

# Premature ejaculation in the era of mobile health application: A current analysis and evaluation of adherence to EAU guidelines

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## Summary

**Introduction:** Several mobile health applications (MHAs) have been developed to assist and improve the quality of life of patients affected by premature ejaculation, but the scientific quality and adherence to guidelines are not yet addressed.

**Materials and methods:** On 25 May 2022, we conducted a search in the Apple App Store and Google Play Store. We reviewed all mobile apps from Apple App Store and Google Play Store for premature ejaculation and evaluated their usage in screening, prevention, management, and adherence to EAU guidelines.

**Results:** In total 9 MHA were reviewed. All MHAs are geared towards the patient and provide information about diagnoses and treatment of PE. The mean score were 2.87, 3.69, 2.77, 2.55, 2.86 for Engagement, Functionality, Aesthetics, Information, and Subjective quality respectively. MHAs reported low and medium adherence to EAU guidelines.

**Conclusions:** MHAs provide different services in many medical fields, including male sexual dysfunction. Their development is constantly increasing, but the problems of scientific validation, content, and quality are not yet solved. Much future research is necessary to improve the quality of the apps and promote new user designed, and high-quality apps.

**KEY WORDS:** App; E-health; Mobile phone; Premature ejaculation; Mobile Application Rating Scale (MARS).

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## INTRODUCTION

Premature Ejaculation (PE) is among the most prevalent male sexual dysfunction worldwide affecting 30-50% of men with a high impact on the quality of life (QoL) of patients and partners (1-6). According to EAU guidelines, PE is defined as ejaculation which always or nearly always occurs prior to or within about one minute of vaginal penetration, inability to delay ejaculation on all or nearly all vaginal penetrations (7). Several causes of PE like psychological issues (depression, stress, anxiety), traumatic sexual experience, diabetes, hypertension, hyperthyroidism, alcoholism and recreational drugs have been described (8). Nowadays, many treatments are available: systemic

medications (selective serotonin reuptake inhibitors [SSRI], tricyclic antidepressants, phosphodiesterase type 5 inhibitors and analgesics), local anesthetics or sprays, and behavioral therapies (sexual therapy). However, men with PE often resort to using self-medication for shame reasons (9). Therefore, mobile applications (apps) could represent a valid tool to support health behavior and medical information about PE (10, 11). In the last years, more than 300.000 apps have been developed (12) and their use has increased during SARS-Cov-2 pandemic (13-16). Apps can be downloaded from "Play Store" for Android and "App Store" for iOS (17). Several MHAs have been produced in different medical and surgical fields including the urological and andrological fields (18-20). MHAs have been developed to assist patients in several conditions (21, 22). *Optale et al.* reported their experience in a pilot study on 35 patients with PE using a mobile coaching app for therapeutic exercises (23). Data reported improvement of the 5-question Premature Ejaculation Diagnostic Tool (PEDT) and the 4-question Premature Ejaculation Profile (PEP) in people who used the app compared the non-users (23). Despite their number and widely use, quality assessments are still a problem. To avoid this, in the last years, several instruments have been developed. Among these, the most used tool is Mobile Application Rating Scale (MARS) (24-26). Several MHAs have been developed for assessing and management of PE, representing an important tool for patients. However, despite their potential utility, much effort must be made regarding the quality, the validation, and the adherence to guidelines. To the best of our knowledge, there are no studies reporting the quality of apps for PE and their adherence to guidelines. The aim of this study is to give an overview of apps for PE, currently free available on the market to evaluate the quality and the adherence to guidelines.

