

BRIEF COMMUNICATIONS

Gynecology

Hybrid pediatric and adolescent gynecology telemedicine consultation in the era of COVID-19: Evaluation and feasibility

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The feasibility of telemedicine in pediatric and adolescent gynecology (PAG) is unknown. One of the main barriers to effective telemedicine consultations is the fact that adolescents are often hesitant to remotely discuss sensitive gynecologic issues.^{1,2} In the present study, the authors evaluated a hybrid telemedicine model which showed promising results.

The telemedicine model evaluated in the present study was hybrid; the first doctor appointment was an in-person consultation. A hybrid telemedicine model in PAG might be a reasonable approach because the first visit helps the clinician to obtain history and perform a physical examination thoroughly and establish rapport confidentially.² Subsequently, follow-up communication occurred via e-mail. An online questionnaire was sent to all the guardians of the patients, whose teleconsultations occurred between October 1, 2020, and April 5, 2021. The questionnaire was based on the Telemedicine Satisfaction Questionnaire (TSQ), developed by Yip et al.³ Detailed methodology can be found in the Data S1. The study protocol was approved by the hospital scientific committee (reference 316/2021). All participants provided informed consent during completion of the online form.

The response rate was 50% (64/128). Median patient age was 15 years (interquartile range: 13–17). A total of 81.3% ($n = 52$) of the respondents had no previous experience with a similar telemedicine service. Out of those who had, 91.7% ($n = 11$) were satisfied with the use of such services.

Figure 1 presents answers to Likert-type items in stacked bars. In total, 81.3% ($n = 52$) of the respondents were satisfied overall by the quality of the service provided via telemedicine (item 17) and 75% ($n = 48$) declared that they would use telemedicine services again (item 11). Furthermore, 89.1% ($n = 57$) of the participants

felt that email communication was helpful. Nevertheless, 45.3% ($n = 29$) had to eventually visit the PAG clinic and 29.7% ($n = 19$) had to communicate via telephone with their doctor. Menstrual disorders, evaluation of hormonal test results, and polycystic ovarian syndrome were the most common telemedicine issues (68.8%, 17.2%, and 15.6%, respectively). Finally, 7.8% ($n = 5$) of the respondents declared that they eventually sought urgent consultation for their medical issue.

In a previous study by Barlow et al.,² only 10.9% of total PAG visits considered for telemedicine were deemed eligible. This was explained by physical examination, discussion of sensitive issues, and maintenance of privacy which served as barriers to remote counseling. The hybrid model implemented in our study may have counteracted some of these issues. Nevertheless, a guardian stated in the comments section of our study that “especially in adolescent issues, a visit to the hospital is a prerequisite.” This highlights the need to maintain a confidential environment which constitutes an especially important aspect of PAG care.⁴ Physicians are often required to follow a special approach in building trust and discussing sensitive issues with adolescents,¹ which may be difficult in the context of telemedicine. Overall, the present study suggests that adopting a hybrid telemedicine model may be a justifiable, low-cost approach to overcoming field-specific remote counselling barriers.

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

AUTHOR CONTRIBUTIONS

VGG, IG, AK, LM conceived the study. VGG, IG, AK, KM, SR, LM designed the study. VGG and IG analyzed data and wrote the first

Vassilis G. Giannakoulis and Ilias Giannakodimos contributed equally to this study.

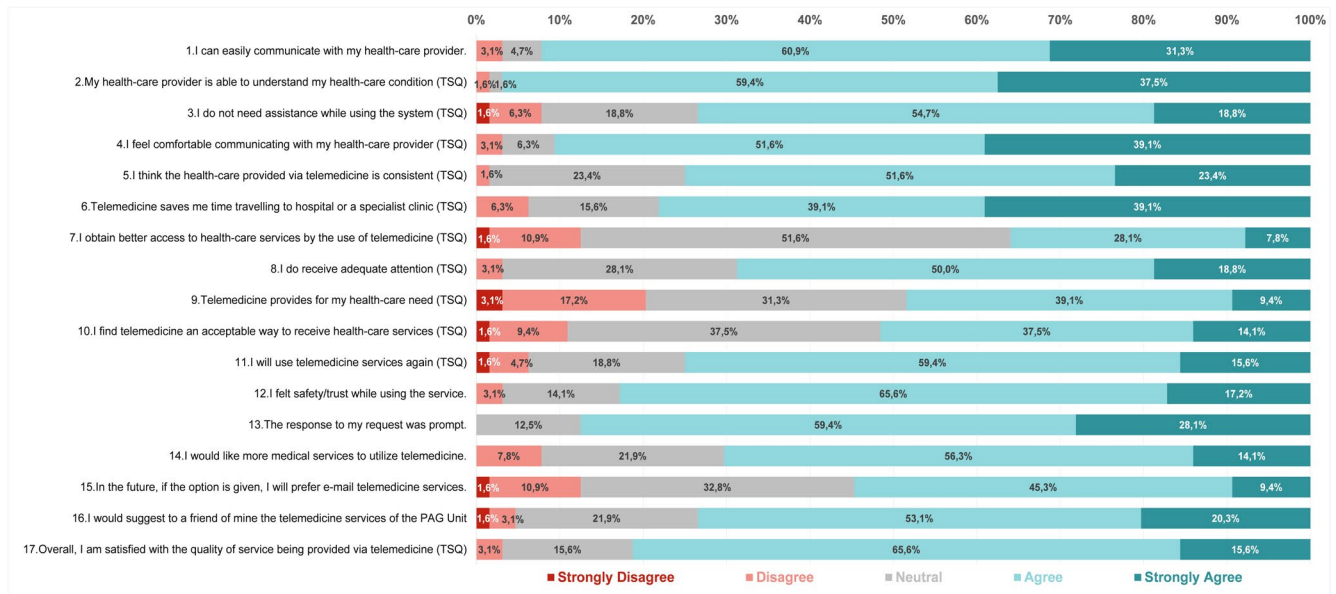


FIGURE 1 Answers to Likert-type items, presented in stacked-bars. These items evaluated patient experience and satisfaction regarding the telemedicine service of the pediatric and adolescent gynecology (PAG) unit. Items with the word TSQ in parentheses are derived from the Telemedicine Satisfaction Questionnaire³

draft of the manuscript. AK, KM, SR, LM revised the manuscript for important intellectual content and created the second draft. LM supervised the project. All authors read and approved the final version of the manuscript.

REFERENCES

1. Snook ML, Nayak S, Lara-Torre E, Sanfilippo JS. Adolescent gynecology: special considerations for special patients. *Clin Obstet Gynecol.* 2012;55:651-661. 10.1097/GRF.0b013e31825caa0f
2. Barlow E, Aggarwal A, Johnstone J, et al. Can paediatric and adolescent gynecological care be delivered via Telehealth? *Paediatrics and Child Health.* 2012;17:e12-e15. 10.1093/pch/17.2.e12
3. Yip MP, Chang AM, Chan J, Mackenzie AE. Development of the telemedicine satisfaction questionnaire to evaluate patient satisfaction with telemedicine: a preliminary study. *J Telemed Telecare.* 2003;9:46-50. 10.1258/135763303321159693
4. Grilo SA, Catalozzi M, Santelli JS, et al. Confidentiality discussions and private time with a health-care provider for youth, United States, 2016. *J Adolesc Health.* 2019;64:311-318. 10.1016/j.jadohealth.2018.10.301

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