División de Ciencias Biológicas y de la Salud

Departamento de Sistemas Biológicos

Licenciatura en Químico Farmacéutico Biólogo

Informe del Servicio Social

Necesidades de información sobre medicamentos en hospitales psiquiátricos de la CONASAMA

Alumna: Diego Iván Mata Martínez

Matricula: 2182028344

Asesora Interna

Dra. Norma Angélica Noguez Méndez. No. Eco.17902

Asesora Externa

Dra. Copytzy Cruz Cruz. No. de cédula: 11511286

Lugar de realización: Comisión Nacional de Salud Mental y Adicciones (CONASAMA), Sede clínica: Hospital Psiquiátrico Fray Bernardino Álvarez. C. Niño Jesús 2, Niño Jesús, Tlalpan, 14080 Ciudad de México, CDMX

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INTRODUCCIÓN

Es necesario tener información con base científica en medicamentos en salud mental debido al uso racional de los medicamentos (URM), el cual se establece cuando "los pacientes reciben de manera oportuna la medicación adecuada a sus necesidades clínicas, en las dosis correspondientes a sus requisitos individuales, durante un período de tiempo adecuado y al menor costo posible; asegurando de esta manera el uso de medicamentos sólo cuando sean requeridos y que el paciente o su cuidador identifique claramente el motivo de su uso y la forma correcta de utilizarlos en las dosis, intervalos y períodos de tiempo indicados por el profesional de la salud, promoviendo así el apego al tratamiento y la calidad en el cuidado de la salud de los pacientes." (COFEPRIS, 2019). De este modo, es necesario tener información de fuentes científicas rígidas y actualizadas para que tanto el personal de salud como los pacientes conozcan acerca del medicamento del cual se le está administrando, para tener conocimiento acerca de reacciones adversas, interacciones del medicamento, dosis, etc.

Marco Teórico

Centro de Información de Medicamentos (CIM)

Un Centro de Información de Medicamentos dentro del HPFBA sería de suma importancia debido a que promueve el uso racional de medicamentos mediante la información técnica-científica, objetiva, actualizada, oportuna y pertinente debidamente procesada y evaluada. Por otra parte, un CIM permite atender y satisfacer necesidades individuales de información de medicamentos en un tiempo corto, de amplia cobertura y a bajo costo. Colabora en la disminución de los costos de servicios de salud atribuibles al tratamiento terapéutico, tanto en el sector público como en el privado (OPS, 1995).

El CIM puede ser mejorado a partir de un enfoque interdisciplinario en esta actividad, ya que en el sector salud y específicamente en HPFBA serla una forma de afrontar problemas de salud mental, por medio de la participación de profesionales de la salud de diferentes disciplinas científicas enfocadas en la salud.

Es así, que esto último tendría como objetivo junto con el paciente evaluar, diagnosticar, intervenir, establecer objetivos y crear un plan de cuidado para mantener la salud mental del paciente en un estado de bienestar.

En la actualidad, las funciones de un CIM,se clasifican en:

a) Actividades básicas que posibilitan el marco adecuado para el desarrollo de la Atención Farmacéutica y que engloban.
b) Asistenciales, relacionados con la Atención farmacéutica.

Asimismo, un CIM puede contribuir indirectamente en conjunto con las farmacias hospitalarias, a aumentar la efectividad de los tratamientos medicamentosos y a reducir sus costos globales (Juárez *et al.,* 1995). Como menciona Juárez *et al.,* 1995, en algunos países europeos y en los Estados Unidos de América los CIM han resultado ser extremadamente útiles y hoy día constituyen un departamento importante de los hospitales. Lo anterior deja en manifiesto que un CIM puede brindar un gran beneficio social para todo el hospital psiquiátrico, por lo que es importante abordar esta actividad en colaboración (interdisciplinariedad) con otros profesionales de la salud dentro de la institución, para que cada uno aporte sus conocimientos y se nutra de gran manera en el aspecto de conocimientos.

Por lo tanto el presente proyecto, al proponer desarrollar un insumo del CIM, puede aportar conocimiento muy importante a los profesionales de salud dentro de la institución, ya que este aporta información valiosa tanto al médico, enfermero, u otro personal sanitario para contribuir a conocer acerca de reacciones adversas. interacciones medicamentosas, dosis, etc. que pueden servir para no dar tratamiento farmacológico o cambiar este para no poner en riesgo la salud del paciente.

Objetivo General

Evaluar las necesidades de información sobre medicamentos en el ámbito psiquiátrico hospitalario.

Objetivos Específicos

- **I**dentificar los medicamentos esenciales utilizados en hospitales psiquiátricos.

- Realizar una búsqueda sistemática sobre publicaciones científicas acerca de “aplicaciones móviles sobre información de medicación en psiquiatría” de 2019 a 2024.
- Investigar bibliográficamente información sobre farmacodinamia, farmacocinética y seguridad de 3 medicamentos utilizados frecuentemente en los Hospitales Psiquiátricos de la CONASAMA.
- Proponer un bosquejo de modelo de aplicación virtual para consultar información acerca de los medicamentos.

METODOLOGÍA

Para esta sección se realizaron los siguientes pasos para así cumplir con cada objetivo planteado inicialmente:

1. Consultar bases de datos hospitalarias para recopilar información sobre los medicamentos básicos utilizados.
2. Realizar una búsqueda sistemática sobre publicaciones científicas de “aplicaciones móviles sobre información de medicación en psiquiatría”, 2019-2024.
3. Identificar información farmacológica sobre 3 Medicamentos utilizados en hospitales psiquiátricos:
    a. Seleccionar tres medicamentos frecuentemente utilizados y realizar una investigación sobre su farmacodinamia, farmacocinética y seguridad.
    b. Consultar fuentes confiables como libros de farmacología, artículos científicos y bases de datos especializadas (Google Académico, PubMed, DrugBank, Drugs.com, entre otras).
4. Proponer un bosquejo de aplicación virtual que brinde información sobre medicamentos:
    a. Diseñar las secciones específicas sobre la farmacodinamia, farmacocinética y seguridad de los medicamentos, asegurando que la información sea clara y fácil de entender.

b. Validar (si es el caso): Solicita retroalimentación del personal de salud para realizar ajustes y mejoras necesarias antes de la implementación final.

ACTIVIDADES REALIZADAS

En primer lugar, me ubicaron en el **Hospital Psiquiátrico Fray Bernardino Álvarez,** en el área de farmacia. En esta área surtí medicamento a diferentes áreas (pisos) del hospital que lo solicitaba, corroborando los datos de la receta, la cantidad que se brindaba, el visto bueno del médico de piso. Posteriormente se procedía a escribir el lote, la caducidad del medicamento y la cantidad del medicamento que se daba en dicha receta. Por otra parte, realizaba inventarios diariamente tanto de medicamentos controlados como no controlados, verificando que tantas entradas como salidas de estos fueran correctos. Otra actividad fue el recibir insumos de proveedores de distintas empresas, siempre se revisaba la documentación que entregaban para que todo estuviera correcto, sin excepción, en dicha documentación debía estar presente una orden de suministro, contrato, certificado de análisis junto la cédula profesional de la persona que la realizó y verificando que fuera un QFB, QFI, IQ, o uno semejante, registro sanitario (si era el caso, por ejemplo, antibióticos), carta canje y carta de vicios ocultos. En caso de que toda la documentación haya sido correcta, se procedía a verificar el lote y contar la cantidad exacta del insumo recibido de acuerdo con lo que se mencionaba en la orden de suministro.

También en la farmacia hospitalaria se realizaba la semaforización de los medicamentos, esto de acuerdo a la fecha de caducidad de los mismos. En el cual, el color rojo significa una caducidad menor a 6 meses, amarillo entre 6 y 12 meses y verde mayor a 12 meses.

Posteriormente, estuve en farmacia gratuita, en la cual surtía medicamento a los pacientes que pertenecían al programa de gratuidad, se procedía a revisar el carnet del paciente, revisando los datos, la próxima cita y el sello “programa de gratuidad”. Una vez realizado lo anterior, se recibía la receta expedida por

AAMATES para poder saber el medicamento que requería. Regularmente se calculaba dar tratamiento por dos meses debido al desabasto del hospital.

Los viernes se asistió a cursos de capacitación como: seminarios sobre salud mental, en la cuales nos otorgaban constancias de estas mismas, por ejemplo, “Psicofarmacología”, “Manejo, cuidado y uso racional de medicamentos para evitar errores de medicación”, “Prevención del suicidio”, entre otras.

METAS ALCANZADAS

Se propuso para un futuro Centro de Información de Medicamentos para poder apoyar al personal de salud y los pacientes del HPFBA en temas de medicamentos para evitar problemas relacionados con estos.

Se logro dar un servicio eficiente en la dispensación del medicamento al paciente en la farmacia hospitalaria.

Con los cursos brindados sobre los procedimientos normalizados de operación (PNO) se apoyó al Hospital psiquiátrico “Dr. Samuel Ramírez Moreno” en la elaboración de estos para el funcionamiento de la farmacia.

RESULTADOS Y CONCLUSIONES

Se realizó la lista de los medicamentos esenciales en el ámbito psiquiátrico con base al cuadro básico del IMSS Grupo No 19: Psiquiatría, en el cual se enlistan los siguientes medicamentos:

• Alprazolam • Amitriptilina • Bromazepam • Citalopram • Diazepam • Escitalopram • Flunitrazepam • Fluoxetina • Imipramina • Lorazepam • Paroxetina • Triazolam • Anfebutamona o Bupropión • Aripiprazol • Clozapina • Duloxetina	• Flupentixol • Haloperidol • Levomepromazina • Carbonato de litio • Mirtazapina • Olanzapina • Paliperidona • Quetiapina • Reboxetina • Risperidona • Sertralina • Sulpirida • Trifluoperazina • Venlafaxina • Ziprasidona • Zuclopentixol

Posteriormente, se realizó la búsqueda sistemática a partir de PubMed y Cochrane con los siguientes términos de búsqueda:

(((mobile app) OR (digital sites)) OR (software)) AND (((drugs information) OR (pharmacy)) OR (medicine)) Filters: Free full text, Systematic Review, in the last 5 years

Posteriormente, se descargó en archivo Excel tanto de PubMed como de Cochrane el título, autor, y año de cada artículo para hacer una base de datos. Se descartaron los títulos repetidos y con ello la cantidad se redujo. Después de tener la base de datos, se procedió a obtener el abstract de cada artículo, y los que no cumplieran con los criterios de inclusión se descartaron.

Ulteriormente, se hizo una revisión por pares de dichos artículos para que tanto el asesor externo como otro ayudante descartaran o aceptaran los artículos seleccionados con anterioridad. Con base en lo anterior se hizo una tabla en la cual se dividía por columnas haciendo mención de nombre del primer autor y año de publicación, objetivos y métodos, resultado principal y resultados secundarios.

Otro punto para cumplir fue la búsqueda bibliográfica de 3 medicamentos usados regularmente en los hospitales de CONASAMA, los cuales fueron los siguientes:

- Risperidona:

Es un antipsicótico de segunda generación utilizado para el tratamiento de varios trastornos mentales, como la esquizofrenia, la manía bipolar, la psicosis o también como un complemento en la depresión grave.

a) Farmacodinamia: Disminuye la actividad de las vías dopaminérgicas y serotoninérgicas en el cerebro, por lo cual disminuye los síntomas de esquizofrenia y trastornos del estado de ánimo. Tiene una alta afinidad por los receptores serotoninérgicos 5-HT2A en comparación con los receptores dopaminérgicos D2 en el cerebro.
b) Farmacocinética:
    I) Absorción: biodisponibilidad oral absoluta es de 70%. La biodisponibilidad oral absoluta de una tableta es de 94% en comparación a una solución.
    II) Volumen de distribución: Aproximadamente de 1 a 2 L/kg.
    III) Metabolismo: Metabolizado ampliamente por la isoenzima 2D6 del citocromo P450 hepático a 9-hidroxirisperidona (es decir, paliperidona). La hidroxilación depende de la debrisoquina 4-hidroxilasa y el metabolismo es sensible a los polimorfismos genéticos en la debrisoquina 4 -hidroxilasa. La risperidona también sufre N-desalquilación en menor medida.
    IV) Ruta de eliminación: se metaboliza ampliamente en el hígado.
    V) Vida media: 3 horas en metabolizadores rápidos, hasta 20 horas en metabolizadores lentos.
    VI) Depuración: se elimina por vía renal. El aclaramiento disminuye en ancianos y en aquellos con alargamiento de creatinina entre 15 y 59 mL/min, disminuye aproximadamente un 60%.
    VII) Toxicidad: Los síntomas con sobredosis incluyen el letargo, distonía/espasmo, taquicardia, bradicardia y convulsiones.

- Haloperidol:

Es un antipsicótico típico usado para el tratamiento de esquizofrenia y otras psicosis, así como también síntomas de agitación, irritabilidad y delirio.

a) Farmacodinamia: Ejerce su efecto antipsicótico a través de su fuerte antagonismo del receptor de dopamina (principalmente D2), en particular en los sistemas mesolímbico y mesocortical del cerebro. Se une más fuertemente que la dopamina misma al receptor D2 de dopamina, con constantes de disociación que son más bajas que las de la dopamina. 4 Se cree que el haloperidol bloquea competitivamente los receptores de dopamina (D2) postsinápticos en el cerebro.

b) Farmacocinética:
   I) Absorción: Los valores farmacocinéticos del haloperidol administrado por vía oral, con 1.7 a 6.1 horas informadas para el tiempo hasta la concentración plasmática máxima (tmax), 14.5 a 36.7 horas informadas para la vida media (t½) y 43.73 µg/L•h [14.89 a 120.96 µg/L•h] informado para el AUC. Se absorbe bien en el tracto gastrointestinal cuando se ingiere por vía oral, sin embargo, el metabolismo hepático de primer paso disminuye su biodisponibilidad oral al 40 - 75%.
   II) Volumen de distribución: Oscila entre 9.5 y 21.7 L/kg.
   III) Metabolismo: Se metaboliza ampliamente en el hígado y sólo alrededor del 1% de la dosis administrada se excreta sin cambios en la orina. Se biotransforma en diversos metabolitos, entre ellos el ácido p-fluorobenzoilpropiónico, la 4-(4-clorofenil)-4-hidroxipiperidina, el haloperidol reducido, los metabolitos de piridinio y el glucurónido de haloperidol. Las enzimas implicadas en la biotransformación del haloperidol incluyen el citocromo P450 (CYP), que incluye CYP3A4 y

      CYP2D6, la carbonil reductasa y la uridina difosfoglucosa glucuronosiltransferasa.
   IV) Ruta de eliminación: Aproximadamente el 30% de la radiactividad

se excreta en la orina después de una única administración oral, mientras que el 18% se excreta en la orina como glucurónido de haloperidol, lo que demuestra que es un metabolito importante en la orina así como en el plasma en humanos.

V) Vida media: tras una administración oral, 14.5 a 36.7 horas. Tras una administración intramuscular, 20.7 horas.

VI) Depuración: tras la administración intravenosa, el aclaramiento plasmático o sérico (CL) fue de 0,39 a 0,708 L/h/kg (6,5 a 11,8 ml/min/kg). Tras la administración oral, el aclaramiento fue de 141,65 L/h (rango de 41,34 a 335,80 L/h). La tasa se reduce en los metabolizadores lentos de la enzima CYP2D6

VII) Toxicidad: Toxicidad oral aguda (DL50): 71 mg/kg (en ratas).

- Escitalopram:

Es un antidepresivo inhibidor selectivo de la recaptación de serotonina usado en el tratamiento de trastorno de depresión mayo, trastorno de ansiedad generalizada y otros trastornos psiquiátricos como el trastorno obsesivo compulsivo (TOC).

a) Farmacodinamia: estos medicamentos por ser un inhibidor selectivo de la recaptación de serotonina provocan un aumento de los niveles de serotonina en las sinapsis neuronales al impedir la recaptación de 5-HT en las terminales presinápticas de las neuronas serotoninérgicas.

b) Farmacocinética:

I) Absorción: después de que la administración oral sea casi completa, con una biodisponibilidad absoluta estimada de aproximadamente el 80%. El Tmax ocurre después de aproximadamente 4 a 5 horas. La Cmax y el AUC parecen seguir la proporcionalidad de la dosis.

II) Volumen de distribución: parece distribuirse ampliamente en los tejidos, con un volumen de distribución aparente de aproximadamente 12 a 26 L/kg.

III) Metabolismo: es principalmente hepático, mediado principalmente por CYP2C19 y CYP3A4 y, en menor medida, CYP2D6. La N-desmetilación oxidativa por el sistema enzimático CYP da como resultado S-desmetilcitalopram (S-DCT) y S-didesmetilcitalopram (S-DDCT).

IV) Ruta de eliminación: Aproximadamente el 8% de la dosis total se elimina en la orina como escitalopram inalterado y el 10% se elimina en la orina como S-desmetilcitalopram. El aclaramiento hepático aparente de escitalopram asciende aproximadamente al 90% de la dosis total.

V) Vida media: Es de 27 a 32 horas, aunque aumenta aproximadamente un 50% en los ancianos y se duplica en pacientes con función hepática reducida. La vida media de eliminación del metabolito primario del escitalopram, S-desmetilcitalopram, es de aproximadamente 54 horas en estado estacionario

VI) Depuración: 600 mL/min, del cual aproximadamente el 7% se debe al aclaramiento renal

VII) Toxicidad: Los síntomas de sobredosis pueden incluir efectos sobre el SNC (mareos, convulsiones, coma, somnolencia), malestar gastrointestinal (náuseas, vómitos) y/o anomalías cardíacas (hipotensión, taquicardia, cambios en el ECG).