## MATERIALS AND METHODS

### Search strategy

We performed an observational cross-sectional descrip-

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tive study of all smartphone apps for patients about PE available on the iOS and Android platforms and evaluated their adherence to EAU guidelines. On 25 May 2022, we conducted a search in Google Play Store for Android phones and Apple App Store for iPhones with the keywords 'premature ejaculation', 'premature ejaculation treatment' and 'premature ejaculation diagnosis' using the search tab. We used a wide array of keywords due to the search strategy of Google Play Store and Apple App Store which is based on finding keywords in titles, app descriptions and tags. Other searches of information provided in books or other formats were excluded. Two authors (GMF, MA) screened separately in *App Store* and *Google Play Store* apps during the search by reading the title and description in the app store. A third author (LC) resolved any discrepancies. At the beginning all apps were reported in Excel form and, according to the exclusion criteria, were screened. All MHAs regarding PE, providing a service to patients, in English, and free to download were included in this analysis. Apps not specifically focused on PE, apps not allowing access to all users and those not available in English were excluded. Successively, all reviewers downloaded and installed the apps on their personal mobile device. They interacted for twenty minutes with each app to explore its features before completing the MARS and evaluated their adherence to EAU guidelines. To assess apps, they were downloaded to either an *Android* and an *iOS* device. If apps were available in both app stores, the *iOS* version was assessed. A total of 840 apps were found by our search, 816 of them were from the *Google Play Store* (*Android*) and 24 of them were from the *Apple App Store* (*iOS*). Of the total, 249 apps were screened after removing duplicates and paid apps. Of the total screened apps, 196 apps met excluding criteria and were removed. In particular 1 app resulted in both stores. The app from the *Apple App Store* was analyzed. In total, 53 apps were eligible for the final evaluation and were downloaded. Finally, 9 apps were included in the final review after removing 44 apps that met exclusion criteria after download. A flow diagram based on the PRISMA statement (Figure 1) was included for the selected apps (27). Table 1 shows the analyzed apps characteristics. The 9 premature ejaculation apps were evaluated by four members of the research team on a 5-point Likert scale based on MARS characteristics.

#### Data extraction

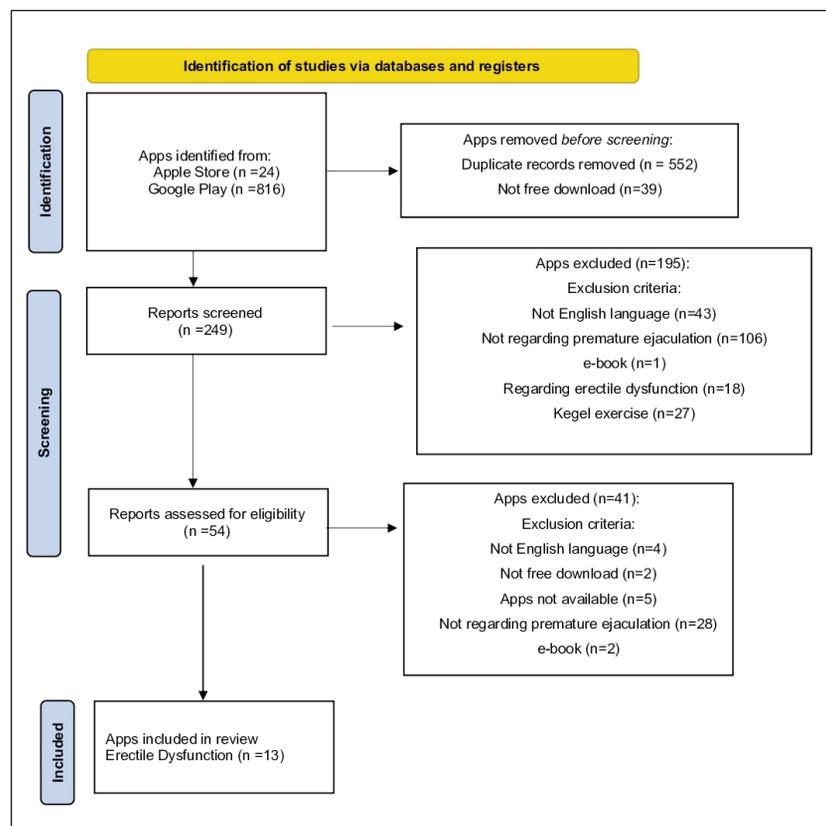
On 27 May 2022 reviewers discussed methods of recording data to ensure standardized modality and a predefined Excel form was created to collect data. The following data were extracted from MHA: title, language, customers, costs, source (*Google Play Store* or *Apple App Store*), field/disease, rating/feed-

back from the users and service provided.

