the Covidence software and a second author will review to make any necessary amendments. Upon completion of the form, two reviewers will independently perform data extraction and all data will be compiled and refined. Any data that is unclear will be resolved through discussion so that a consensus can be met. The form will consist of the following information: study title, author details, country of origin, intervention, study design, methods of recruitment of participants (phone, mail, clinic patients), total number of CSU participants and controls, study population (age, gender), the type of stress explored (psychological, biochemical, physiological, perceived, emotional), and whether data on stress is quantitative or qualitative.

Reporting results / Analysis of the evidence Analysis will be completed after data extraction

and presented through graphs and tables along with the review.

Presentation of the results Results will be presented through figures, graphs and tables along with the review.

Language restriction All articles must be translatable to English.

Country(ies) involved Ireland.

Keywords Chronic spontaneous urticaria; chronic idiopathic urticaria; stress; stress measurement tools; patient reported outcomes.

Dissemination plans Potential journals such as BMC Medicine, the Irish Journal of Psychological Medicine and the Irish Medical Journal could be possibilities for submission upon completion but are not definitive. Research will be presented at events and conferences within the Royal College of Surgeons in Ireland.

Contributions of each author

Author 1 - Jennifer Donnelly.
Email: jenniferdonnelly21@rcsi.com
Author 2 - Michelle Lim.
Email: michellelim22@rcsi.com
Author 3 - Padraic Dunne.
Email: padraicdunne@rcsi.com