Por último, se obtuvo una tabla con la información más relevante obtenida a partir de la búsqueda sistemática. Con base en esto, se puede plantea una idea con las características más importantes con ayuda de los artículos recopilados para establecer una aplicación digital donde el personal de salud así como los pacientes puedan consultar información sobre lo que están medicando o en su defecto los pacientes consultar si el medicamento que está tomando afecte por algún otro medicamento o cualquier alimento o bebida.

En conclusión, realizar el servicio social en un área poco recurrida por los farmacéuticos abrió mucho las puertas en las sedes en las que estábamos cada

uno de nosotros, fue grato poco a poco ver como el demás personal de salud convivía y nos tomaba en cuenta para debatir o conocer acerca del tema relacionado con medicamentos, ya que muchas veces desconocían puntos importante acerca de esto. Por ejemplo, el simple hecho de que los medicamentos no debían guardarse en lugares específicos, o que debían estar a cierta temperatura y humedad para conservar el estado óptimo de este. Otro punto importante fue abordar de manera extensa temas sobre salud mental, ya que actualmente es un estigma muy grande en la sociedad y debemos todos contribuir a solucionar ese problema de salud, ya que en los últimos años y sobre todo por la pandemia, se incrementó la tasa de incidencia de diversas enfermedades de salud mental que antes no era tan común que se presentaran. Por último, el servicio social me ayudó a desenvolver mis conocimiento y aptitudes que fui construyendo durante toda la carrera universitaria, por lo que al final y desde mi perspectiva, me superé siendo tanto estudiante como persona ya en el mundo laboral, mejorando día con día durante el periodo que realicé el servicio social.

RECOMENDACIONES

Realizar difusión en el hospital entre familiares y pacientes resaltando la importancia que tiene la salud mental fomentando la participación por parte de los estudiantes de servicio social.

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Anexos

Tabla de Estudios.

	Title	Authors	Citation	Journal/Book	Publication Year		Abstract	Estado	Joule	comentarios
2	A Patient-Oriented App (ThessHF) to Improve Self-Care Quality in Heart Failure: From Evidence-Based Design to Pilot Study	Bakogiannis C	JMIR Mhealth U	JMIR Mhealth U	2021		Background: Heart failure (HF) remains a major public health challenge, while HF self-care is particularly challenging. Mobile health (mHealth)-based interventions taking advantage of smartphone technology have shown particular promise in increasing the quality of self-care among these patients, and in turn improving the outcomes of their disease. Objective: The objective of this study was to co-develop with physicians, patients with HF, and their caregivers a patient-oriented mHealth app, perform usability assessment, and investigate its effect on the quality of life of patients with HF and rate of hospitalizations in a pilot study. Methods: The development of an mHealth app (The Hellenic Educational Self-care and Support Heart Failure app [ThessHF app]) was evidence based, including features based on previous clinically tested mHealth interventions and selected by a panel of HF expert physicians and discussed with patients with HF. At the end of alpha development, the app was rated by mHealth experts with the Mobile Application Rating Scale (MARS). The beta version was tested by patients with HF, who rated its design and content by means of the Post-Study System Usability Questionnaire (PSSUQ). Subsequently, a prospective pilot study (THESS-HF [THe Effect of a Specialized Smartphone app on Heart Failure patients' quality of self-care, quality of life and hospitalization rate]) was performed to investigate the effect of app use on patients with HF over a 3-month follow-up period. The primary endpoint was patients' quality of life, which was measured with the Kansas City Cardiomyopathy Questionnaire (KCCQ) and the 5-level EQ-5D version (EQ-5D-5L). The secondary endpoints were the European Heart Failure Self-care Behavior Scale (EHFScBS) score and the hospitalization rate. Results: A systematic review of mHealth-based HF interventions and expert panel suggestions yielded 18 separate app features, most of which were incorporated into the ThessHF app. A total of 14 patients and 5 mHealth experts evaluated the app. The results demonstrated a very good user experience (overall PSSUQ score 2.37 [SD 0.63], where 1 is the best, and a median MARS score of 4.55/5). Finally, 30 patients (male: n=26, 87%) participated in the THESS-HF pilot study (mean age 68.7 [SD 12.4] years). A significant increase in the quality of self-care was noted according to the EHFScBS, which increased by 4.4% (SD 7.2%) (P=.002). The mean quality of life increased nonsignificantly after 3 months according to both KCCQ (mean increase 5.8 [SD 15] points, P=.054) and EQ-5D-5L (mean increase 5.6% [SD 15.6%], P=.06) scores. The hospitalization rate for the follow-up duration was 3%. Conclusions: The need for telehealth services and remote self-care management in HF is of vital importance, especially in periods such as the COVID-19 pandemic. We developed a user-friendly mHealth app to promote remote self-care support in HF. In this pilot study, the use of the ThessHF app was associated with an increase in the quality of self-care. A future multicenter study will investigate the effect of the app use on long-term outcomes in patients with HF. Keywords: COVID-19; caregivers; heart failure; mHealth; patients; self-care; smartphone app.	Aceptado		
4	A systematic review and meta-analysis of digital application use in clinical research in pain medicine	Shetty A, Delar	Front Digit Hea	Front Digit Hea	2022		Importance: Pain is a silent global epidemic impacting approximately a third of the population. Pharmacological and surgical interventions are primary modes of treatment. Cognitive/behavioural management approaches and interventional pain management strategies are approaches that have been used to assist with the management of chronic pain. Accurate data collection and reporting treatment outcomes are vital to addressing the challenges faced. In light of this, we conducted a systematic evaluation of the current digital application landscape within chronic pain medicine. Objective: The primary objective was to consider the prevalence of digital application usage for chronic pain management. These digital applications included mobile apps, web apps, and chatbots. Data sources: We conducted searches on PubMed and ScienceDirect for studies that were published between 1st January 1990 and 1st January 2021. Study selection: Our review included studies that involved the use of digital applications for chronic pain conditions. There were no restrictions on the country in which the study was conducted. Only studies that were peer-reviewed and published in English were included. Four reviewers had assessed the eligibility of each study against the inclusion/exclusion criteria. Out of the 84 studies that were initially identified, 38 were included in the systematic review. Data extraction and synthesis: The AMSTAR guidelines were used to assess data quality. This assessment was carried out by 3 reviewers. The data were pooled using a random-effects model. Main outcomes and measures: Before data collection began, the primary outcome was to report on the standard mean difference of digital application usage for chronic pain conditions. We also recorded the type of digital application studied (e.g., mobile application, web application) and, where the data was available, the standard mean difference of pain intensity, pain inferences, depression, anxiety, and fatigue. Results: 38 studies were included in the systematic review and 22 studies were included in the meta-analysis. The digital interventions were categorised to web and mobile applications and chatbots, with pooled standard mean difference of 0.22 (95% CI: -0.16, 0.60), 0.30 (95% CI: 0.00, 0.60) and -0.02 (95% CI: -0.47, 0.42) respectively. Pooled standard mean differences for symptomatologies of pain intensity, depression, and anxiety symptoms were 0.25 (95% CI: 0.03, 0.46), 0.30 (95% CI: 0.17, 0.43) and 0.37 (95% CI: 0.05, 0.69), respectively. A sub-group analysis was conducted on pain intensity due to the heterogeneity of the results (I2 = 82.86%; p = 0.02). After stratifying by country, we found that digital applications were more likely to be effective in some countries (e.g., United States, China) than others (e.g., Ireland, Norway). Conclusions and relevance: The use of digital applications in improving pain-related symptoms shows promise, but further clinical studies would be needed to develop more robust applications. Systematic review registration: https://www.crd.york.ac.uk/prospero/, identifier: CRD42021228343. Keywords: chronic pain; digital app; digital medicine; mHealth; pain management.	Aceptado		
5	A Systematic Review and Meta-Analysis of the Effects of Rehabilitation Using Digital Healthcare on Musculoskeletal Pain and Quality of Life	Jang S, Lee B, L	J Pain Res. 202	J Pain Res	2023		Rehabilitation using digital healthcare (DHC) has the potential to enhance the effectiveness of treatment for musculoskeletal disorders (MSDs) and associated pain by improving patient outcomes, while being cost-effective, safe, and measurable. This systematic review and meta-analysis aimed to evaluate the effectiveness of musculoskeletal rehabilitation using DHC. We searched PubMed, Ovid-Embase, Cochrane Library, and PEDro Physiotherapy Evidence Database from inception to October 28, 2022 for controlled clinical trials comparing DHC to conventional rehabilitation. We used a random-effects model for the meta-analysis, pooling the effects of DHC on pain and quality of life (QoL) by calculating standardized mean differences (SMDs) with 95% confidence intervals (CIs) between DHC rehabilitation and conventional rehabilitation (control). Fifty-four studies with 6240 participants met the inclusion criteria. The sample size ranged from 26 to 461, and the average age of the participants ranged from 21.9 to 71.8 years. The majority of the included studies focused on knee or hip joint MSD (n = 23), and the most frequently utilized DHC interventions were mobile applications (n = 26) and virtual or augmented reality (n = 16). Our meta-analysis of pain (n = 45) revealed that pain reduction was greater in DHC rehabilitation than in conventional rehabilitation (SMD: -0.55, 95% CI: -0.74, -0.36), indicating that rehabilitation using DHC has the potential to ameliorate MSD pain. Furthermore, DHC significantly improved health-related QoL and disease-specific QoL (SMD: 0.66, 95% CI: 0.29, 1.03; SMD: -0.44, 95% CI: -0.87, -0.01) compared to conventional rehabilitation. Our findings suggest that DHC offers a practical and flexible rehabilitation alternative for both patients with MSD and healthcare professionals. Nevertheless, further researches are needed to elucidate the underlying mechanisms by which DHC affects patient-reported outcomes, which may vary depending on the type and design of the DHC intervention. Keywords: digital healthcare; musculoskeletal disorder; pain; patient-reported outcomes; quality of life; rehabilitation.	Aceptado		
6	A systematic review of dialectical behavior therapy mobile apps for content and usability	Wilks CR, Gurt	Borderline Per	Borderline Per	2021		Background: The gap between treatment need and treatment availability is particularly wide for individuals seeking Dialectical Behavior Therapy (DBT), and mobile apps based on DBT may be useful in increasing access to care and augmenting in-person DBT. This review examines DBT based apps, with a specific focus on content quality and usability. Methods: All apps referring to DBT were identified in Google Play and iOS app stores and were systematically reviewed for app content and quality. The Mobile App Rating Scale (MARS) was used to evaluate app usability and engagement. Results: A total of 21 free to download apps were identified. The majority of apps (71%) included a component of skills training, five apps included a diary card feature. Most (76.19%) apps were designed to function without help from a therapist. The average user "star" rating was 4.39 out of 5. The mean overall MARS score was 3.41, with a range of 2.15 to 4.59, and 71.43% were considered minimally 'acceptable,' as defined by a score of 3 or higher. The average star rating was correlated with the total MARS score (r = .51, p = .02). Estimates of app usage differed substantially between popular and unpopular apps, with the three most popular apps accounting for 89.3% of monthly active users. Conclusions: While the present study identified many usable and engaging apps in app stores designed based on DBT, there are limited apps for clinicians. DBT based mobile apps should be carefully developed and clinically evaluated. Keywords: Dialectical behavior therapy; Engagement; Usability; mHealth.	Aceptado		Tercer acuerdo se queda_terapia dialectica a distancia
7	A systematic review of healthcare provider-targeted mobile applications for non-communicable diseases in low- and middle-income countries	Geldsetzer P, F	NPJ Digit Med.	NPJ Digit Med	2022		Mobile health (mHealth) interventions hold promise for addressing the epidemic of noncommunicable diseases (NCDs) in low- and middle-income countries (LMICs) by assisting healthcare providers managing these disorders in low-resource settings. We aimed to systematically identify and assess provider-facing mHealth applications used to screen for, diagnose, or monitor NCDs in LMICs. In this systematic review, we searched the indexing databases of PubMed, Web of Science, and Cochrane Central for studies published between January 2007 and October 2019. We included studies of technologies that were: (i) mobile phone- or tablet-based, (ii) able to screen for, diagnose, or monitor an NCD of public health importance in LMICs, and (iii) targeting health professionals as users. We extracted disease type, intervention purpose, target population, study population, sample size, study methodology, technology stage, country of development, operating system, and cost. Our initial search retrieved 13,262 studies, 315 of which met inclusion criteria and were analyzed. Cardiology was the most common clinical domain of the technologies evaluated, with 89 publications. mHealth innovations were predominantly developed using Apple's iOS operating system. Cost data were provided in only 50 studies, but most technologies for which this information was available cost less than 20 USD. Only 24 innovations targeted the ten NCDs responsible for the greatest number of disability-adjusted life years lost globally. Most publications evaluated products created in high-income countries. Reported mHealth technologies are well-developed, but their implementation in LMICs faces operating system incompatibility and a relative neglect of NCDs causing the greatest disease burden.	No aceptado		Tercer acuerdo se queda_
8	A Systematic Review on Mobile Health Applications' Education Program for Patients Taking Oral Anticoagulants	Jang I.	Int J Environ R	Int J Environ R	2021		Warfarin is widely used as an oral anticoagulant. However, it is difficult to manage patients due to its narrow therapeutic range and individualized differences. Using controlled trials and real-world observational studies, this systematic review aimed to analyze health education's impact among patients on warfarin therapy by mobile application. Smartphone and tablet applications have the potential to actively educate patients by providing them with timely information through push notifications. MEDLINE, EMBASE, CINAHL, Web of Science, and Cochrane electronic databases were searched using the keywords "anticoagulants," "warfarin", "mobile application", and "smartphone" up to May 2020. Of the 414 articles obtained, 12 articles met the inclusion criteria for this review. The education and self-management programs using the mobile health application had diverse contents. A meta-analysis was not deemed appropriate because of the heterogeneity of populations, interventions, and outcomes. Thus, a narrative synthesis is presented instead. This review demonstrates that educating patients for anticoagulation management through their smartphones or tablets improves their knowledge levels, medication or treatment adherence, satisfaction, and clinical outcomes. Moreover, it has a positive effect on continuing health care. Future research concerning patients taking warfarin should include key self-management outcomes in larger, more rigorously designed studies, allowing for comparisons across studies. This study proposes a continuous application of timely education through smartphone applications to the current medical and nursing practice. Keywords: systematic review, oral anticoagulants, nursing, application, self-management	Aceptado		