#### Assessment of app quality

To assess apps' quality, *Mobile Application Rating Scale* (MARS) was used. MARS is a multidimensional instrument of 23 structured questions evaluating engagement, functionality, esthetics, information, app subjective quality, and app-specific, showing a very acceptable reliability and validity. MARS is composed of 19 items grouped in four categories of perceived app quality: engagement (five items assessing the extent to which the app engages target users); functionality (four items assessing how easy the app is to navigate and the overall app performance); aesthetics (three items assessing visual appearance and style); information (seven items assessing accuracy, quality, and quantity of the app), and 1 category of subjective quality. Each category score is the mean of the different items, rated on a 5-point Likert-type scale (from 1 = inadequate to 5 = excellent) within its category. The mean of the 4 app quality category scores is used to calculate overall quality score and the final score range from 0 to 5. A score of between 1 and 2/5 is considered as 'poor' quality, while 3/5 is 'acceptable' and at least 4/5 is 'good' quality. If scores differed by a single point, reviewers use the mean of the two ratings, while if scores differing by more than a single point, reviewers solve the discrepancy through discussion and consensus agreement. Mean scores were calculated for each domain and an overall quality score was calculated based on the aggregated mean values for each of the four domains. The mean score for subjective quality is calculated.

**Figure 1.**  
PRISMA.



### Assessment of app adherence to EAU guidelines

An adherence checklist of five items (definition, physiopathology, diagnosis, risk factors and treatment) based on section 5 of the *EAU guidelines of PE* has been created. Two independent reviewers (urologist with high experience in male sexual dysfunction) analyzed separately apps for their adherence to *EAU guidelines*. According to criteria used in similar studies, raters gave each app a score from 0 to 3 for each of the five items. A score of “0” indicated no adherence to guidelines. A score of “1” indicated a weak adherence. A score of “2” indicated a partial or moderate adherence. A score of “3” indicated strong adherence. Where coding scores differed by 1 point, the average of the two ratings was taken. If there was a greater than 1-point discrepancy, a third author reviewed apps and resolved the discrepancy. The possible score on the checklist ranged from 0 to 15 for each app. To facilitate evaluation, adherence to the checklist was arbitrarily con-

sidered low with a total score ranging from 0 to 5, medium (6-10), and high (11-15).

### RESULTS

In total 9 apps were included in the final analysis: 4 from the Apple App Store and 5 from the Google Play Store. Four apps (44%) provided information about treatment; 2 (22%), 3 (33%) provide information about diagnosis and overall information respectively. PE risks factors were mentioned in some MHA. Data about downloads were available for 5 apps out of the 9 reviewed. Downloads were not available for MHAs presented in the *Apple App Store*. The most downloaded app was *Last Longer in Bed & Control Premature Stamina* of which more than 100.000 downloads were reported. All the apps were planned to be used by patients. No information about MHA rating was available. MARS scale scores are represented in Table 2.

**Table 1.**  
App characteristics.

Name of application	Android/Apple/Both	Download	Producer	Category	Focus
Premature ejaculation tools	Apple	n.a.	Putu angga risky raharja	Medicine	Informative, definition Test PEDT
Pea-last longer in bed	Apple	n.a.	Smarter health solution LLC	Health and Wellness	Informative, definition Treatment Exercises
Slow down last longer	Apple	n.a.	Slow down health inc	Medicine	Exercises
SMART SAA	Apple	n.a.	PERGALI LTD	Health and Wellness	Informative, definition Test
Last longer in bed & control premature stamina	Android	100.000 +	MasterpieceApps	Lifestyle	Treatment
My sex Doctor	Android	10.000+	MYSO LTD	Lifestyle	Definition
My sex Doctor lite	Android	10.000+	MYSO LTD	Lifestyle	Definition
Premature ejaculation	Android	5000 +	Nature Healthy Care	Entertainment	Definition Diagnosis Treatment
Premature ejaculation: Information and treatment	Android	1000+	HemiSphere Studio	Health and fitness	Definition Diagnosis Treatment

