

PSYCHOMETRIC ASSESSMENT OF PATIENT REPORTED EXPERIENCES WITH ARTIFICIAL INTELLIGENCE TOOLS IN HEMOPHILIA CARE

G. Sottilotta^{1,2}, G. Praticò¹, D. Megalizzi¹, M. Hart², C. Komar², F. Luise³

¹ UOSD Centro Microcitemie - Servizio Emostasi e Trombosi. Grande Ospedale Metropolitano di Reggio Calabria, Italy; ² Save One Life Inc., USA; ³ Laboratorio Analisi. Grande Ospedale Metropolitano di Reggio Calabria, Italy

Introduction. Artificial intelligence (AI) is increasingly integrated into everyday life and is expected to influence clinical practice by supporting tasks traditionally performed by healthcare professionals. People with haemophilia (PWH) have historically shown a strong interest in understanding scientific, diagnostic, and therapeutic advances related to their condition, often seeking information through conferences, online platforms, and, more recently, AI based applications. As AI tools become more accessible, evaluating how PWH perceive the quality and reliability of AI generated medical information is essential.

Aims. The study aimed to assess patient reported satisfaction with AI generated responses to haemophilia related questions, focusing on clarity, accuracy, and perceived usefulness through a psychometric evaluation.

Materials and Methods. A 10-item questionnaire was developed from questions proposed directly by PWH, addressing innovative therapies, emerging treatment strategies, and future perspectives in haemophilia care. Twelve adults male with haemophilia (mean age 49.2, range 19-65) submitted the same questionnaire to five AI tools: ChatGPT®, Gemini®, Copilot®, DeepSeek®, and Perplexity®. Participants evaluated each set of responses using a Likert-type

psychometric scale, generating a total satisfaction score ranging from 0 to 50 for each AI system.

Results. All AI applications achieved medium to high satisfaction scores, with a mean value of 37.9 (range 33.8-39.6), corresponding to an average rating of 3.8 on a 1-5 scale. Participants generally considered the information provided to be clear, relevant, and aligned with their expectations. The use of patient generated questions ensured accessibility and avoided excessive technical complexity, supporting the applicability of AI tools for non professional users. Detailed results are summarised in Table 1.

Conclusions. PWH expressed overall appreciation for the quality of AI generated answers. These findings suggest that AI systems may already serve as valuable resources for patient education in haemophilia, particularly in settings with limited access to specialised haemophilia centres or insufficient availability of trained healthcare personnel. Nonetheless, AI generated information must always be interpreted under medical supervision to prevent misunderstandings or inappropriate self management. Continued monitoring and evaluation of AI tools remain essential to ensure accuracy, safety, and alignment with evolving standards of haemophilia care



2.01 Hemophilia - clinical and treatment issues

Table 1: Patients characteristics and Artificial Intelligence (AI) applications scores

Type of Hemophilia	Age	CHAT GPT	PERPLEXITY	COPILOT	GEMINI	DEEPSEEK
A Severe	41	48	40	30	40	30
A Severe	53	40	40	30	40	47
A Severe with Inhibitor	58	36	38	39	40	39
A Moderate	53	39	35	37	43	47
A Moderate	55	45	45	44	42	40
A Severe	38	30	40	35	42	20
B Severe	19	30	35	30	23	36
A Severe	35	45	40	30	45	35
A Severe with Inhibitor	59	45	45	30	45	50
A Severe	64	46	44	32	42	30
A Severe	65	33	36	37	36	35
A Severe	50	38	34	32	36	38
AI Average rating		39.6	39.3	33.8	39.5	37.2