15	Aplicaciones mÃ³viles para la prevenciÃ³n del suicidio en adolescentes y adultos jÃ³venes/ Suicide prevention mobile applications for adolescents and young adults	HernÃ¡ndez-R	Rev. cub. inf. c	LILACS	2020	1677-5538	Suicide is a public health problem causing 800 000 deaths a year worldwide. A large number of interventions, among them mobile applications, digital devices and online resources, have shown promising results for its prevention. The purpose of the study was to conduct a literature review about the usefulness of mobile applications in primary health care to prevent suicide among adolescents and young adults. A bibliographic search was performed to identify mobile application-based suicide prevention strategies aimed at adolescents and young adults. Three information analysis / synthesis categories were established: needs of patients at risk of committing suicide, mobile health and suicide prevention, and limitations of suicide prevention applications. The literature indicates that mobile applications may be useful to manage mental disease, in conjunction with conventional therapy. Keywords: Suicide; prevention and control; mobile applications; adolescent; young adult; Primary Health Care	Aceptado		
16	Applications of digital health for public health responses to COVID-19: a systematic scoping review of artificial intelligence, telehealth and related technologies	Gunasekeran [	NPJ Digit Med.	NPJ Digit Med	2021		The coronavirus disease 2019 (COVID-19) pandemic has overwhelmed healthcare services, faced with the twin challenges in acutely meeting the medical needs of patients with COVID-19 while continuing essential services for non-COVID-19 illnesses. The need to re-invent, re-organize and transform healthcare and co-ordinate clinical services at a population level is urgent as countries that controlled initial outbreaks start to experience resurgences. A wide range of digital health solutions have been proposed, although the extent of successful real-world applications of these technologies is unclear. This study aims to review applications of artificial intelligence (AI), telehealth, and other relevant digital health solutions for public health responses in the healthcare operating environment amidst the COVID-19 pandemic. A systematic scoping review was performed to identify potentially relevant reports. Key findings include a large body of evidence for various clinical and operational applications of telehealth (40.1%, n = 99/247). Although a large quantity of reports investigated applications of artificial intelligence (AI) (44.9%, n = 111/247) and big data analytics (36.0%, n = 89/247), weaknesses in study design limit generalizability and translation, highlighting the need for more pragmatic real-world investigations. There were also few descriptions of applications for the internet of things (IoT) (2.0%, n = 5/247), digital platforms for communication (DC) (10.9%, 27/247), digital solutions for data management (DM) (1.6%, n = 4/247), and digital structural screening (DS) (8.9%, n = 22/247); representing gaps and opportunities for digital public health. Finally, the performance of digital health technology for operational applications related to population surveillance and points of entry have not been adequately evaluated.	No aceptado		Tercer acuerdo, se queda
17	Apps y Medicina: una visiÃ³n global y la situaciÃ³n chilena/ An appraisal of healthcare mobile applications	Tala, Ã lvaro; VÃ	Rev. mÃ©d. Ch	LILACS	2022		Mobile applications (Apps) may become effective aids in health care. Health Apps could reduce barriers such as access and costs and could be used to monitor symptoms, behaviors and even treatments. There is more evidence of their usefulness in nutrition, cardiovascular and mental health. Despite this, its current use is predominantly for information purposes. Healthcare App quality evaluation should consider both clinical and technological aspects since the evidence on its clinical effectiveness is still incipient and they have associated risks. In Chile, the use of mobile technology and Apps is increasing, but there are no regulations for their use. There are few national institutions oriented to the creation and development of Apps for healthcare, highlighting the Digital Transformation Committee, part of the Corporation for the Promotion of Production (CORFO) and the National Center for Health Information Systems (CENS). General recommendations for healthcare App development and use have been established. In this process, it would be beneficial to include actors involved in care. Given the progress of healthcare Apps worldwide and nationally, it is important that health professionals develop digital skills to maximize the potential benefit of these technologies.	Aceptado		
18	Assessment of the Fairness of Privacy Policies of Mobile Health Apps: Scale Development and Evaluation in Cancer Apps	Benjumea J, Ro	JMIR Mhealth U	JMIR Mhealth U	2020		Background: Cancer patients are increasingly using mobile health (mHealth) apps to take control of their health. Many studies have explored their efficiency, content, usability, and adherence; however, these apps have created a new set of privacy challenges, as they store personal and sensitive data. Objective: The purpose of this study was to refine and evaluate a scale based on the General Data Protection Regulation and assess the fairness of privacy policies of mHealth apps. Methods: Based on the experience gained from our previous work, we redefined some of the items and scores of our privacy scale. Using the new version of our scale, we conducted a case study in which we analyzed the privacy policies of cancer Android apps. A systematic search of cancer mobile apps was performed in the Spanish version of the Google Play website. Results: The redefinition of certain items reduced discrepancies between reviewers. Thus, use of the scale was made easier, not only for the reviewers but also for any other potential users of our scale. Assessment of the privacy policies revealed that 29% (9/31) of the apps included in the study did not have a privacy policy, 32% (10/31) had a score over 50 out of a maximum of 100 points, and 39% (12/31) scored fewer than 50 points. Conclusions: In this paper, we present a scale for the assessment of mHealth apps that is an improved version of our previous scale with adjusted scores. The results showed a lack of fairness in the mHealth app privacy policies that we examined, and the scale provides developers with a tool to evaluate their privacy policies.	Aceptado		
19	Benefits of Mobile Apps for Cancer Pain Management: Systematic Review	Zheng C, Chen	JMIR Mhealth U	JMIR Mhealth U	2020		Background: Pain ratings reported by patients with cancer continue to increase, and numerous computer and phone apps for managing cancer-related pain have been developed recently; however, whether these apps effectively alleviate patients' pain remains unknown. Objective: This study aimed to comprehensively evaluate the role of mobile apps in the management of cancer pain. Methods: Literature on the use of apps for cancer pain management and interventions, published before August 2019, was retrieved from the following databases: MEDLINE, Embase, Cochrane, CINAHL, Scopus, and PsycINFO. The effects of apps on cancer pain were evaluated using RevMan5.3 software, and the rates of adverse drug reactions were analyzed using the R Statistical Software Package 3.5.3. Results: A total of 13 studies were selected for the analysis: 5 randomized controlled trials (RCTs), 4 before-after studies, 2 single-arm trials, 1 prospective cohort study, and 1 prospective descriptive study. The 5 RCTs reported data for 487 patients (240 patients in the intervention group and 247 patients in the control group), and the remaining studies reported data for 428 patients. We conducted a meta-analysis of the RCTs. According to the meta-analysis, apps can significantly reduce pain scores (mean difference [MD]=−0.50, 95% CI −0.94 to −0.07, I2=62%, P=.02). We then used apps that have an instant messaging module for subgroup analysis; these apps significantly reduced patients' pain scores (MD=−0.67, 95% CI −1.06 to −0.28, I2=57%, P<.01). Patients using apps without an instant messaging module did not see a reduction in the pain score (MD=0.30, 95% CI −1.31 to 1.92, I2=70%, P=.71). Overall, patients were highly satisfied with using apps. Other outcomes, such as pain catastrophizing or quality of life, demonstrated greater improvement in patients using apps with instant messaging modules compared with patients not using an app. Conclusions: The use of apps with instant messaging modules is associated with reduced pain scores in patients with cancer-related pain, and patient acceptance of these apps is high. Apps without instant messaging modules are associated with relatively higher pain scores. The presence of an instant messaging module may be a key factor affecting the effect of an app on cancer pain.	Aceptado		
21	Characteristics of Mobile Health Platforms for Depression and Anxiety: Content Analysis Through a Systematic Review of the Literature and Systematic Search of Two App Stores	Leong QY, Srid	J Med Internet	J Med Internet	2022		Background Mobile health (mHealth) platforms show promise in the management of mental health conditions such as anxiety and depression. This has resulted in an abundance of mHealth platforms available for research or commercial use. Objective The objective of this review is to characterize the current state of mHealth platforms designed for anxiety or depression that are available for research, commercial use, or both. Methods A systematic review was conducted using a two-pronged approach: searching relevant literature with prespecified search terms to identify platforms in published research and simultaneously searching 2 major app stores—Google Play Store and Apple App Store—to identify commercially available platforms. Key characteristics of the mHealth platforms were synthesized, such as platform name, targeted condition, targeted group, purpose, technology type, intervention type, commercial availability, and regulatory information. Results The literature and app store searches yielded 169 and 179 mHealth platforms, respectively. Most platforms developed for research purposes were designed for depression (116/169, 68.6%), whereas the app store search reported a higher number of platforms developed for anxiety (Android: 58/179, 32.4%; iOS: 27/179, 15.1%). The most common purpose of platforms in both searches was treatment (literature search: 122/169, 72.2%; app store search: 129/179, 72.1%). With regard to the types of intervention, cognitive behavioral therapy and referral to care or counseling emerged as the most popular options offered by the platforms identified in the literature and app store searches, respectively. Most platforms from both searches did not have a specific target age group. In addition, most platforms found in app stores lacked clinical and real-world evidence, and a small number of platforms found in the published research were available commercially. Conclusions A considerable number of mHealth platforms designed for anxiety or depression are available for research, commercial use, or both. The characteristics of these mHealth platforms greatly vary. Future efforts should focus on assessing the quality—utility, safety, and effectiveness—of the existing platforms and providing developers, from both commercial and research sectors, a reporting guideline for their platform description and a regulatory framework to facilitate the development, validation, and deployment of effective mHealth platforms. Keywords: mHealth, digital medicine, anxiety, depression, systematic review, mental health conditions, mobile phone	Aceptado		
22	Collection and Analysis of Adherence Information for Software as a Medical Device Clinical Trials: Systematic Review	Grayek E, Krish	JMIR Mhealth U	JMIR Mhealth U	2023		Background: The rapid growth of digital health apps has necessitated new regulatory approaches to ensure compliance with safety and effectiveness standards. Nonadherence and heterogeneous user engagement with digital health apps can lead to trial estimates that overestimate or underestimate an app's effectiveness. However, there are no current standards for how researchers should measure adherence or address the risk of bias imposed by nonadherence through efficacy analyses. Objective: This systematic review aims to address 2 critical questions regarding clinical trials of software as a medical device (SaMD) apps: How well do researchers report adherence and engagement metrics for studies of effectiveness and efficacy? and What efficacy analyses do researchers use to account for nonadherence and how appropriate are their methods? Methods: We searched the Food and Drug Administration's registration database for registrations of repeated-use, patient-facing SaMD therapeutics. For each such registration, we searched ClinicalTrials.gov, company websites, and MEDLINE for the corresponding clinical trial and study articles through March 2022. Adherence and engagement data were summarized for each of the 24 identified articles, corresponding to 10 SaMD therapeutics. Each article was analyzed with a framework developed using the Cochrane risk-of-bias questions to estimate the potential effects of imperfect adherence on SaMD effectiveness. This review, funded by the Richard King Mellon Foundation, is registered on the Open Science Framework. Results: We found that although most articles (23/24, 96%) reported collecting information about SaMD therapeutic engagement, of the 20 articles for apps with prescribed use, only 9 (45%) reported adherence information across all aspects of prescribed use: 15 (75%) reported metrics for the initiation of therapeutic use, 16 (80%) reported metrics reporting adherence between the initiation and discontinuation of the therapeutic (implementation), and 4 (20%) reported the discontinuation of the therapeutic (persistence). The articles varied in the reported metrics. For trials that reported adherence or engagement, there were 4 definitions of initiation, 8 definitions of implementation, and 4 definitions of persistence. All articles studying a therapeutic with a prescribed use reported effectiveness estimates that might have been affected by nonadherence; only a few (2/20, 10%) used methods appropriate to evaluate efficacy. Conclusions: This review identifies 5 areas for improving future SaMD trials and studies: use consistent metrics for reporting adherence, use reliable adherence metrics, preregister analyses for observational studies, use less biased efficacy analysis methods, and fully report statistical methods and assumptions. Keywords: adherence; application; clinical trials; compliance; effectiveness; efficacy; engagement; evaluation; mHealth; medical device; mobile health; risk; safety; systematic review; usability.	Aceptado		Tercer acuerdo, se queda

23	Computer programs used in the field of hospital pharmacy for the management of dangerous drugs: systematic review of literature	Climent-Balles	Front Public H	Front Public H	2023		Background This review wants to highlight the importance of computer programs used to control the steps in the management of dangerous drugs. It must be taken into account that there are phases in the process of handling dangerous medicines in pharmacy services that pose a risk to the healthcare personnel who handle them. Objective: To review the scientific literature to determine what computer programs have been used in the field of hospital pharmacy for the management of dangerous drugs (HDs). Methods The following electronic databases were searched from inception to July 30, 2021: MEDLINE (via PubMed), Embase, Cochrane Library, Scopus, Web of Science, Latin American and Caribbean Literature in Health Sciences (LILACS) and Medicine in Spanish (MEDES). The following terms were used in the search strategy: "Antineoplastic Agents," "Cytostatic Agents," "Hazardous Substances," "Medical Informatics Applications," "Mobile Applications," "Software," "Software Design," and "Pharmacy Service, Hospital." Results A total of 104 studies were retrieved form the databases, and 18 additional studies were obtained by manually searching the reference lists of the included studies and by consulting experts. Once the inclusion and exclusion criteria were applied, 26 studies were ultimately included in this review. Most of the applications described in the included studies were used for the management of antineoplastic drugs. The most commonly controlled stage was electronic prescription; 18 studies and 7 interventions carried out in the preparation stage focused on evaluating the accuracy of chemotherapy preparations. Conclusion Antineoplastic electronic prescription software was the most widely implemented software at the hospital level. No software was found to control the entire HD process. Only one of the selected studies measured safety events in workers who handle HDs. Moreover, health personnel were found to be satisfied with the implementation of this type of technology for daily work with these medications. All studies reviewed herein considered patient safety as their final objective. However, none of the studies evaluated the risk of HD exposure among workers. Keywords: antineoplastic agents, cytostatic agents, hazardous substances, medical informatics applications, software, Hospital Pharmacy, patient safety, occupational health	Aceptado		
24	Conducting a systematic review and evaluation of commercially available mobile applications (apps) on a health-related topic: the TECH approach and a step-by-step methodological guide	Gasteiger N, D	BMJ Open. 202	BMJ Open	2023		Objectives To provide an overview of the methodological considerations for conducting commercial smartphone health app reviews (mHealth reviews), with the aim of systematising the process and supporting high-quality evaluations of mHealth apps. Design Synthesis of our research team's experiences of conducting and publishing various reviews of mHealth apps available on app stores and hand-searching the top medical informatics journals (eg, The Lancet Digital Health, npj Digital Medicine, Journal of Biomedical Informatics and the Journal of the American Medical Informatics Association) over the last five years (2018–2022) to identify other app reviews to contribute to the discussion of this method and supporting framework for developing a research (review) question and determining the eligibility criteria. Results We present seven steps to support rigour in conducting reviews of health apps available on the app market: (1) writing a research question or aims, (2) conducting scoping searches and developing the protocol, (3) determining the eligibility criteria using the TECH framework, (4) conducting the final search and screening of health apps, (5) data extraction, (6) quality, functionality and other assessments and (7) analysis and synthesis of findings. We introduce the novel TECH approach to developing review questions and the eligibility criteria, which considers the Target user, Evaluation focus, Connectedness and the Health domain. Patient and public involvement and engagement opportunities are acknowledged, including co-developing the protocol and undertaking quality or usability assessments. Conclusion Commercial mHealth app reviews can provide important insights into the health app market, including the availability of apps and their quality and functionality. We have outlined seven key steps for conducting rigorous health app reviews in addition to the TECH acronym, which can support researchers in writing research questions and determining the eligibility criteria. Future work will include a collaborative effort to develop reporting guidelines and a quality appraisal tool to ensure transparency and quality in systematic app reviews. Keywords: telemedicine, systematic review, health informatics, information technology, statistics & research methods	Aceptado		Tercer acuerdo se queda, ya que podría ayudar a establecer aspectos de calidad de nuestra app
33	Effectiveness and Minimum Effective Dose of App-Based Mobile Health Interventions for Anxiety and Depression Symptom Reduction: Systematic Review and Meta-Analysis	Lu SC, Xu M, W	JMIR Ment Hea	JMIR Ment Hea	2022		Background: Mobile health (mHealth) apps offer new opportunities to deliver psychological treatments for mental illness in an accessible, private format. The results of several previous systematic reviews support the use of app-based mHealth interventions for anxiety and depression symptom management. However, it remains unclear how much or how long the minimum treatment "dose" is for an mHealth intervention to be effective. Just-in-time adaptive intervention (JITAI) has been introduced in the mHealth domain to facilitate behavior changes and is positioned to guide the design of mHealth interventions with enhanced adherence and effectiveness. Objective: Inspired by the JITAI framework, we conducted a systematic review and meta-analysis to evaluate the dose effectiveness of app-based mHealth interventions for anxiety and depression symptom reduction. Methods: We conducted a literature search on 7 databases (ie, Ovid MEDLINE, Embase, PsycInfo, Scopus, Cochrane Library (eg, CENTRAL), ScienceDirect, and ClinicalTrials, for publications from January 2012 to April 2020. We included randomized controlled trials (RCTs) evaluating app-based mHealth interventions for anxiety and depression. The study selection and data extraction process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. We estimated the pooled effect size using Hedge g and appraised study quality using the revised Cochrane risk-of-bias tool for RCTs. Results: We included 15 studies involving 2627 participants for 18 app-based mHealth interventions. Participants in the intervention groups showed a significant effect on anxiety (Hedge g=-.10, 95% CI -0.14 to -0.06, I2=0%) but not on depression (Hedge g=-.08, 95% CI -0.23 to 0.07, I2=4%). Interventions of at least 7 weeks' duration had larger effect sizes on anxiety symptom reduction. Conclusions: There is inconclusive evidence for clinical use of app-based mHealth interventions for anxiety and depression at the current stage due to the small to nonsignificant effects of the interventions and study quality concerns. The recommended dose of mHealth interventions and the sustainability of intervention effectiveness remain unclear and require further investigation. Keywords: intervention dose effectiveness; mental health; mobile health; smartphone apps; systematic review and meta-analysis.	Aceptado		
34	Effectiveness of eHealth interventions for improving medication adherence of organ transplant patients: A systematic review and meta-analysis	Lee H, Shin BC	PLoS One. 202	PLoS One	2020		Background: Organ transplantation is the most effective treatment for patients with end-stage organ failure. It has been actively carried out all over the world. Recently, eHealth interventions have been applied to organ transplant patients. This systematic review and meta-analysis aimed to evaluate the effects of eHealth interventions for improving medication adherence in organ transplant patients as compared to usual or conventional care alone. Methods: We searched MEDLINE via PubMed, Excerpta Media dataBASE (EMBASE), the Cochrane Register Controlled Trials, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), PsycINFO, and six domestic Korean databases to identify randomized controlled trials (RCTs) published up to April 17, 2020. Two reviewers independently selected relevant studies and extracted data. The quality and bias of the identified studies were assessed. To estimate the effect size, a meta-analysis of the studies was performed using the Cochrane Collaboration software Review Manager 5.3. PRISMA guidelines were followed. When statistical heterogeneity was greater than 80%, narrative synthesis was performed. Results: Of the 1,847 articles identified, seven RCTs with a total of 759 participants met the inclusion criteria. The risk of bias assessment showed that the blinding of participants and personnel was high. In six studies, medication adherence (effect size = -0.18-1.30) and knowledge scores were not significantly different between those receiving eHealth interventions and the controls. Conclusions: Our findings suggest that eHealth interventions were similar to standard care or advanced care for improving medication adherence, and they faired equally well for improving medication knowledge. Therefore, eHealth interventions can be used for medication adherence of organ transplant patients. More research is needed to provide well-designed eHealth intervention to improve the medication adherence and knowledge of organ transplant patients.	Aceptado		
36	Effectiveness of mHealth Interventions in Medication Adherence among Patients with Cardiovascular Diseases: A Systematic Review	Arshed M, Mah	Diseases. 202	Diseases	2023		mHealth interventions have been reported to improve adherence to long-term therapies in chronic conditions. Therefore, this study aimed at determining the effectiveness of mHealth interventions in medication adherence among patients with cardiovascular diseases (CVDs), a leading cause of mortality globally. Relying on our inclusion criteria and the PRISMA recommendations, a literature search was carried out in the PubMed, Medline, and ProQuest databases for primary studies that investigated the impact of mHealth on medication adherence for cardiovascular disease (CVD) between 2000-2021. A total of 23 randomized controlled trials with 34,915 participants matched the selection criteria. The mHealth interventions used included text messages, mobile phone applications, and voice calls, which were used either as a single intervention or combined. Additionally, studies on enhancing drug adherence had contradictory findings: most of the studies elaborated positive results; however, six studies were unable to reveal any significant effect. Finally, a risk bias analysis revealed varying outcomes across all studies. This review, as a whole, supported the notion that mHealth interventions can be effective in improving adherence to CVD medication even though they could not improve adherence to all CVD medications when compared with controls. Further trials with more refined designs integrated with comprehensive interventions are needed to produce better health outcomes. Keywords: adherence; cardiovascular diseases medication; interventions; mobile health; patients.	Aceptado		
50	eHealth Interventions to Treat Substance Use in Pregnancy: A Systematic Review and Meta-Analysis	Silang K, Sangi	Int J Environ Re	Int J Environ Re	2021		Substance use during pregnancy is associated with adverse pregnancy and neonatal outcomes; eHealth interventions offer a potential accessible treatment option. The objective of this systematic review and meta-analysis was to evaluate the effectiveness of eHealth interventions for the treatment of substance use during pregnancy. A comprehensive search of PsycINFO, Medline, CINAHL, Cochrane and Embase databases was conducted from May 2020 to April 2021. The protocol for this study was registered with Prospero (CRD42020205186) through the University of York Centre for Reviews and Dissemination. Two independent reviewers completed screening, data extraction, and quality assessment. RCTs were included if they reported: (a) administration of an eHealth intervention for (b) substance use outcomes, among (c) pregnant individuals. Comprehensive Meta-Analysis Software (CMA) was used to calculate pooled effect sizes (Odds Ratio) to determine the effect of eHealth interventions on substance use outcomes. Six studies were identified with substance use outcomes that included: smoking (n = 3), alcohol (n = 2), and other (n = 1). eHealth interventions were delivered through the internet (n = 1), computer (n = 3), telephone (n = 1), and text (n = 1). Results suggested that eHealth interventions significantly reduced substance use in pregnant individuals compared to controls (OR = 1.33, 95% CI = 1.06 to 1.65, p = 0.013). eHealth interventions offer a promising and accessible treatment option to reduce substance use during pregnancy. This work was supported by the generous donors of the Alberta Children's Hospital Foundation, the Canadian Child Health Clinician Scientist Program (CCHCSP), the Canadian Institute of Health Research and the Fonds de Recherche du Québec-Santé. Keywords: alcohol; cannabis; digital intervention; drug use; internet intervention; pregnancy; randomized controlled trials; smoking; substance-related disorders; telemedicine.	Aceptado		
53	Evaluating Commercially Available Mobile Apps for Depression Self-Management	Myers A, Ches	AMIA Annu Syr	AMIA Annu Syr	2021		Clinical depression affects 17.3 million adults in the U.S. However, 37% of these adults receive no treatment, and many symptoms remain unmanaged. Mobile health apps may complement in-person treatment and address barriers to treatment, yet their quality has not been systematically appraised. We conducted a systematic review of apps for depression by searching in three major app stores. Apps were selected using specific inclusion and exclusion criteria. The final apps were downloaded and independently evaluated using the Mobile Application Rating Scale (MARS), IMS Institute for Healthcare Informatics functionality score, and six features specific to depression self-management. Mobile health apps for depression self-management exhibit a wide range of quality, but more than half (74%) of the apps had acceptable quality, with 32% having MARS scores ≥ 4.0 out of 5.0. These high scoring apps indicate that mobile apps have the potential to improve patient self-management, treatment engagement, and mental health outcomes.	Aceptado		