**Table 2.**  
MARS scale scores.

Name of application	Engagement (section A)	Functionality (section B)	Aesthetics (section C)	Information (section D)	Mean (A+B+C+D)	App subjective quality (section E)
Premature ejaculation tools	2	4	1.33	2	2.33	2
Pea-last longer in bed	3.8	3.25	3	3.33	3.34	3.25
Slow down last longer	3.4	2.75	3	2.66	2.95	3
SMART SAA	3.6	3.75	3	3.6	3.49	2.75
Last longer in bed & control premature stamina	3	4.5	3	1	2.88	1.75
My sex Doctor	2	4	3	2	2.75	3
My sex Doctor lite	2	4	3	2	2.75	3
Premature ejaculation	4	4	3.3	3.6	3.72	4
Premature ejaculation: Information and treatment	2	3	2.3	2.8	2.52	3

### Engagement

The score in this section was based on a 5-point Likert scale in 5 subscales (*Entertainment, Interest, Customization, Interactivity and Target-group*). The mean score was 2.87. Scores ranged from 2 to 4 out of 5. The “*Premature Ejaculation*” app (*Android*) produced by *Nature Healthy Care* received the highest score for the engagement. This app contains PE definitions, as well as information about diagnosis and treatment.

### Functionality

The score of the functionality section was based on a 5-point Likert scale in 4 subscales (*Performance, Ease of use, Navigation and Gestural design*) and the mean score was 3.69. Scores ranged from 2.75 to 4.5. “*Last Longer in Bed & Control Premature Stamina*” app (*Android*) produced by *Masterpiece* achieved the maximum score.

### Aesthetics

The aesthetics section was formed by a 5-point Likert scale in 3 subscales (*Layout, Graphics, Visual Appeal*) and the average score was 2.77. Scores ranged from 1.33 to 3.3 out of 5, and “*Premature Ejaculation*” produced by *Nature Healthy Care* reached the maximum aesthetics score.

### Information

The information section was formed by a 5-point Likert scale in 7 subscales and the mean score was 2.55. Score ranged from 1 to 3.6. The “*SMART SAA*” (*Apple*) produced by

**Table 3.**  
EAU adherence checklist scores.

Name of application	Definition (0-3)	Physiopathology (0-3)	Risk factors (0-3)	Diagnosis (0-3)	Treatment (0-3)	Total
Premature ejaculation tools	n.a	n.a	n.a	2	n.a.	2
Pea-last longer in bed	3	1	n.a	1	3	8
Slow down last longer	2	1	2	2	3	10
SMART SAA	2	n.a	n.a	2	n.a.	4
Last Longer in bed & control premature stamina	2	1	1	1	3	8
My sex Doctor	2	2	n.a.	1	n.a.	5
My sex Doctor lite	2	2	n.a.	1	n.a.	5
Premature ejaculation	3	2	2	3	3	13
Premature ejaculation: Information and treatment	2	2	1	2	1	8

Pergali LTD and “Premature Ejaculation” produced by Nature Healthy Care achieved the highest score of 3.6. These two apps respectively offer information and test for PE, and definition, diagnosis, and treatment options for PE.

### Subjective quality

The subjective quality section consisted of 4 items. The mean score was 2.86, with scores ranging from 1.75 to 4. “Premature Ejaculation” app reached the maximum score.

### EAU adherence checklist

We evaluated the EAU guidelines adherence in 9 apps. EAU adherence scores are represented in Table 3. The PE definition was reported in 8 (88.9%) apps, the score ranged from 2 to 3 (mean 2.25); physiopathology was reported in 7 (77.8%) apps, the score ranged from 1 to 2 (mean 1.57); risk factors were reported in 4 (44.4%) apps, the score ranged from 1 to 2 (mean 1.5); diagnosis was reported in 9 (100%), the score range from 1 to 3 (mean 1.67); treatment was reported in 5 (55.6%), the score ranged from 1 to 3 (mean 2.6). The overall score ranged from 2 to 13 (mean 7). The highest score was reported by “Premature Ejaculation” (Android) produced by Nature Healthy Care. Only two of the nine evaluated apps reached the maximum definition score of 3 in definition, while none of the apps reached 3 in physiopathology and risk factors. Finally, only one app and four apps reached the maximum respectively in diagnosis and treatment.

### DISCUSSION

The current study aimed to evaluate the overall quality MHAs for PE and their adherence to EAU guidelines. To the best of our knowledge, no previous studies examined this topic. We addressed this void and identified several noteworthy observations. First, despite the high number of MHAs no standardized evaluation method has been assessed, but many studies suggest combining the use of different scores. In the present study we used MARS to evaluate the apps' quality. MARS was a tool widely used in several previous published studies. In this study, the mean scores of the MARS categories are dramatically low and MHAs are inadequate to assist patients. “Information” and

“Esthetics” show the lowest score, 2.55 and 2.77 respectively.

“Functionality” reported the highest score (3.69). As previously showed in our study on MHAs for erectile dysfunction, apps were developed without healthcare support and the most important tool is their usability (28). Jupp *et al.* showed that “Functionality” is the highest score in MHAs for oncology patients (29). This suggests that MHAs are easy to navigate and efficient and represent an important skill for MHAs geared for the patients. The overall low quality of MHAs seems to be related to their commercial tone.

Furthermore, our results indicate that healthcare and medical institutions are still missing the potential of reaching patients through this technology, and therefore the MHA were a field of only commercial initiatives. In fact, only three (33%) of MHA were considered acceptable. The same results were reported in other studies using MARS to evaluate different medical conditions (30). Amor-Garcia *et al.* report a score of 2.98 analyzing genitourinary cancer (17); Kwan *et al.* and Knitza *et al.* report scores of 3.48 and 3.85 in apps for rheumatology conditions (31, 32). This suggests that overall MHAs regardless of diseases and fields require general improvements, in particular, healthcare involvement in MHA development is mandatory. Second, most MHAs had low or medium adherence to EAU guidelines. The highest adherence is reported in PE definition and treatment. “Premature Ejaculation” (Android) produced by Nature Healthy Care shows the highest score (13) and the high adherence to EAU guidelines. This is not surprising, because Nature Healthy Care produce several apps in different medical fields. MHAs report a wide options of treatment for PE including behavioural and medical options. According to the literature, treatment of PE includes pharmacological and non-pharmacological treatment as well as psychotherapy and behavioral therapies (masturbation before coitus (precoital masturbation) “stop-start” and “squeeze” techniques, use of multiple condoms, and pelvic floor exercise). Pelvic floor exercise/Kegel exercises help strengthen pelvic floor muscles to provide better ejaculation control. Ischiocavernosus, bulbocavernosus muscles, and sphincters, play an important role in sexual function, with high electromyographic activity and rhythmic contractions during the ejaculatory period (8, 33-35). In a prospective quasi-randomized controlled trial, Jiang *et al.* reported that penis-root masturbation (PRM) and Kegel exercise (KE) have effects on PPE and KE was less effective than PRM. EAU guidelines report weak evidence about behavioural and psychotherapy treatments for PE (7). Despite these, our search show 27 MHAs for KE as PE treatment. Our study has several strengths: first of all, we examined for the first time the content, the quality, and the adherence to EAU guidelines about PE; we performed a rigorous search, screening, and analysis on Apple and Google stores; reviewer had experience in MARS scale using. The main limitation of our study is the number of apps sub-

jected to the qualitative assessment. Furthermore, the reproducibility of the research turns out to be complex due to the working method of the *App Store* and *Google Play Store* (the visibility of apps depends on the device and on the country where the search is performed); the exclusion criteria, which led to the exclusion of paid apps; the guidelines developed for healthcare and not for patients and the constant production of new MHA.