57	Factors Influencing Adherence to mHealth Apps for Prevention or Management of Noncommunicable Diseases: Systematic Review	Jakob R, Harpe	J Med Internet	J Med Internet	2022		Background: Mobile health (mHealth) apps show vast potential in supporting patients and health care systems with the increasing prevalence and economic costs of noncommunicable diseases (NCDs) worldwide. However, despite the availability of evidence-based mHealth apps, a substantial proportion of users do not adhere to them as intended and may consequently not receive treatment. Therefore, understanding the factors that act as barriers to or facilitators of adherence is a fundamental concern in preventing intervention dropouts and increasing the effectiveness of digital health interventions. Objective: This review aimed to help stakeholders develop more effective digital health interventions by identifying factors influencing the continued use of mHealth apps targeting NCDs. We further derived quantified adherence scores for various health domains to validate the qualitative findings and explore adherence benchmarks. Methods: A comprehensive systematic literature search (January 2007 to December 2020) was conducted on MEDLINE, Embase, Web of Science, Scopus, and ACM Digital Library. Data on intended use, actual use, and factors influencing adherence were extracted. Intervention-related and patient-related factors with a positive or negative influence on adherence are presented separately for the health domains of NCD self-management, mental health, substance use, nutrition, physical activity, weight loss, multicomponent lifestyle interventions, mindfulness, and other NCDs. Quantified adherence measures, calculated as the ratio between the estimated intended use and actual use, were derived for each study and compared with the qualitative findings. Results: The literature search yielded 2862 potentially relevant articles, of which 99 (3.46%) were included as part of the inclusion criteria. A total of 4 intervention-related factors indicated positive effects on adherence across all health domains: personalization or tailoring of the content of mHealth apps to the individual needs of the user, reminders in the form of individualized push notifications, user-friendly and technically stable app design, and personal support complementary to the digital intervention. Social and gamification features were also identified as drivers of app adherence across several health domains. A wide variety of patient-related factors such as user characteristics or recruitment channels further affects adherence. The derived adherence scores of the included mHealth apps averaged 56.0% (SD 24.4%). Conclusions: This study contributes to the scarce scientific evidence on factors that positively or negatively influence adherence to mHealth apps and is the first to quantitatively compare adherence relative to the intended use of various health domains. As underlying studies mostly have a pilot character with short study durations, research on factors influencing adherence to mHealth apps is still limited. To facilitate future research on mHealth app adherence, researchers should clearly outline and justify the app's intended use; report objective data on actual use relative to the intended use; and, ideally, provide long-term use and retention data. Keywords: NCD; adherence; attrition; digital health intervention; eHealth; engagement; intended use; mHealth; mobile phone; noncommunicable disease; retention.	Aceptado		
58	Factors Influencing the Acceptance and Adoption of Mobile Health Apps by Physicians During the COVID-19 Pandemic: Systematic Review	Alsahli S, Hor S	JMIR Mhealth U	JMIR Mhealth U	2023		Background: During the COVID-19 pandemic, the provision of and access to health care have been uniquely challenging, particularly during lockdowns or when dealing with COVID-19 cases. Health care professionals have had to provide patients with the necessary health care. However, delivering health care services while reducing face-to-face interaction puts an immense strain on health systems that are already overburdened. Against this backdrop, it is now more critical than ever to ensure the accessibility of health care services. Such access has been made increasingly available through mobile health (mHealth) apps. These apps have the potential to significantly improve health care outcomes and expectations and address some of the challenges confronting health care systems worldwide. Despite the advantages of mHealth, its acceptance and adoption remain low. Hence, health care organizations must consider the perceptions and opinions of physicians if the technology is to be successfully implemented. Objective: The objective of this systematic review was to explore and synthesize the scientific literature on the factors influencing the acceptance and adoption of mHealth among physicians during the COVID-19 pandemic. Methods: A systematic review of the studies published between March 2020 and December 2022 was conducted using the MEDLINE, Scopus, Embase, and ProQuest databases. The database search yielded an initial sample of 455 potential publications for analysis, of which 9 (2%) met the inclusion criteria. The methodology of this review was based on PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Results: The factors influencing mHealth acceptance and adoption by physicians were divided into perceived barriers and perceived facilitators, which were further grouped into the following 3 major thematic categories: technological, individual, and organizational barriers and facilitators, respectively. The technological barriers were accessibility, technical issues, usefulness, and data management; individual barriers were perceived patient barriers, time and workload pressure, technical literacy, knowledge of mHealth, and peer support; and organizational barriers were financial factors, management support and engagement, data security, telemonitoring policy, and collaboration. The technological facilitators of uptake were technical factors, clinical usefulness, and data management; individual facilitators were patient related care, intrinsic motivation, collaboration, and data sharing (individual); and organizational facilitators were workflow-related determinants, organizational financial support, recommendation of mHealth services, and evidence-based guidelines. Conclusions: This review summarized the evidence on the factors influencing mHealth acceptance and adoption by physicians during the COVID-19 pandemic. The main findings highlighted the importance of addressing organizational readiness to support physicians with adequate resources, shifting the focus from technological to patient-centered factors, and the seamless integration of mHealth into routine practice during and beyond the pandemic. Keywords: acceptance; adoption; attitude; barrier; doctor; mHealth; mobile app; mobile health; mobile phone; physician; practitioner.	Aceptado		
59	Impact of digital assistive technologies on the quality of life for people with dementia: a scoping review	Schneider C, N	BMJ Open. 202	BMJ Open	2024		Background: Digital assistive technologies (DATs) have emerged as promising tools to support the daily life of people with dementia (PWD). Current research tends to concentrate either on specific categories of DATs or provide a generic view. Therefore, it is of essence to provide a review of different kinds of DATs and how they contribute to improving quality of life (QOL) for PWD. Design: Scoping review using the framework proposed by Arksey and O'Malley and recommendations from Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews. Data sources: Cochrane, Embase, PubMed, Scopus and Web of Science (January 2013 to May 2023). Eligibility criteria for selecting studies: Completed scientific literature with a primary focus on DATs for PWD, perspectives of caregivers, family members or healthcare workers in relation to a PWD, people living in diverse settings and all severities of dementia. Data extraction and synthesis: Screening and data extraction were conducted, followed by quantitative and qualitative analyses using thematic analysis principles and Digital Therapeutics Alliance categories for DAT grouping. Results: The literature search identified 6083 records, with 1056 duplicates. After screening, 4560 full texts were excluded, yielding 122 studies of different designs. The DATs were categorised into digital therapeutics (n=109), patient monitoring (n=30), digital diagnostics (n=2), care support (n=2) and health system clinical software (n=1). These categories were identified to impact various aspects of QOL: preserving autonomy, engagement, and social interaction, health monitoring and promotion, improving activities of daily living, improving cognition, maintaining dignity, managing behavioural and psychological symptoms of dementia and safety/surveillance. Conclusions: Various DATs offer extensive support, elevating the QOL of PWD. Digital therapeutics are predominantly used for ageing-in-place and independent living through assistance with daily tasks. Future research should focus on less-represented digital health technology categories, such as care support, health & wellness or software solutions. Observing ongoing DAT developments and their long-term effects on QOL remains essential. Keywords: Aging; Dementia; Health Services for the Aged; Information technology; Quality of Life.	Aceptado		
60	Inventory and Analysis of Controlled Trials of Mobile Phone Applications Targeting Substance Use Disorders: A Systematic Review	Bahadoor R, Al	Front Psychiat	Front Psychiat	2021		Background: Less than 20% of people with addictions have access to adequate treatment. Mobile health could improve access to care. No systematic review evaluates effectiveness of mobile health applications for addiction. Objectives: First aim was to describe controlled trials evaluating the effectiveness of smartphone applications targeting substance use disorders and addictive behaviors. Secondly, we aimed to understand how the application produced changes in behavior and craving management. Method: A systematic review based on PRISMA recommendations was conducted on MEDLINE, CENTRAL, and PsycINFO. Studies had to be controlled trials concerning addictive disorders (substance/behavior), mobile application-based interventions, assessing effectiveness or impact of those applications upon use, published after 2008. Relevant information was systematically screened for synthesis. Quality and risk of bias were evaluated with JADAD score. Results: Search strategy retrieved 22 articles (2014-2019) corresponding to 22 applications targeting tobacco, alcohol, other substances and binge eating disorder. Control groups had access to usual treatments or a placebo-application or no treatment. Eight applications showed reduced use. Most of the applications informed about risks of use and suggestions for monitoring use. Twelve applications managed craving. Discussion: Heterogeneity limited study comparisons. Duration of studies was too short to predict sustainable results. A reduction of craving seemed related to a reduction in use. Conclusion: There is a lack of robust and comparable studies on mHealth applications for addiction treatment. Such applications could become significant contributors in clinical practice in the future so longer-termed double-blind studies are needed. Targeting craving to prevent relapse should be systematic. Keywords: efficacy; mHealth; mobile applications; substance use disorder; systematic review.	Aceptado		
61	Just-in-Time Adaptive Mechanisms of Popular Mobile Apps for Individuals With Depression: Systematic App Search and Literature Review	Teepe GW, Da	J Med Internet	J Med Internet	2021		Background: The number of smartphone apps that focus on the prevention, diagnosis, and treatment of depression is increasing. A promising approach to increase the effectiveness of the apps while reducing the individual's burden is the use of just-in-time adaptive intervention (JITAI) mechanisms. JITAIs are designed to improve the effectiveness of the intervention and reduce the burden on the person using the intervention by providing the right type of support at the right time. The right type of support and the right time are determined by measuring the state of vulnerability and the state of receptivity, respectively. Objective: The aim of this study is to systematically assess the use of JITAI mechanisms in popular apps for individuals with depression. Methods: We systematically searched for apps addressing depression in the Apple App Store and Google Play Store, as well as in curated lists from the Anxiety and Depression Association of America, the United Kingdom National Health Service, and the American Psychological Association in August 2020. The relevant apps were ranked according to the number of reviews (Apple App Store) or downloads (Google Play Store). Two authors separately reviewed all publications concerning the app found within scientific databases (PubMed, Cochrane Register of Controlled Trials, PsycINFO, Google Scholar, IEEE Xplore, Web of Science, ACM Portal, and Science Direct), publications cited on the app's website, information on the app's website, and the app itself. All types of measurements (eg, open questions, closed questions, and device analytics) found in the apps were recorded and reviewed. Results: None of the 28 reviewed apps used JITAI mechanisms to tailor content to situations, states, or individuals. Of the 28 apps, 3 (11%) did not use any measurements, 20 (71%) exclusively used self-reports that were insufficient to leverage the full potential of the JITAIs, and the 5 (18%) apps using self-reports and passive measurements used them as progress or task indicators only. Although 34% (23/68) of the reviewed publications investigated the effectiveness of the apps and 21% (14/68) investigated their efficacy, no publication mentioned or evaluated JITAI mechanisms. Conclusions: Promising JITAI mechanisms have not yet been translated into mainstream depression apps. Although the wide range of passive measurements available from smartphones were rarely used, self-reported outcomes were used by 71% (20/28) of the apps. However, in both cases, the measured outcomes were not used to tailor content and timing along a state of vulnerability or receptivity. Owing to this lack of tailoring to individual, state, or situation, we argue that the apps cannot be considered JITAIs. The lack of publications investigating whether JITAI mechanisms lead to an increase in the effectiveness or efficacy of the apps highlights the need for further research, especially in real-world apps. Keywords: depression; digital mental health; effectiveness; just-in-time adaptive interventions; mobile phone; smartphone applications.	Aceptado		
67	mHealth Interventions for Self-management of Hypertension: Framework and Systematic Review on Engagement, Interactivity, and Tailoring	Cao W, Milks N	JMIR Mhealth U	JMIR Mhealth U	2022		Background: Engagement is essential for the effectiveness of digital behavior change interventions. Existing systematic reviews examining hypertension self-management interventions via mobile apps have primarily focused on intervention efficacy and app usability. Engagement in the prevention or management of hypertension is largely unknown. Objective: This systematic review explores the definition and role of engagement in hypertension-focused mobile health (mHealth) interventions, as well as how determinants of engagement (ie, tailoring and interactivity) have been implemented. Methods: A systematic review of mobile app interventions for hypertension self-management targeting adults, published from 2013 to 2020, was conducted. A total of 21 studies were included in this systematic review. Results: The engagement was defined or operationalized as a microlevel concept, operationalized as interaction with the interventions (ie, frequency of engagement, time or duration of engagement with the program, and intensity of engagement). For all 3 studies that tested the relationship, increased engagement was associated with better biomedical outcomes (eg, blood pressure change). Interactivity was limited in digital behavior change interventions, as only 7 studies provided 2-way communication between users and a health care professional, and 9 studies provided 1-way communication in possible critical conditions that is, when abnormal blood pressure values were recorded, users or health care professionals were notified. The tailoring of interventions varied at different aspects, from the tailoring of intervention content (including goals, patient education, advice and feedback from health professionals, reminders, and motivational messages) to the tailoring of intervention dose and communication mode. Tailoring was carried out in a number of ways, considering patient characteristics such as goals, preferences, disease characteristics (eg, hypertension stage and medication list), disease self-management experience levels, medication adherence rate, and values and beliefs. Conclusions: Available studies support the importance of engagement in intervention effectiveness as well as the essential roles of patient factors in tailoring, interactivity, and engagement. A patient-centered engagement framework for hypertension self-management using mHealth technology is proposed here, with the intent of facilitating intervention design and disease self-management using mHealth technology. Keywords: digital behavior change; engagement; hypertension; interactivity; interventions; mHealth; mobile app; mobile phone; systematic review; tailoring.	Aceptado		
69	Mobile Application-Based Interventions for Chronic Pain Patients: A Systematic Review and Meta-Analysis of Effectiveness	Pfeifer AC, Uda	J Clin Med. 202	J Clin Med	2020		Chronic pain is one of the major causes of disability in the general population. Even though there are effective treatment options available for reducing symptoms, these treatments often do not have consistent lasting effects. As the usage of mobile devices has increased enormously during the last few years, mobile application-based treatment options are widespread. Such app-based programs are not yet empirically proven but might enable patients to become more independent in their pain management in order to prevent relapse. The aim of this meta-analysis was to summarize the literature on mobile application-based interventions for chronic pain patients. Therefore, three electronic bibliographic databases, PubMed, PsycINFO, and Web of Science, were searched for studies that investigated the effectiveness of mobile application-based intervention for chronic pain on pain intensity. The final sample comprised twenty-two studies, with a total of 4679 individuals. Twelve of these twenty-two studies used a randomized control trial (RCT) design, while ten studies only used an observational design. For all twenty-two studies, a small but significant effect (d = -0.40) was found when compared to baseline measures or control groups. The results suggest that apps-based treatment can be helpful in reducing pain, especially in the long-term. Keywords: chronic pain; meta-analysis; mobile application; rehabilitation; review.	Aceptado		

70	Mobile applications for breast cancer survivorship and self-management: A systematic review	Kapoor A, Nam	Health Informa	Health Informa	2020		The use of mobile technology and mobile apps has become pervasive in our daily lives for completing a variety of daily tasks. Mobile health (mHealth) apps can provide an accessible platform for self-management among breast cancer (BC) survivors, as they recover from not just the intensive cancer treatments, but also their associated side-effects. They also offer a means to learn about survivorship topics and connect with peer survivors online, irrespective of their geographical location. This study is an attempt to assess the availability and characterize the self-management features of free mobile apps for breast cancer survivors on the Google Play (Android) and Apple App Store (iOS). Out of 249 such apps for the Android, only eight satisfied initial criteria, while only one of 174 iOS apps that met inclusion criteria was included for further analysis. A content analysis of the nine apps that met inclusion criteria was conducted to assess the inclusion of the following mHealth self-management features derived from the Chronic Care Model: symptom tracking; survivorship education; information-sharing with family and/or caregivers; scheduling follow-up visits; personal alerts and reminders; and social networking. Survivorship education was found to be the most common self-management feature among the apps reviewed, followed by social networking. The results of this study highlight the dearth of available mHealth resources for BC survivors. Future efforts in app development should involve survivors and healthcare providers to ensure comprehensive resources that address their unmet needs are made more accessible. Keywords: breast cancer; cancer survivorship; consumer health information; mhealth; mobile health; self-management.	Aceptado		
72	Mobile applications in children with cerebral palsy	Rodríguez Mar	Neurologia (Er	Neurologia (Er	2021		Introduction: Cerebral palsy (CP) is one of the most common developmental disorders. Technological development has enabled a transformation of the healthcare sector, which can offer more individualised, participatory, and preventive services. Within this context of new technology applied to the healthcare sector, mobile applications, or apps, constitute a very promising tool for the management of children with CP. Objective: The purpose of this article is to perform a systematic review of the information published about various mobile applications either directly related to CP or with potential to be useful in the context of the disease, and to describe, analyse, and classify these applications. Material and methods: A literature search was carried out to gather articles published in English or Spanish between 2011 and 2017 which presented, analysed, or validated applications either specifically designed or potentially useful for CP. Furthermore, a search for mobile applications was conducted in the main mobile application markets. Conclusions: A total of 63 applications were found in biomedical databases and mobile application markets, of which 40 were potentially useful for CP and 23 were specifically designed for the condition (11 for information, 3 for evaluation, and 9 for treatment). There are numerous mobile applications either specifically designed for or with potential to be useful in the field of CP. However, despite the existing scientific evidence, the low methodological quality of scientific articles makes it impossible to generalise the use of these tools. Keywords: Aplicaciones móviles; App; Apps; Cerebral palsy; Mobile applications; Parálisis cerebral infantil; eHealth; mHealth.	Aceptado		
76	Mobile apps for detecting falsified and substandard drugs: A systematic review	Ciapponi A, Da	PLoS One. 202	PLoS One	2021		The use of substandard and counterfeit medicines (SCM) leads to significant health and economic consequences, like treatment failure, rise of antimicrobial resistance, extra expenditures of individuals or households and serious adverse drug reactions including death. Our objective was to systematically search, identify and compare relevant available mobile applications (apps) for smartphones and tablets, which use could potentially affect clinical and public health outcomes. We carried out a systematic review of the literature in January 2020, including major medical databases, and app stores. We used the validated Mobile App Rating Scale (MARS) to assess the quality of apps, (1 worst score, 5 acceptable score, and 5 best score). We planned to evaluate the accuracy of the mobile apps to detect SCM. We retrieved 335 references through medical databases and 42 from Apple, Google stores and Google Scholar. We finally included two studies of the medical database, 25 apps (eight from the App Store, eight from Google Play, eight from both stores, and one from Google Scholar), and 16 websites. We only found one report on the accuracy of a mobile apps detecting SCMs. Most apps use the imprint, color or shape for pill identification, and only a few offer pill detection through photographs or bar code. The MARS mean score for the apps was 3.17 (acceptable), with a maximum of 4.9 and a minimum of 1.1. The 'functionality' dimension resulted in the highest mean score (3.4), while the 'engagement' and 'information' dimensions showed the lowest one (3.0). In conclusion, we found a remarkable evidence gap about the accuracy of mobile apps in detecting SCMs. However, mobile apps could potentially be useful to screen for SCM by assessing the physical characteristics of pills, although this should still be assessed in properly designed research studies.	Aceptado		
77	Mobile Apps for Drug-Drug Interaction Checks in Chinese App Stores: Systematic Review and Content Analysis	Shen C, Jiang B	JMIR Mhealth U	JMIR Mhealth U	2021		Background: As a computerized drug-drug interaction (DDI) alert system has not been widely implemented in China, health care providers are relying on mobile health (mHealth) apps as references for checking drug information, including DDIs. Objective: The main objective of this study was to evaluate the quality and content of mHealth apps supporting DDI checking in Chinese app stores. Methods: A systematic review was carried out in November 2020 to identify mHealth apps providing DDI checking in both Chinese iOS and Android platforms. We extracted the apps' general information (including the developer, operating system, costs, release date, size, number of downloads, and average rating), scientific or clinical basis, and accountability, based on a multidimensional framework for evaluation of apps. The quality of mHealth apps was evaluated by using the Mobile App Rating Scale (MARS). Descriptive statistics, including numbers and percentages, were calculated to describe the characteristics of the apps. For each app selected for evaluation, the section-specific MARS scores were calculated by taking the arithmetic mean, while the overall MARS score was described as the arithmetic mean of the section scores. In addition, the Cohen kappa (κ) statistic was used to evaluate the interrater agreement. Results: A total of 7 apps met the selection criteria, and only 3 included citations. The average rating score for Android apps was 3.5, with a minimum of 1.0 and a maximum of 4.9, while the average rating score for iOS apps was 4.7, with a minimum of 4.2 and a maximum of 4.9. The mean MARS score was 3.69 out of 5 (95% CI 3.34-4.04), with the lowest score of 1.96 for Medication Guidelines and the highest score of 4.27 for MCDEX mobile. The greatest variation was observed in the information section, which ranged from 1.41 to 4.60. The functionality section showed the highest mean score of 4.05 (95% CI 3.71-4.40), whereas the engagement section resulted in the lowest average score of 3.16 (95% CI 2.81-3.51). For the information quality section, which was the focus of this analysis, the average score was 3.42, with the MCDEX mobile app having the highest score of 4.6 and the Medication Guidelines app having the lowest score of 1.9. For the overall MARS score, the Cohen interrater κ was 0.354 (95% CI 0.236-0.473), the Fleiss κ was 0.353 (95% CI, 0.234-0.472), and the Krippendorff α was 0.356 (95% CI 0.237-0.475). Conclusions: This study systematically reviewed the mHealth apps in China with a DDI check feature. The majority of investigated apps demonstrated high quality with accurate and comprehensive information on DDIs. However, a few of the apps that had a massive number of downloads in the Chinese market provided incorrect information. Given these apps might be used by health care providers for checking potential DDIs, this creates a substantial threat to patient safety. Keywords: MARS; app; drug interaction; drug safety; drugs; mHealth.	Aceptado		
81	Mobile Apps That Promote Emotion Regulation, Positive Mental Health, and Well-being in the General Population: Systematic Review and Meta-analysis	Eisenstadt M,	JMIR Ment Hea	JMIR Ment Hea	2021		Background: Among the general public, there appears to be a growing need and interest in receiving digital mental health and well-being support. In response to this, mental health apps (MHapps) are becoming available for monitoring, managing, and promoting positive mental health and well-being. Thus far, evidence supports favorable outcomes when users engage with MHapps, yet there is a relative paucity of reviews on apps that support positive mental health and well-being. Objective: We aimed to systematically review the available research on MHapps that promote emotion regulation, positive mental health, and well-being in the general population aged 18-45 years. More specifically, the review aimed at providing a systematic description of the theoretical background and features of MHapps while evaluating any potential effectiveness. Methods: A comprehensive literature search of key databases, including MEDLINE (via Ovid), EMBASE (via Ovid), PsycINFO (via Ovid), Web of Science, and the Cochrane Register of Controlled Trials (CENTRAL), was performed until January 2021. Studies were included if they described standalone mental health and well-being apps for adults without a formal mental health diagnosis. The quality of all studies was assessed against the Mixed Methods Appraisal Tool. In addition, the Cochrane Risk-of-Bias tool (RoB-2) was used to assess randomized control trials (RCTs). Data were extracted using a modified extraction form from the Cochrane Handbook of Systematic Reviews. A narrative synthesis and meta-analysis were then undertaken to address the review aims. Results: In total, 3156 abstracts were identified. Of these, 52 publications describing 48 MHapps met the inclusion criteria. Together, the studies evaluated interventions across 15 countries. Thirty-nine RCTs were identified suggesting some support for the role of individual MHapps in improving and promoting mental health and well-being. Regarding the pooled effect, MHapps, when compared to controls, showed a small effect for reducing mental health symptoms (k=19, Hedges g=-0.24, 95% CI -0.34 to -0.14; P<.001) and improving well-being (k=13, g=0.17, 95% CI 0.05-0.29, P=.004), and a medium effect for emotion regulation (k=6, g=0.49, 95% CI 0.23-0.74, P<.001). There is also a wide knowledge base of creative and innovative ways to engage users in techniques such as mood monitoring and guided exercises. Studies were generally assessed to contribute unclear or a high risk of bias, or to be of medium to low methodological quality. Conclusions: The emerging evidence for MHapps that promote positive mental health and well-being suggests promising outcomes. Despite a wide range of MHapps, few apps specifically promote emotion regulation. However, our findings may position emotion regulation as an important mechanism for inclusion in future MHapps. A fair proportion of the included studies were pilot or feasibility trials (k=17, 33%), and full-scale RCTs reported high attrition rates and nondiverse samples. Given the number and pace at which MHapps are being released, further robust research is warranted to inform the development and testing of evidence-based programs. Keywords: MHapp, mHealth; effectiveness; emotion regulation; management; mental health; mental health app; mobile apps; monitoring; systematic review; well-being.	Aceptado		
82	Mobile Apps to Improve Medication Adherence in Cardiovascular Disease: Systematic Review and Meta-analysis	Al-Arkee S, Ma	J Med Internet	J Med Internet	2021		Background: Adherence rates of preventative medication for cardiovascular disease (CVD) have been reported as 57%, and approximately 9% of all CVD events in Europe are attributable to poor medication adherence. Mobile health technologies, particularly mobile apps, have the potential to improve medication adherence and clinical outcomes. Objective: The objective of this study is to assess the effects of mobile health care apps on medication adherence and health-related outcomes in patients with CVD. This study also evaluates apps' functionality and usability and the involvement of health care professionals in their use. Methods: Electronic databases (MEDLINE [Ovid], PubMed Central, Cochrane Library, CINAHL Plus, PsycINFO [Ovid], Embase [Ovid], and Google Scholar) were searched for randomized controlled trials (RCTs) to investigate app-based interventions aimed at improving medication adherence in patients with CVD. RCTs published in English from inception to January 2020 were reviewed. The Cochrane risk of bias tool was used to assess the included studies. Meta-analysis was performed for clinical outcomes and medication adherence, with meta-regression analysis used to evaluate the impact of app intervention duration on medication adherence. Results: This study included 16 RCTs published within the last 6 years. In total, 12 RCTs reported medication adherence as the primary outcome, which is the most commonly self-reported adherence. The duration of the interventions ranged from 1 to 12 months, and sample sizes ranged from 24 to 412. Medication adherence rates showed statistically significant improvements in 9 RCTs when compared with the control, and meta-analysis of the 6 RCTs reporting continuous data showed a significant overall effect in favor of the app intervention (mean difference 0.90, 95% CI 0.03-1.78) with a high statistical heterogeneity (I2=93.32%). Moreover, 9 RCTs assessed clinical outcomes and reported an improvement in systolic blood pressure, diastolic blood pressure, total cholesterol, and low-density lipoprotein cholesterol levels in the intervention arm. Meta-analysis of these clinical outcomes from 6 RCTs favored app interventions, but none were significant. In the 7 trials evaluating app usability, all were found to be acceptable. There was a great variation in the app characteristics. A total of 10 RCTs involved health care professionals, mainly physicians and nurses, in the app-based interventions. The apps had mixed functionality: 2 used education, 7 delivered reminders, and 7 provided reminders in combination with educational support. Conclusions: Apps tended to increase medication adherence, but interventions varied widely in design, content, and delivery. Apps have an acceptable degree of usability; yet the app characteristics conferring usability and effectiveness are ill-defined. Future large-scale studies should focus on identifying the essential active components of successful apps. Keywords: cardiovascular disease; medication adherence; mobile health care applications; mobile phone; systematic review.	Aceptado		
83	Mobile apps to reduce depressive symptoms and alcohol use in youth: A systematic review and meta-analysis: A systematic review	Magwood O, S	Campbell Syst	Campbell Syst	2024		Background: Among youth, symptoms of depression, anxiety, and alcohol use are associated with considerable illness and disability. Youth face many personal and health system barriers in accessing mental health care. Mobile applications (apps) offer youth potentially accessible, scalable, and anonymous therapy and other support. Recent systematic reviews on apps to reduce mental health symptoms among youth have reported uncertain effectiveness, but analyses based on the type of app-delivered therapy are limited. Objectives: We conducted this systematic review with youth co-researchers to ensure that this review addressed the questions that were most important to them. The objective of this review is to synthesize the best available evidence on the effectiveness of mobile apps for the reduction of depressive symptoms (depression, generalized anxiety, psychological distress) and alcohol use among youth. Search methods: We conducted electronic searches of the following bibliographic databases for studies published between January 1, 2008, and July 1, 2022: MEDLINE (via Ovid), Embase (via Ovid), PsycINFO (via Ovid), CINAHL (via EBSCOHost), and CENTRAL (via the Cochrane Library). The search used a combination of indexed terms, free text words, and MeSH headings. We manually screened the references of relevant systematic reviews and included randomized controlled trials (RCTs) for additional eligible studies, and contacted authors for full reports of identified trial registries or protocols. Selection criteria: We included RCTs conducted among youth aged 15-24 years from any setting. We did not exclude populations on the basis of gender, socioeconomic status, geographic location or other personal characteristics. We included studies which assessed the effectiveness of app-delivered mental health support or therapy interventions that targeted the management of depressive disorders and/or alcohol use disorders. We excluded apps that targeted general wellness, apps which focused on prevention of psychological disorders and apps that targeted bipolar disorder, psychosis, post-traumatic stress disorder, attention-deficit hyperactivity disorder, substance use disorders (aside from alcohol), and sleep disorders. Eligible comparisons included usual care, no intervention, wait-list control, alternative or controlled mobile applications. We included studies which reported outcomes on depressive symptoms, anxiety symptoms, alcohol use and psychological distress over any follow-up period. Data collection and analysis: We standardized the PICO definitions (population, intervention, comparison, and outcome) of each included study and grouped studies by the type of therapy or support offered by the app. Whenever app design and clinical homogeneity allowed, we meta-analyzed outcomes using a random-effects model. Outcome data measured using categorical scales were synthesized using odds ratios. Outcome data measured using continuous scales were synthesized as the standardized mean difference. We assessed the methodological quality of each included study using the Cochrane Risk of Bias 2.0 tool and we assessed certainty of the evidence using the GRADE approach. Main results: From 5280 unique citations, we included 36 RCTs published in 37 reports and conducted in 15 different countries (7984 participants). Among the 36 included trials, we assessed two with an overall low risk of bias, 8 trials with some concern regarding risk of bias, and 26 trials with a high risk of bias. Interventions varied in the type of therapy or supports offered. The most common intervention designs employed mindfulness training, cognitive behavioral therapy (CBT), or a combination of the two (mindfulness + CBT). However, other interventions also included self-monitoring, medication reminders, cognitive bias modification or positive stimulation, dialectical behavioral therapy, gamified health promotion, or social skill building. Mindfulness apps led to short term improvements in depressive symptoms when compared to a withheld control (SMD = -0.36; 95% CI [-0.63, -0.10]; p = 0.007, n = 3 RCTs, GRADE: very low certainty) and when compared to an active control (SMD = -0.27; 95% CI [-0.53, -0.01]; p = 0.04, n = 2 RCTs, GRADE: very low). Apps delivering this type of support also significantly improved symptoms of anxiety when compared to a withheld control (SMD = -0.35; 95% CI [-0.60, -0.09]; p = 0.008, n = 3 RCTs, GRADE: very low) but not when compared to an active control (SMD = -0.24; 95% CI [-0.50, 0.02]; p = 0.07, n = 2 RCTs, GRADE: very low). Mindfulness apps showed improvements in psychological stress that approached statistical significance among participants receiving the mindfulness mobile apps compared to those in the withheld control (SMD = -0.27; 95% CI [-0.56, 0.03]; p = .07, n = 4 RCTs, GRADE: very low). CBT apps also led to short-term improvements in depressive symptoms when compared to a withheld control (SMD = -0.40; 95% CI [-0.80, 0.01]; p = 0.05, n = 2 RCTs, GRADE: very low) and when	Aceptado		Revisarlo en extenso- pendiente de evaluar