## CONCLUSIONS

The use of MHAs for PE represents an unexplored topic, with much future perspective. MHAs have been reported as an integral part of patients' lives, and although from year to year, their numbers are constantly increasing, the overall quality is still low. The problems of scientific validation content and quality in MHA for PE are not yet solved. Further several studies are needed to improve the quality, accessibility, user-designed, and high-quality of apps.

## REFERENCES

- Gao J, Zhang X, Su P, et al. Prevalence and impact of premature ejaculation in outpatients complaining of ejaculating prematurely: using the instruments of intravaginal ejaculatory latency time and patient-reported outcome measures. *Int J Impot Res.* 2014; 26:94-9.
- Sjögren Fugl-Meyer K, Fugl-Meyer AR. Sexual disabilities are not singularities. *Int J Impot Res.* 2002; 14:487-93.
- Mirone V, Napolitano L, D'Emmanuele di Villa Bianca R, et al. A new original nutraceutical formulation ameliorates the effect of Tadalafil on clinical score and cGMP accumulation. *Arch Ital Urol Androl.* 2021; 93:221-6.
- Romano L, Granata L, Fusco F, et al. Sexual dysfunction in patients with chronic gastrointestinal and liver diseases: a neglected issue. *Sex Med Rev.* 2021; S2050-0521 (21)00039-1.
- Barone B, Napolitano L, Abate M, et al. The role of testosterone in the elderly: what do we know? *Int J Mol Sci.* 2022; 23:3535.
- Romano L, Pellegrino R, Sciorio C, et al. Erectile and sexual dysfunction in male and female patients with celiac disease: A cross-sectional observational study. *Andrology.* 2022; 10:910-918.
- Salonia A, Bettocchi C, Boeri L, et al. European Association of Urology guidelines on sexual and reproductive health—2021 update: male sexual dysfunction. *Eur Urol.* 2021; 80:333-57.
- Veetil Raveendran A, Agarwal A. Premature ejaculation - current concepts in the management: A narrative review. *Int J Reprod Biomed IJRM [Internet].* 25 January 2021 [cited 22 June 2022]; Available from: <https://knepublishing.com/index.php/ijrm/article/view/8176>
- InformedHealth.org [Internet]. Cologne, Germany: Institute for Quality and Efficiency in Health Care (IQWiG); 2006-. Premature ejaculation: What can I do on my own? 2019 Sep 12. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK547551/>.
- Iribarren SJ, Akande TO, Kamp KJ, et al. Effectiveness of mobile apps to promote health and manage disease: systematic review and meta-analysis of randomized controlled trials. *JMIR MHealth UHealth.* 2021; 9:e21563.
- Milne-Ives M, Lam C, De Cock C, et al. Mobile apps for health behavior change in physical activity, diet, drug and alcohol use, and mental health: systematic review. *JMIR MHealth UHealth.* 2020; 8:e17046.
- Levine DM, Co Z, Newmark LP, Groisser AR, et al. Design and testing of a mobile health application rating tool. *Npj Digit Med.* 2020; 3:74.
- John Leon Singh H, Couch D, Yap K. Mobile health apps that help with COVID-19 management: scoping review. *JMIR Nurs.* 2020; 3:e20596.
- Barone B, De Luca L, Napolitano L, et al. Lower urinary tract symptoms and mental health during COVID-19 pandemic. *Arch Ital Urol Androl.* 2022; 94:46-50.
- Napolitano L, Barone B, Crocetto F, et al. The COVID-19 pandemic: is it a wolf consuming fertility? *Int J Fertil Steril.* 2020; 14:159-60.
- Sujarwoto S, Augia T, Dahlan H, et al. COVID-19 mobile health apps: an overview of mobile applications in Indonesia. *Front Public Health.* 2022; 10:879695.
- Amor-García MÁ, Collado-Borrell R, Escudero-Vilaplana V, et al. Assessing apps for patients with genitourinary tumors using the Mobile Application Rating Scale (MARS): systematic search in app stores and content analysis. *JMIR MHealth UHealth.* 2020; 8:e17609.
- Rajani NB, Weth D, Mastellos N, Filippidis FT. Adherence of popular smoking cessation mobile applications to evidence-based guidelines. *BMC Public Health;* 19:743.
- Vaggers S, Puri P, Wagenlehner F, Somani BK. A content analysis of mobile phone applications for the diagnosis, treatment, and prevention of urinary tract infections, and their compliance with European Association of Urology guidelines on urological infections. *Eur Urol Focus.* 2021; 7:198-204.
- Escrive-Escuder A, De-Torres I, Roldán-Jiménez C, et al. Assessment of the quality of mobile applications (apps) for management of low back pain using the Mobile App Rating Scale (MARS). *Int J Environ Res Public Health.* 2020; 17:9209.
- Kernebeck S, Busse TS, Böttcher MD, et al. Impact of mobile health and medical applications on clinical practice in gastroenterology. *World J Gastroenterol.* 2020; 26:4182-97.
- Martínez-Pérez B, de la Torre-Díez I, López-Coronado M. Mobile health applications for the most prevalent conditions by the World Health Organization: review and analysis. *J Med Internet Res.* 2013; 15(6):e120.
- Optale G, Burigat S, Chittaro L, Riva G. Smartphone-based therapeutic exercises for men affected by premature ejaculation: a pilot study. *Sex Med.* 2020; 8:461-71.
- Terhorst Y, Philipp P, Sander LB, et al. Validation of the Mobile Application Rating Scale (MARS). Moitra E, curatore. *PLOS ONE.* 2020; 15:e0241480.
- Dantas LO, Carvalho C, Prando BC, et al. Mobile health technologies for the management of rheumatic diseases: a systematic review of online stores in Brazil. *Clin Rheumatol.* 2021; 40:2601-9.
- Moglia ML, Nguyen HV, Chyjek K, et al. Evaluation of smartphone menstrual cycle tracking applications using an adapted APPLICATIONS Scoring System. *Obstet Gynecol.* 2016; 127:1153-60.
- Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ.* 2021; 372:n71.
- Luigi Napolitano, Giovanni Maria Fusco, Luigi Cirillo, et al. Erectile dysfunction and mobile phone applications: Quality, content and adherence to European Association guidelines on male sexual dysfunction. *Arch Ital Urol Androl.* 2022; 94:211-216.
- Jupp JCY, Sultani H, Cooper CA, et al. Evaluation of mobile phone