85	Mobile Health Application-Based Interventions to Improve Self-management of Chemotherapy-Related Symptoms Among People with Breast Cancer Who Are Undergoing Chemotherapy: A Systematic Review	Shi N, Wong Al	Oncologist. 20	Oncologist	2023		Background: Since the COVID-19 pandemic, there have been an increasing number of studies on using mobile health (mHealth) to support the symptom self-management of patients with breast cancer (BC). However, the components of such programs remain unexplored. This systematic review aimed to identify the components of existing mHealth app-based interventions for patients with BC who are undergoing chemotherapy and to uncover self-efficacy enhancement elements from among them. Methods: A systematic review was conducted for randomized controlled trials published from 2010 to 2021. Two strategies were used to assess the mHealth apps: The Omaha System, a structured classification system for patient care, and Bandura's self-efficacy theory, which assesses sources of influence that determine an individual's confidence in being able to manage a problem. Intervention components identified in the studies were grouped under the 4 domains of the intervention scheme of the Omaha System. Four hierarchical sources of self-efficacy enhancement elements were extracted from the studies using Bandura's self-efficacy theory. Results: The search uncovered 1,668 records. Full-text screening was conducted on 44 articles, and 5 randomized controlled trials (n = 537 participants) were included. Self-monitoring under the domain of "Treatments and procedure" was the most frequently used mHealth intervention for improving symptom self-management in patients with BC undergoing chemotherapy. Most mHealth apps used various "mastery experience" strategies including reminders, self-care advice, videos, and learning forums. Conclusion: Self-monitoring was commonly utilized in mHealth-based interventions for patients with BC undergoing chemotherapy. Our survey uncovered evident variation in strategies to support self-management of symptoms and standardized reporting is required. More evidence is required to make conclusive recommendations related to mHealth tools for BC chemotherapy self-management. Keywords: applications; breast cancer; chemotherapy; mHealth; self-management.	Aceptado		
86	Mobile health applications designed for self-management of chronic pulmonary diseases in children and adolescents: a systematic mapping review	Sapouna V, Kit	J Bras Pneumo	J Bras Pneumo	2023		Objective: Mobile health (mHealth) applications are scarce for children and adolescents with chronic pulmonary diseases (CPDs). This study aimed to map and describe the contents of the mHealth apps available for use in children and adolescents with CPDs. Methods: We performed a systematic mapping review of published scientific literature in PubMed, Scopus, and Cochrane Library by February of 2023, using relevant keywords. Inclusion criteria were as follows: children aged < 18 years with CPDs; and studies published in English on mHealth apps. Results: A total number of 353 studies were found, 9 of which met the inclusion criteria. These studies described seven mHealth apps for Android and iOS, designed either for asthma (n = 5) or for cystic fibrosis (n = 2). Five content areas were identified: education/information; pharmacological treatment; emergency; support; and non-pharmacological treatment. The studies (4, 2, and 3, respectively) showed consistent findings using qualitative, quantitative, and mixed methodologies. Conclusions: This mapping review provided a guided selection of the most appropriate mHealth apps for use in children and adolescents with CPDs based on the needs of each target population. However, these mHealth apps have limited capabilities to reinforce disease self-management and provide information related to treatment compliance.	Aceptado		
91	Mobile Health for Traumatic Brain Injury: A Systematic Review of the Literature and Mobile Application Market	Christopher E.	Cureus. 2019	Cureus	2019		Traumatic Brain Injury (TBI) is a growing public health issue with an increasing burden of disease globally. TBI can lead to significant motor, cognitive and emotional deficits. Mobile health (mHealth) is a promising technology to help diagnose and manage patients with TBI. The aim of this study was to systematically examine and classify available TBI mobile applications (apps) and critically appraise the literature underpinning mHealth for the management of TBI. Two major app markets (Apple and Google Play) were systematically searched. Included apps were classified and had data extracted. Coupled to this, a systematic search of the literature (MEDLINE, Web of Science, Scopus, PsycINFO) was performed examining the effectiveness of mHealth interventions in helping patients manage their symptoms after TBI (registered with PROSPERO: CRD42018107386). From 1296 apps, 53 met our inclusion criteria. The top three functions were TBI screening, education and biomechanics monitoring. Twenty-six apps (49.1%) focused on sports-related concussion. Eight apps (15.1%) were gamified and 12 apps (22.6%) connected to an external device. From the literature, a total of eight articles were included of which four (50%) were case series, two (25%) were feasibility/pilot studies, one (12.5%) was a case report, and one (12.5%) was a randomised controlled trial. The median number of patients was seven (1 - 43). There is a small number of mobile apps for TBI, mostly focusing on sports-related concussion. At present, the uptake and application of these apps as a management aid is limited and the evidence for their usefulness in TBI remains low. Keywords: concussion; mhealth; mobile technology in healthcare; traumatic brain injury (tbi).	Aceptado		
106	Smartphone Apps for Diabetes Medication Adherence: Systematic Review	Islam SMS, Mis	JMIR Diabetes.	JMIR Diabetes	2022		Background: Diabetes is one of the leading noncommunicable chronic diseases globally. In people with diabetes, blood glucose levels need to be monitored regularly and managed adequately through healthy lifestyles and medications. However, various factors contribute to poor medication adherence. Smartphone apps can improve medication adherence in people with diabetes, but it is not clear which app features are most beneficial. Objective: This study aims to systematically review and evaluate high-quality apps for diabetes medication adherence, which are freely available to the public in Android and Apple app stores and present the technical features of the apps. Methods: We systematically searched Apple App Store and Google Play for apps that assist in diabetes medication adherence, using predefined selection criteria. We assessed apps using the Mobile App Rating Scale (MARS) and calculated the mean app-specific score (MASS) by taking the average of app-specific scores on 6 dimensions, namely, awareness, knowledge, attitudes, intention to change, help-seeking, and behavior change rated on a 5-point scale (1=strongly disagree and 5=strongly agree). We used the mean of the app's performance on these 6 dimensions to calculate the MASS. Apps that achieved a total MASS mean quality score greater than 4 out of 5 were considered to be of high quality in our study. We formulated a task-technology fit matrix to evaluate the apps for diabetes medication adherence. Results: We identified 8 high-quality apps (MASS score≥4) and presented the findings under 3 main categories: characteristics of the included apps, app features, and diabetes medication adherence. Our framework to evaluate smartphone apps in promoting diabetes medication adherence considered physiological factors influencing diabetes and app features. On evaluation, we observed that 25% of the apps promoted high adherence and another 25% of the apps promoted moderate adherence. Finally, we found that 50% of the apps provided low adherence to diabetes medication. Conclusions: Our findings show that almost half of the high-quality apps publicly available for free did not achieve high to moderate medication adherence. Our framework could have positive implications for the future design and development of apps for patients with diabetes. Additionally, apps need to be evaluated using a standardized framework, and only those promoting higher medication adherence should be prescribed for better health outcomes. Keywords: applications; apps; diabetes; digital health; mHealth; medication adherence; mobile health; smartphones; task-technology fit.	Aceptado		
110	Systematic literature review of adopting eHealth in pharmaceutical care during COVID-19 pandemic: recommendations for strengthening pharmacy services	Cen ZF, Tang P	BMJ Open. 202	BMJ Open	2022		Objectives: The study aimed to determine how eHealth was adopted in pharmaceutical care (PC), the outcome reported and the contextual factors. Design: Systematic literature review in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Data sources: Literature was searched in six databases including PubMed, Scopus, Medline, Web of Science, Science Direct and China National Knowledge Infrastructure. Eligibility criteria: Studies which reported the usage experiences of eHealth in any aspects of PC by pharmacists during the COVID-19 pandemic, written in English or Chinese, and published in peer-reviewed journals between December 2019 and March 2022 were included. Opinion articles, conference abstracts, correspondence, letters and editorials were excluded. Data extraction and synthesis: The literature search was completed on 15 April 2022. Two researchers independently conducted the literature search and extracted the data into an Excel table informed by the logic model with the key components of goals, input, activities, output and contextual factors. Results: Forty-three studies were included in this review. During the COVID-19 pandemic, hospital pharmacists, community pharmacists and specialist pharmacists in 17 countries continued to educate, consult, monitor and manage the patients and the general public via phone calls, videoconferences, mobile applications, social media, websites and/or enhanced interoperability of electronic medical records. Assuring the continuity of pharmacy care, reduced need for hospital visits, and improved work accuracy and efficiency were the benefits of eHealth mostly reported. Contextual factors affecting the adoption of eHealth were multifaceted, prompting supporting actions at the levels of government, hospital/pharmacy, pharmacists and patients. Conclusion: This study revealed the wide adoption of eHealth in PC during the pandemic and the emerging evidence for its importance. Proper adoption of eHealth will help reshape the mode of pharmacy services to ensure continuity, quality and efficiency of care amid the challenges of the pandemic. Prospero registration number: CRD42022299812. Keywords: COVID-19; PUBLIC HEALTH; Telemedicine.			remodela el modo de servicios farmacéuticos para garantizar la continuidad, la calidad y la eficiencia de la atención a los pacientes de manera remota, pero no deja claro si tambien involucra medicacion. Pero yo lo incluiria hasta realizar la revision completa del articulo
112	The Adoption and Acceptance of mHealth Interventions for Self-Management of Hypertension Among Adult Patients: A Systematic Review	Alzahrani SA, E	Cureus. 2022	Cureus	2022		Hypertension is a worldwide epidemic that affects healthcare costs and public health. As a result, self-management of this disease and, in this context, mobile health (mHealth) can be used as a cost-effective management tool. Self-management of hypertension remains of great significance due to the rising number of hypertension cases. As a result, this study aimed to assess the various mobile health interventions used in the self-management of hypertension, their user acceptability, compliance, and adherence to hypertension treatment, and their effectiveness. Some mobile health techniques are automated text and video messages. These mobile applications allow for self-monitoring and communication between the patients and the health service providers, reminders, and automated signals. The abovementioned interventions are promising tools in helping manage blood pressure (BP), but resources are limited. This review involved selecting studies associated with mobile health interventions in managing hypertension and extracting data from available resources. Thirteen studies were selected using the inclusion criteria, and relevant data were extracted and discussed in the review. This review reported the role of mobile health interventions in the management of blood pressure, as most studies noted a decrease in blood pressure and increased medication adherence and self-efficacy. It also reported a reliable communication channel between the participants and their health service providers. Keywords: hypertension; implementing health innovation; medicine and mobile technology; self-care; systematic review.	Aceptado		
116	The Effect of Smartphone App-Based Interventions for Patients With Hypertension: Systematic Review and Meta-Analysis	Xu H, Long H.	JMIR Mhealth U	JMIR Mhealth U	2020		Background: Hypertension is a major cause of cardiovascular disease, which is the leading cause of premature death. People with hypertension who do not comply with recommended treatment strategies have a higher risk of heart attacks and strokes, leading to hospitalization and consequently greater health care costs. The smartphone, which is now ubiquitous, offers a convenient tool to aid in the treatment of hypertension through the use of apps targeting lifestyle management, and such app-based interventions have shown promising results. In particular, recent evidence has shown the feasibility, acceptability, and success of digital interventions in changing the behavior of people with chronic conditions. Objective: The aim of this study was to systematically compile available evidence to determine the overall effect of smartphone apps on blood pressure control, medication adherence, and lifestyle changes for people with hypertension. Methods: This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement guidelines. Databases were searched to identify randomized controlled trials related to the influence of an app-based intervention in people with hypertension. Data extracted from the included studies were subjected to a meta-analysis to compare the effects of the smartphone app intervention to a control. Results: Eight studies with a total of 1657 participants fulfilled the inclusion criteria. Pooled analysis of 6 studies assessing systolic blood pressure showed a significant overall effect in favor of the smartphone intervention (weighted mean difference -2.28, 95% CI -3.90-0.66). Pooled analysis of studies assessing medication adherence demonstrated a significant effect (P<.001) in favor of the intervention group (standard mean difference 0.38, 95% CI 0.26-0.50) with low heterogeneity (I2=0%). No difference between groups was demonstrated with respect to physical activity. Conclusions: A smartphone intervention leads to a reduction in blood pressure and an increase in medication adherence for people with hypertension. Future research should focus on the effect of behavior coaching apps on medication adherence, lifestyle change, and blood pressure reduction. Keywords: adherence; blood pressure; hypertension; lifestyle; medication adherence; mobile; smartphone; smartphone app.	Aceptado		

121	The Efficacy of eHealth Interventions for the Treatment of Adults Diagnosed With Full or Subthreshold Binge Eating Disorder: Systematic Review and Meta-analysis	Moghimi E, Da	J Med Internet	J Med Internet	2021		Background: There has been a recent rise in the use of eHealth treatments for a variety of psychological disorders, including eating disorders. Objective: This meta-analysis of randomized controlled trials is the first to evaluate the efficacy of eHealth interventions specifically for the treatment of binge eating disorder (characterized by compulsive overconsumption of food, in a relatively short period, and without compensatory behaviors such as purging or fasting). Methods: A search on the electronic databases PubMed, Web of Science, Embase, MEDLINE, and CINAHL was conducted for randomized controlled trials that compared the efficacy of eHealth treatment interventions with waitlist controls. Results: From the databases searched, 3 studies (298 participants in total) met the inclusion criteria. All interventions were forms of internet-based guided cognitive behavioral therapy. The results of the analysis demonstrated that when compared with waitlist controls, individuals enrolled in eHealth interventions experienced a reduction in objective binge episodes (standardized mean difference [SMD] -0.77, 95% CI -1.38 to -0.16) and eating disorder psychopathology (SMD -0.71, 95% CI -1.20 to -0.22), which included shape (SMD -0.61, 95% CI -1.01 to -0.22) and weight concerns (SMD -0.91, 95% CI -1.33 to -0.48). There was no significant difference in BMI between the eHealth interventions and controls (SMD -0.01, 95% CI -0.40 to 0.39). Conclusions: These findings provide promising results for the use of internet-based cognitive behavioral therapy for binge eating disorder treatment and support the need for future research to explore the efficacy of these eHealth interventions. Keywords: binge eating; cognitive behavioral therapy; eating disorder; guided self-help; internet; mobile phone; obesity; weight loss.	Aceptado		
126	The Quality of Mobile Apps Used for the Identification of Pressure Ulcers in Adults: Systematic Survey and Review of Apps in App Stores	Koepp J, Baror	JMIR Mhealth L	JMIR Mhealth L	2020		Background: The increasing global use of smartphones has contributed to the growing use of apps for various health conditions, showing promising results. Through mobile apps, it is possible to perform chronological and iconographic follow-up of wounds, such as pressure ulcers, using a simple and practical tool. However, numerous surveys have pointed out issues related to the functionality, design, safety, and veracity of app information. Objective: The objective of this study was to perform a systematic review of published studies regarding mobile apps and a systematic survey in app stores looking for apps developed to identify, evaluate, treat, and/or prevent pressure ulcers in adults, and to evaluate those apps based on software quality characteristics. Methods: This review followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The main bibliographic databases were searched between January 1, 2007 and October 15, 2018, and an app survey was performed in app stores. The selected studies were evaluated according to software quality characteristics by the International Organization for Standardization/International Electrotechnical Commission (ie, ISO/IEC 25010:2011) that involve functionality, efficiency, compatibility, usability, reliability, safety, maintenance, and portability. Results: The search in databases and web-based app stores returned a total of 2075 studies. After removal of duplicates and screening of titles and abstracts, 48 complete articles were evaluated for eligibility, and among these, six were included for qualitative synthesis. Conclusions: In this review, it was observed that all studies involved the initial phase of app development or improvement, and therefore, the apps still need to be evaluated using different software quality characteristics, so that in the future, a gold standard can be approached. Therefore, the prescription of an app for the identification, evaluation, treatment, and/or prevention of pressure ulcers in adults is currently limited. However, the evaluated studies provided important insights for future research. It is of utmost importance that future surveys develop apps jointly with users, using collaborative and cocreative processes and assess patients in real-world situations across different service settings, and they should consider different ethnicities, so that apps are useful to end users, such as patients, family members, health professionals, and students, in the health area. In addition, it is necessary for studies to describe the methodological course of app development in a clear and objective way in order to ensure reproducibility of the study and to offer inputs to allow future research to approach the development of ideal apps that are geared to positively impact the health of end users. Trial registration: PROSPERO CRD42018114137; https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=114137. Keywords: decubitus ulcer; mobile app; portable app; pressure sore; software; wounds and injuries.	Aceptado		
130	The Use of mHealth Apps for the Assessment and Management of Diabetes-Related Foot Health Outcomes: Systematic Review	Sadler S, Gerra	J Med Internet	J Med Internet	2023		Background: Globally, diabetes affects approximately 500 million people and is predicted to affect up to 700 million people by 2045. In Australia, the ongoing impact of colonization produces inequity in health care delivery and inequality in health care outcomes for First Nations Peoples, with diabetes rates 4 times those of non-Indigenous Australians. Evidence-based clinical practice has been shown to reduce complications of diabetes-related foot disease, including ulceration and amputation, by 50%. However, factors such as a lack of access to culturally safe care, geographical remoteness, and high costs associated with in-person care are key barriers for First Nations Peoples in accessing evidence-based care, leading to the development of innovative mobile health (mHealth) apps as a way to increase access to health services and improve knowledge and self-care management for people with diabetes. Objective: This study aims to evaluate studies investigating the use of mHealth apps for the assessment and management of diabetes-related foot health in First Nations Peoples in Australia and non-Indigenous populations globally. Methods: PubMed, Informit's Indigenous Collection database, Ovid MEDLINE, Embase, CINAHL Complete, and Scopus were searched from inception to September 8, 2022. Hand searches of gray literature and reference lists of included studies were conducted. Studies describing mHealth apps developed for the assessment and management of diabetes-related foot health were eligible. Studies must include an evaluation (qualitative or quantitative) of the mHealth app. No language, publication date, or publication status restrictions were used. Quality appraisal was performed using the revised Cochrane risk-of-bias tool for randomized trials and the Health Evidence Bulletins Wales checklists for observational, cohort, and qualitative studies. Results: No studies specifically including First Nations Peoples in Australia were identified. Six studies in non-Indigenous populations with 361 participants were included. Foot care education was the main component of all mHealth apps. Of the 6 mHealth apps, 2 (33%) provided functionality for participants to enter health-related data; 1 (17%) included a messaging interface. The length of follow-up ranged from 1-6 months. Of the 6 studies, 1 (17%) reported high levels of acceptability of the mHealth app content for self-care by people with diabetes and diabetes specialists; the remaining 5 (83%) reported that participants had improved diabetes-related knowledge and self-management skills after using their mHealth app. Conclusions: The findings from this systematic review provide an overview of the features deployed in mHealth apps and indicate that this type of intervention can improve knowledge and self-care management skills in non-Indigenous people with diabetes. Future research needs to focus on mHealth apps for populations where there is inadequate or ineffective service delivery, including for First Nations Peoples and those living in geographically remote areas, as well as evaluate direct effects on diabetes-related foot disease outcomes. Trial registration: PROSPERO CRD42022349087; https://tinyurl.com/35u6mmzd. Keywords: Aboriginal; First Nations; Torres Strait Islander; diabetes; diabetic; foot; mHealth; mobile app; mobile apps; mobile health; mobile phone; review methodology; systematic review.	Aceptado		
133	The Use of Mobile Apps for Heart Failure Self-management: Systematic Review of Experimental and Qualitative Studies	Bezerra Giorda	JMIR Cardio. 2(	JMIR Cardio	2022		Background: Heart failure self-management is essential to avoid decompensation and readmissions. Mobile apps seem promising in supporting heart failure self-management, and there has been a rapid growth in publications in this area. However, to date, systematic reviews have mostly focused on remote monitoring interventions using nonapp types of mobile technologies to transmit data to health care providers, rarely focusing on supporting patient self-management of heart failure. Objective: This study aims to systematically review the evidence on the effect of heart failure self-management apps on health outcomes, patient-reported outcomes, and patient experience. Methods: Four databases (PubMed, Embase, CINAHL, and PsycINFO) were searched for studies examining interventions that comprised a mobile app targeting heart failure self-management and reported any health-related outcomes or patient-reported outcomes or perspectives published from 2008 to December 2021. The studies were independently screened. The risk of bias was appraised using Cochrane tools. We performed a narrative synthesis of the results. The protocol was registered on PROSPERO (International Prospective Register of Systematic Reviews; CRD42020158041). Results: A total of 28 articles (randomized controlled trials [RCTs]: n=10, 36%), assessing 23 apps, and a total of 1397 participants were included. The most common app features were weight monitoring (19/23, 83%), symptom monitoring (18/23, 78%), and vital sign monitoring (15/23, 65%). Only 26% (6/23) of the apps provided all guideline-defined core components of heart failure self-management programs: education, symptom monitoring, medication support, and physical activity support. RCTs were small, involving altogether 717 participants, had ≤6 months of follow-up, and outcomes were predominantly self-reported. Approximately 20% (2/10) of RCTs reported a significant improvement in their primary outcomes: heart failure knowledge (P=.002) and self-care (P=.004). One of the RCTs found a significant reduction in readmissions (P=.02), and 20% (2/10) of RCTs reported higher unplanned clinic visits. Other experimental studies also found significant improvements in knowledge, self-care, and readmissions, among others. Less than half of the studies involved patients and clinicians in the design of apps. Engagement with the intervention was poorly reported, with only 11% (3/28) of studies quantifying app engagement metrics such as frequency of use over the study duration. The most desirable app features were automated self-monitoring and feedback, personalization, communication with clinicians, and data sharing and integration. Conclusions: Mobile apps may improve heart failure self-management; however, more robust evaluation studies are needed to analyze key end points for heart failure. On the basis of the results of this review, we provide a road map for future studies in this area. Keywords: heart failure; mobile app; mobile health; mobile phone; secondary prevention; self-management.	Aceptado		
134	Tools for Evaluating the Content, Efficacy, and Usability of Mobile Health Apps According to the Consensus-Based Standards for the Selection of Health Measurement Instruments: Systematic Review	Muro-Culebra	JMIR Mhealth L	JMIR Mhealth L	2021		Background: There are several mobile health (mHealth) apps in mobile app stores. These apps enter the business-to-customer market with limited controls. Both, apps that users use autonomously and those designed to be recommended by practitioners require an end-user validation to minimize the risk of using apps that are ineffective or harmful. Prior studies have reviewed the most relevant aspects in a tool designed for assessing mHealth app quality, and different options have been developed for this purpose. However, the psychometric properties of the mHealth quality measurement tools, that is, the validity and reliability of the tools for their purpose, also need to be studied. The Consensus-based Standards for the Selection of Health Measurement Instruments (COSMIN) initiative has developed tools for selecting the most suitable measurement instrument for health outcomes, and one of the main fields of study was their psychometric properties. Objective: This study aims to address and psychometrically analyze, following the COSMIN guideline, the quality of the tools that are used to measure the quality of mHealth apps. Methods: From February 1, 2019, to December 31, 2019, 2 reviewers searched PubMed and Embase databases, identifying mHealth app quality measurement tools and all the validation studies associated with each of them. For inclusion, the studies had to be meant to validate a tool designed to assess mHealth apps. Studies that used these tools for the assessment of mHealth apps but did not include any psychometric validation were excluded. The measurement tools were analyzed according to the 10 psychometric properties described in the COSMIN guideline. The dimensions and items analyzed in each tool were also analyzed. Results: The initial search showed 3372 articles. Only 10 finally met the inclusion criteria and were chosen for analysis in this review, analyzing 8 measurement tools. Of these tools, 4 validated ≥5 psychometric properties defined in the COSMIN guideline. Although some of the tools only measure the usability dimension, other tools provide information such as engagement, esthetics, or functionality. Furthermore, 2 measurement tools, Mobile App Rating Scale and mHealth Apps Usability Questionnaire, have a user version, as well as a professional version. Conclusions: The Health Information Technology Usability Evaluation Scale and the Measurement Scales for Perceived Usefulness and Perceived Ease of Use were the most validated tools, but they were very focused on usability. The Mobile App Rating Scale showed a moderate number of validated psychometric properties, measures a significant number of quality dimensions, and has been validated in a large number of mHealth apps, and its use is widespread. It is suggested that the continuation of the validation of this tool in other psychometric properties could provide an appropriate option for evaluating the quality of mHealth apps. Keywords: assessment; eHealth; mHealth; mobile apps; mobile health; mobile phone; questionnaire design; rating; smartphone.	Aceptado		
139	User Engagement With Smartphone Apps and Cardiovascular Disease Risk Factor Outcomes: Systematic Review	Spaulding EM	JMIR Cardio. 2(	JMIR Cardio	2021		Background: The use of mobile health (mHealth) interventions, including smartphone apps, for the prevention of cardiovascular disease (CVD) has demonstrated mixed results for obesity, hypercholesterolemia, diabetes, and hypertension management. A major factor attributing to the variation in mHealth study results may be mHealth user engagement. Objective: This systematic review aims to determine if user engagement with smartphone apps for the prevention and management of CVD is associated with improved CVD health behavior change and risk factor outcomes. Methods: We conducted a comprehensive search of PubMed, CINAHL, and Embase databases from 2007 to 2020. Studies were eligible if they assessed whether user engagement with a smartphone app used by an individual to manage his or her CVD risk factors was associated with the CVD health behavior change or risk factor outcomes. For eligible studies, data were extracted on study and sample characteristics, intervention description, app user engagement measures, and the relationship between app user engagement and the CVD risk factor outcomes. App user engagement was operationalized as general usage (eg, number of log-ins or usage days per week) or self-monitoring within the app (eg, total number of entries made in the app). The quality of the studies was assessed. Results: Of the 24 included studies, 17 used a randomized controlled trial design, 4 used a retrospective analysis, and 3 used a single-arm pre- and posttest design. Sample sizes ranged from 55 to 324,649 adults, with 19 studies recruiting participants from a community setting. Most of the studies assessed weight loss interventions, with 6 addressing additional CVD risk factors, including diabetes, sleep, stress, and alcohol consumption. Most of the studies that assessed the relationship between user engagement and reduction in weight (9/13, 69%), BMI (3/4, 75%), body fat percentage (1/2, 50%), waist circumference (2/3, 67%), and hemoglobin A1c (3/5, 60%) found statistically significant results, indicating that greater app user engagement was associated with better outcomes. Of 5 studies, 3 (60%) found a statistically significant relationship between higher user engagement and an increase in objectively measured physical activity. The studies assessing the relationship between user engagement and dietary and diabetes self-care behaviors, blood pressure, and lipid panel components did not find statistically significant results. Conclusions: Increased app user engagement for prevention and management of CVD may be associated with improved weight and BMI; however, only a few studies assessed other outcomes, limiting the evidence beyond this. Additional studies are needed to assess user engagement with smartphone apps targeting other important CVD risk factors, including dietary behaviors, hypercholesterolemia, diabetes, and hypertension. Further research is needed to assess mHealth user engagement in both inpatient and outpatient settings to determine the effect of integrating mHealth interventions into the existing clinical workflow and on CVD outcomes. Keywords: cardiovascular disease; engagement; health behaviors; mHealth; mobile phone; risk factors; smartphone.	Aceptado		
141	Utilization of Mobile Mental Health Services among Syrian Refugees and Other Vulnerable Arab Populations-A Systematic Review	Ashfaq A, Esm	Int J Environ Re	Int J Environ Re	2020		The global refugee crisis is at its most critical state in history; Syria alone has produced 12 million internally displaced persons, with another 5 million refugees seeking protection across the globe. Faced with the heavy burden of mental distress carried by a massive refugee influx, many host nations lack the service capacity to respond adequately. While mobile mental health (mMHealth) applications and platforms have the potential to augment screenings and interventions for vulnerable populations, an insufficient gender and cultural adaptation of technology may drastically hamper its uptake in Arab refugees. Reporting only papers originating from Middle Eastern and/or Arab nations or refugee host nations, this systematic review evaluates the available literature published between 2000 and 2019 on the usage acceptability of mMHealth in Syrian refugees and other vulnerable Arab populations. We conducted a systematic review in PubMed, PsychInfo, Association of Computing Machinery (ACM) and the Directory of Open Access Journals (DOAJ) using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to identify studies that addressed mMHealth implementation in these populations; of a total of 607 articles identified, only 10 (1.6%) available, unique articles met our search criteria. These studies discussed the feasibility and efficacy of mMHealth applications and the barriers to their uptake. The few existing studies show positive impacts of mMHealth on the access to services and on treatment outcomes but also reveal a paucity of literature on mMHealth for vulnerable Arab populations. These findings indicate a critical need for research on the barriers to mMHealth uptake, to bolster service capacity in the Arab Region and in the refugee diaspora of other, non-Arab host countries. Keywords: Arab Region; Syrian refugee; health capacity; mMHealth; mental health; mobile health; refugees; telehealth.	Aceptado		

Resumen de Resultados.

Nombre del primer autor y año de publicación	Objetivo y métodos	Resultado principal	Resultados secundarios
Al-Arkee S, 2021	Evaluar los efectos de las aplicaciones móviles de atención sanitaria en la adherencia a la medicación y los resultados relacionados con la salud en pacientes con ECV, así como su funcionalidad y facilidad al usarse. Revisión sistemática a partir de MEDLINE, PubMed, Cochrane Library, CINAHL Plus, PsycINFO, Embase y Google Scholar. Ensayos controlados aleatorizados (ECA) para investigar intervenciones basadas en aplicaciones destinadas a mejorar la adherencia a la medicación en pacientes con ECV.	12 ECA informaron la adherencia a la medicación como resultado primario. La duración de las intervenciones varió de 1 a 12 meses, y los tamaños de muestra variaron de 24 a 412. Las tasas de adherencia a la medicación mostraron mejoras estadísticamente significativas en 9 ECA en comparación con el control.	Las aplicaciones tendían a aumentar la adherencia a la medicación, pero las intervenciones variaban ampliamente en cuanto a diseño, contenido y forma de aplicación. Las aplicaciones tienen un grado aceptable de usabilidad, pero las características que confieren usabilidad y eficacia no están bien definidas.
Al-Sahli S, 2023	Explorar y sintetizar la literatura científica sobre los factores que influyen en la aceptación y adopción de mHealth entre los médicos durante la pandemia de COVID-19. Revisión sistemática utilizando las bases de datos MEDLINE, Scopus, Embase y ProQuest. Arrojó una muestra inicial de 455 publicaciones potenciales para análisis, de las cuales 9 (2%) cumplieron los criterios de inclusión. La metodología de esta revisión se basó en PRISMA.	Los factores que influyen en la aceptación y adopción de mHealth; 3 categorías temáticas principales: 1. Barreras y facilitadores tecnológicos, individuales y organizacionales. Barreras tecnológicas: accesibilidad, problemas técnicos, utilidad y la gestión de datos. 2. Barreras individuales (pacientes): presión del tiempo y la carga de trabajo, la alfabetización técnica, el conocimiento de mHealth. 3. Barreras organizacionales: factores financieros, el apoyo y la participación de la gerencia, la seguridad de los datos, la política de telemonitorización y la colaboración.	La tendencia hacia las aplicaciones de mHealth como modelo de prestación de atención durante la pandemia ha revelado varias deficiencias a la hora de estimular la adopción de dichas tecnologías por parte de los médicos. Esta revisión exploró los factores que influyen en la aceptación y adopción de mHealth por parte de los médicos a medida que evoluciona la pandemia de COVID-19. Se identificaron factores relacionados con los dominios tecnológico, individual y organizacional.
Alzahrani SA, 2022	Evaluar las diversas intervenciones de salud móvil utilizadas en la autogestión de la hipertensión, aceptabilidad (usuarios), el	13 estudios analizaron a distintos pacientes sometidos a intervenciones de gestión de la salud (dispositivos	Las intervenciones de salud más comúnmente reportadas son aplicaciones móviles con mensajes de texto y video automatizados y

	cumplimiento y la adherencia al tratamiento (hipertensión), y efectividad. Análisis sistemático realizado con el enfoque Cochrane con un informe presentado utilizando PRISMA.	móviles). Se usó la tecnología mHealth, incluía comunicación con los pacientes (mensajes de texto, vídeo o voz). Algunos estudios utilizaron la mHealth para gestionar a los pacientes hipertensos, mientras que otros la utilizaron para controlar a las poblaciones con mayor riesgo de hipertensión, ayudándolas a evitarla.	equipos de automonitoreo Se ha reportado una reducción significativa en la presión arterial luego del uso de mensajes automatizados, mensajes de video, aplicaciones de automonitoreo y aplicaciones móviles.
Ashfaq A, 2020	Una estrategia que ha cobrado impulso recientemente es la creación de intervenciones de salud móvil (mHealth) y salud mental móvil (mMHealth) para lograr objetivos de atención de salud y transformar la prestación de servicios de salud en todo el mundo. Revisión de la literatura en: PubMed/Medline, PsychInfo, Association of Computing Machinery y Directory of Open Access Journals. Se hizo uso de PRISMA.	7 estudios analizan la utilización de nuevas aplicaciones de mMHealth, 5 analizan las barreras, 5 analizan las actitudes y la aceptación de mMHealth, 1 es un estudio cruzado aleatorizado y 1 es un ensayo de control aleatorizado que analiza la eficacia de un prototipo de mMHealth. Se analizaron siete prototipos únicos de mMHealth e incluyeron 3 intervenciones basadas en la web, 2 aplicaciones móviles, 1 herramienta de transferencia de video/audio y 1 herramienta de teleconferencia.	Informan que entre el 64 y el 88,2% de sus poblaciones de estudio expresan un interés positivo en las aplicaciones de mMHealth y actitudes positivas hacia la utilización de mMHealth. Las 7 tecnologías de mMHealth individuales resultaron eficaces como herramientas de detección y tratamiento psiquiátrico, y la mayoría de los participantes y proveedores tenían actitudes positivas y mostraban aceptación de mMHealth.
Bakogiannis, 2021	Desarrollar junto con médicos, pacientes con IC y sus cuidadores una aplicación de mHealth orientada al paciente, realizar una evaluación de usabilidad e investigar su efecto en la calidad de vida de los pacientes con IC y la tasa de hospitalizaciones en un estudio piloto. Características discretas de la aplicación que podrían incorporarse a la aplicación ThessHF. Estas características se difundieron a un panel de 8 cardiólogos y 2 médicos familiarizados con mHealth. Además, estas características se discutieron con pacientes con IC y se solicitó su opinión.	Un total de 14 pacientes y 5 expertos en mHealth evaluaron la aplicación. Los resultados demostraron una muy buena experiencia de usuario (Finalmente, 30 pacientes (hombres: n = 26, 87%) participaron en el estudio piloto THESS-HF (edad media 68.7 años). Se observó un aumento significativo en la calidad del autocuidado. La calidad de vida media aumentó de forma no significativa después de 3 meses. La tasa de hospitalización durante el seguimiento fue del 3%.	Desarrollo de una aplicación de mHealth orientada al paciente: la aplicación ThessHF. Desarrollamos una aplicación de mHealth fácil de usar para promover el apoyo remoto del autocuidado en pacientes con IC. En este estudio piloto, el uso de la aplicación ThessHF se asoció con un aumento en la calidad del autocuidado.