applications to support medication adherence and symptom management in oncology patients. *Pediatr Blood Cancer*. 2018; 65:e27278.

30. Narrillos-Moraza Á, Gómez-Martínez-Sagrera P, Amor-García MÁ, et al. Mobile apps for hematological conditions: review and content analysis using the mobile app rating scale. *JMIR MHealth UHealth*. 2022; 10:e32826.

31. Kwan YH, Ong WJ, Xiong M, et al. Evaluation of mobile apps targeted at patients with spondyloarthritis for disease monitoring: systematic app search. *JMIR MHealth UHealth*. 2019; 7:e14753.

32. Knitz J, Tascilar K, Messner EM, et al. German mobile apps in

rheumatology: review and analysis using the Mobile Application Rating Scale (MARS). *JMIR MHealth UHealth*. 2019; 7:e14991.

33. Jiang M, Yan G, Deng H, et al. The efficacy of regular penis-root masturbation, versus Kegel exercise in the treatment of primary premature ejaculation: A quasi-randomised controlled trial. *Andrologia*. 2020; 52:e13473

34. Pastore AL, Palleschi G, Fuschi A, et al. Pelvic floor muscle rehabilitation for patients with lifelong premature ejaculation: a novel therapeutic approach. *Ther Adv Urol*. 2014; 6:83-8.

35. Pischedda A, Fusco F, Curreli A, et al. Pelvic floor and sexual male dysfunction. *Arch Ital Urol Androl*. 2013; 85:1-7.

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