Bahadoor R, 2021	1. Describir los ensayos controlados que evaluaron la eficacia de las aplicaciones para teléfonos inteligentes dirigidas a los trastornos por consumo de sustancias y las conductas adictivas. 2. Comprender cómo la aplicación producía cambios en la conducta y en el control del antojo. Revisión sistemática basada PRISMA en MEDLINE, CENTRAL y PsycINFO. Los estudios debían ser ensayos controlados sobre trastornos adictivos (sustancias/conducta), intervenciones basadas en aplicaciones móviles, que evaluaran la efectividad o el impacto de esas aplicaciones en el uso.	Se recuperó 22 artículos correspondientes a 22 aplicaciones dirigidas al tabaco, alcohol, otras sustancias y trastorno por atracón. Los grupos de control tuvieron acceso a tratamientos habituales, una aplicación de placebo y a ningún tratamiento. Ocho aplicaciones mostraron un uso reducido. La mayoría de las aplicaciones informaron sobre los riesgos del uso y sugerencias para monitorear el uso. Doce aplicaciones manejaron la ansiedad.	No existen estudios sólidos y comparables sobre las aplicaciones de la mHealth para el tratamiento de las adicciones. Estas aplicaciones podrían convertirse en importantes aportaciones a la práctica clínica en el futuro. El tratamiento sistemático del *craving* para prevenir las recaídas debería ser el objetivo. Los hallazgos actuales sugieren que las aplicaciones para teléfonos inteligentes pueden contribuir de manera efectiva al cambio de conducta y al manejo del *craving* en los trastornos por consumo de sustancias y adicciones. Sin embargo, hasta la fecha, muy pocas aplicaciones han sido evaluadas en cuanto a su validez.
Benjumea J, 2020	Refinar y evaluar una escala basada en el Reglamento General de Protección de Datos y evaluar la imparcialidad de las políticas de privacidad de las aplicaciones de mHealth. Se siguió una estrategia de búsqueda sistemática para identificar todas las aplicaciones de mHealth relevantes para los tipos de cáncer más comunes (cáncer de mama, próstata, colorrectal y de pulmón) y para el cáncer en general. Nos centramos en las aplicaciones de Android debido a su dominio del mercado, siendo el sistema operativo más instalado entre los nuevos teléfonos inteligentes.	Presencia de políticas de privacidad según el tipo de aplicación y encontramos que el 75% (12/16) de las aplicaciones de gestión de enfermedades y el 80% (8/10) de las aplicaciones de apoyo tenían una política de privacidad. Política de privacidad según el tipo de cáncer, cáncer general (9/12, 75%) y cáncer de mama (11/14, 79%) obtuvieron mejores resultados que cáncer de próstata (0/2). 2 apps de cáncer de próstata no son lo suficientemente representativas para un análisis más profundo. Respecto otras apps de cáncer, el 67% (2/3) tenían políticas de privacidad.	El 29% (9/31) de las aplicaciones incluidas no tenían una política de privacidad. El primer resultado decepcionante fue la ausencia de una política de privacidad en 9 de 31 aplicaciones. Esto significa que solo el 71% de las aplicaciones tenían una política de privacidad. Según la literatura, cuando se analizaron las principales aplicaciones de mHealth, el porcentaje de aplicaciones con una política de privacidad fue de aproximadamente el 90%
Bezerra L, 2022	Revisar sistemáticamente la evidencia sobre el efecto de las aplicaciones de autogestión de la insuficiencia cardíaca en los resultados de salud, los resultados informados por los pacientes y la	Aproximadamente el 20 % (2/10) de los ECA encontraron mejoras significativas en sus resultados primarios: conocimiento sobre la insuficiencia cardíaca y el	Se informó de la interacción con la aplicación móvil en el 11% (3/28) de los estudios, y el 67% (2/3) indicó que menos de la mitad de los participantes accedieron a la aplicación diariamente según lo recomendado por los

	experiencia del paciente. Búsquedas en PubMed, Embase, CINAHL y PsycINFO, para encontrar estudios que examinaran intervenciones que incluyeran una aplicación móvil dirigida al autocontrol de la insuficiencia cardíaca y que informaran sobre resultados relacionados con la salud, resultados o perspectivas informados por los pacientes publicados entre 2008 y diciembre de 2021.	autocuidado. Uno de los ECA informó varios resultados primarios, mostrando mejoras en el autocuidado y la calidad de vida. 40% (4/10) de los ECA no mostraron mejoras significativas en sus resultados primarios (calidad de vida, autocuidado, logrando una terapia médica óptima, adherencia a la medicación y días de hospitalización relacionados con insuficiencia cardíaca). Aproximadamente el 20% (2/10) de los ECA informaron un mayor uso de los servicios de atención médica en los grupos de intervención que en los grupos de control, incluido un mayor número de visitas clínicas no planificadas y un mayor uso de los recursos de enfermería (tiempo y llamadas) y la optimización de la medicación.	investigadores y otro que muestra que el 60% de los participantes usaban la aplicación más de una vez a la semana, como se recomienda. 8 (35%) siendo parte de sistemas de telemonitorización y conectadas a servicios de atención médica. Las características comunes de las aplicaciones fueron el control del peso, los síntomas y los signos vitales y la provisión de educación, recordatorios de medicación y visualización gráfica de datos.
Cao W, 2022	Esta revisión sistemática explora la definición y el papel de la participación en las intervenciones de salud móvil (mHealth) centradas en la hipertensión, así como también cómo se han implementado los determinantes de la participación (es decir, la adaptación y la interactividad). Se realizó una revisión sistemática de intervenciones con aplicaciones móviles para el autocontrol de la hipertensión dirigidas a adultos, publicadas entre 2013 y 2020. Se incluyeron un total de 21 estudios en esta revisión sistemática.	Un total de 9 estudios proporcionó información educativa relacionada con la salud. El contenido de la educación variaba, y algunos estudios centrándose en la hipertensión, algunos estudios centrado en los medicamentos para la hipertensión, y algunos estudios incluidos los enfoques dietéticos para reducir la hipertensión. Algunos incluían funciones para registrar tanto la presión arterial como la adherencia o la ingesta de medicamentos. Otros incluían el registro de presión arterial, la ingesta o adherencia a la medicación. Otros registraron otra información como	La mayoría de los estudios (14/21, 67%) se realizaron en Estados Unidos. Además, de los 21 estudios, 2 (10%) se realizaron en China y otros 2 (10%) estudios se realizaron en Suecia. El 14% restante (3/21) de los estudios se realizó en Canadá, Corea del Sur y España. El tamaño de la muestra osciló entre 17 y 5115 participantes, con una edad media de 42,44 a 60 años. Las intervenciones se desarrollaron para audiencias generales (personas con sobrepeso, para audiencias específicas con hipertensión (pacientes con hipertensión mal controlada), o en pacientes con diabetes, hipertensión o ambas. En cuanto al contenido de la intervención, la

		efectos secundarios de medicamentos, registro de síntomas y seguimiento de la dieta, frecuencia cardíaca, el peso y los pasos.	mayoría de los estudios implicaba el seguimiento de la medicación o la adherencia al tratamiento.
Cen ZF, 2022	Determinar cómo se adoptó la eSalud en la atención farmacéutica (AP), los resultados reportados y los factores contextuales. Revisión sistemática de la literatura acuerdo con las pautas de los PRISMA. Pregunta de investigación "How did pharmacists employ eHealth during the COVID-19 pandemic for the provision of care to their patients?". Usaron marco "PICOT".	Se informó sobre el uso de eSalud por parte de los farmacéuticos hospitalarios, seguidos de los farmacéuticos comunitarios. Los pacientes con enfermedades crónicas fueron las principales poblaciones objetivo de las intervenciones de AF-eSalud, seguidos de los pacientes con COVID-19 y los pacientes con cáncer. Los farmacéuticos comunitarios estaban más inclinados a utilizar la eSalud para brindar apoyo emocional a sus pacientes y al público para aliviar su ansiedad sobre el desarrollo de la pandemia, mientras que los farmacéuticos hospitalarios utilizaron la eSalud para llevar a cabo varias intervenciones de atención primaria.	(1) teleeducación (educar a los pacientes sobre cómo tomar medicamentos y efectos adversos de los medicamentos, n = 17); (2) teleconsulta (atender consultas de pacientes sobre problemas relacionados con medicamentos, n=28); (3) telemonitorización (monitorizar el uso de medicamentos por parte de los pacientes en tiempo real, n=27); (4) telegestión de casos (gestión continua del régimen de medicación del paciente según las condiciones del paciente, n=30) y (5) telementoría (el uso de la eSalud por parte de otros trabajadores sanitarios para buscar asesoramiento de los farmacéuticos, n=19). AF-eSalud: consulta, evaluación y dispensación de pedidos de medicamentos, monitoreo del paciente para eventos adversos de medicamentos, seguimiento integral y evaluación continua, revisión y gestión de medicamentos, y educación sobre medicamentos, los farmacéuticos habrían ampliado sus servicios hacia el cuidado del bienestar mental de los pacientes (7), facilitando la colaboración con el equipo de atención médica con el intercambio de información (i8) y medidas de salud pública (9) durante la pandemia.
Christopher E, 2019	Examinar y clasificar sistemáticamente las aplicaciones móviles (apps) para LCT disponibles y evaluar críticamente la literatura que respalda la mHealth para el tratamiento de la LCT. Revisión sistemática de las apps móviles disponibles mediante una búsqueda en Google Play y Apple App Store La	Nueve aplicaciones (17,0 %) fueron designadas para profesionales de la salud, 18 aplicaciones (34,0 %) fueron designadas para pacientes y 26 aplicaciones (49,1 %) fueron designadas para atletas.	El precio varió de gratis a £ 4,92, pero la mayoría de las aplicaciones (92,5 %) fueron gratuitas. Se encontró una pequeña cantidad de apps móviles para el TCE con una aceptación limitada. La mayoría de ellas se centraban en la conmoción cerebral relacionada con el deporte y estaban destinadas a la detección

	selección inicial se basó en el nombre de la aplicación y la descripción proporcionada por los desarrolladores.		de conmociones cerebrales o a la educación sobre el TCE. Además, la evidencia que respalda la mHealth en el TCE es limitada y hay una escasez de ensayos clínicos a gran escala que examinen esta área. Dada la variedad de necesidades de atención que tienen los pacientes con TCE, existe margen para desarrollar intervenciones de mHealth específicas para el TCE que tengan como objetivo ayudar a los pacientes y que hayan sido probadas de manera sólida en cuanto a su eficacia clínica.
Ciapponi A, 2021	Buscar, identificar y comparar sistemáticamente las aplicaciones móviles (apps) relevantes disponibles para teléfonos inteligentes y tabletas, cuyo uso podría afectar potencialmente los resultados clínicos y de salud pública. Realizamos una revisión sistemática de la literatura siguiendo los métodos Cochrane y las pautas PRISMA. La búsqueda en Medline (PubMed).	Se incluyeron 25 apps móviles, 16 sitios web que comparan la medicación dada con grandes bases de datos internas, un estudio preimpreso que evalúa una aplicación móvil y otro estudio que compara cuatro aplicaciones móviles, junto con un detalle de sus principales características para facilitar las comparaciones. Estos informes hacían referencia a la usabilidad y a la capacidad de las apps para identificar correctamente las píldoras/tabletas. La mayoría de las aplicaciones afirman detectar las píldoras evaluando la impresión, el color o la forma, y solo unas pocas ofrecen la posibilidad de identificación a través de una fotografía o un código de barras.	De las 25 aplicaciones, ocho eran de la App Store de Apple, ocho de Google Play, ocho estaban listadas en ambas tiendas y una (MedSnap) no estaba en ninguna de las plataformas, pero se identificó a través de Google Scholar y MedRxiv. El número total de aplicaciones con acceso a bases de datos de medicamentos fue 12 (de 25), y 9 eran de acceso gratuito. El seguimiento del historial de medicamentos estaba disponible solo en 6 aplicaciones, una de las cuales tiene algún costo, 16 aplicaciones permiten compartir mientras que 5 tienen algún costo y 7 aplicaciones requieren inicio de sesión y brindan protección con contraseña, y solo 2 tienen algún costo.
Climent S, 2023	Revisar la literatura científica para determinar qué programas informáticos se han utilizado en el ámbito de la farmacia hospitalaria para la gestión de medicamentos peligrosos. Diseño descriptivo transversal. Se	La mayoría de las aplicaciones eran para el manejo de fármacos antineoplásicos. La etapa más comúnmente controlada fue la prescripción electrónica. De las 19 intervenciones relacionadas con recetas electrónicas, seis estudio	Tres intervenciones evaluaron el desempeño de un robot; en uno de estos estudios, los robots también prepararon la medicación adyuvante. El tipo más común de error de prescripción fue el error de dosis, seguido de la falta de

	realizaron búsquedas en: MEDLINE (vía PubMed), Embase, Cochrane Library, Scopus, Web of Science, Literatura Latinoamericana y del Caribe en Ciencias de la Salud (LILACS) y Medicina en Español (MEDES).	describieron la implementación de un sistema de receta electrónica. Los resultados notificados con mayor frecuencia fueron la incidencia y/o el tipo de error en la prescripción electrónica. La disminución de errores de medicación debido a la prescripción electrónica (la intervención más común) se destacó en la mayoría de los estudio.	integridad en las prescripciones. La mayoría de los errores de prescripción se clasificaron como menores o leves; la mayoría de los errores moderados a graves fueron errores de dosis. Se detectó un mayor número de errores de dosificación debido a la implementación de sistemas gravimétricos, un robot procesador y un analizador de muestras. Los errores de dosificación se redujeron con el uso de robots procesadores en comparación con las preparaciones manuales.
Culebras A, 2021	Abordar y analizar psicométricamente, siguiendo la guía COSMIN, la calidad de las herramientas que se utilizan para medir la calidad de las apps de mHealth. Revisión sistemática en las bases de datos PubMed y Embase, identificando herramientas de medición de calidad de aplicaciones de mHealth y todos los estudios de validación asociados con cada una de ellas. Para su inclusión, los estudios debían estar destinados a validar una herramienta diseñada para evaluar aplicaciones de mHealth.	2 herramientas (Mobile App Rating Scale [MARS] y mHealth Apps Usability Questionnaire [MAUQ]) tienen diferentes versiones para usuarios y profesionales. Además, el MAUQ ofrece diferentes versiones para aplicaciones de mHealth interactivas o independientes. La herramienta SUS se utiliza para evaluar muchos productos y servicios, como software, páginas web o aplicaciones móviles. Se centra en medir la usabilidad mediante una escala Likert de 10 elementos.	Cuestionario Health Information Technology Usability Evaluation Scale (Health-ITUES) fue uno de los primeros cuestionarios en centrarse específicamente en áreas de salud Cuestionario MAUQ se centra exclusivamente en los aspectos de usabilidad de las aplicaciones
Dinesh, 2021	Revisar las aplicaciones de inteligencia artificial (IA), telesalud y otras soluciones de salud digital relevantes para las respuestas de salud pública en el entorno operativo de la atención médica en medio de la pandemia de COVID-19. revisión sistemática de acuerdo con las directrices de la extensión de las revisiones de alcance (PRISMA) de los elementos de informe preferidos para revisiones sistemáticas y metaanálisis (PRISMA-ScR).	Los dominios tecnológicos que se describieron con mayor frecuencia para las respuestas a la COVID-19 fueron la inteligencia artificial (44,9 %, n = 111/247), la telesalud (40,1 %, n = 99/247) y los macrodatos (36,0 %, n = 89/247).	Se han reportado investigaciones mínimas para la aceptación de pacientes y/o proveedores.

Eisenstadt M, 2021	Revisar sistemáticamente la investigación disponible sobre las MHapps que promueven la regulación emocional, la salud mental positiva y el bienestar en la población general de 18 a 45 años. Búsqueda bibliográfica en bases de datos MEDLINE, EMBASE, Web of Science y el Registro Cochrane de Ensayos Controlados (CENTRAL). Se incluyeron los estudios que describían aplicaciones independientes de salud mental y bienestar para adultos sin un diagnóstico formal de salud mental.	Identificaron 39 ECA que sugieren algún apoyo al papel de las MHapps individuales en la mejora y promoción de la salud mental y el bienestar. Con respecto al efecto agrupado, las MHapps, en comparación con los controles, mostraron un pequeño efecto para reducir los síntomas de salud mental, mejorar el bienestar, y un efecto medio para la regulación de las emociones.	Los estudios evaluaron intervenciones en 15 países distintos con un total de 22.090 participantes en la investigación. Se realizaron principalmente en Estados Unidos (13/52, 25%), Reino Unido (6/52, 12%) y Australia (5/52, 9,6%), y se realizaron menos estudios en países de ingresos bajos y medios como Brasil (1/52, 2%) o Irán (1/52, 2%). Varios estudios (10/52, 19%) atrajeron a participantes de una variedad de países a través del reclutamiento en línea.
Chelsey RW, 2021	Esta revisión examina las aplicaciones basadas en terapia dialéctica conductual DBT, con un enfoque específico en la calidad del contenido y la facilidad de uso. Se identificaron todas las aplicaciones que hacen referencia a la terapia conductual conductual en Google Play y las tiendas de aplicaciones de iOS y se revisaron sistemáticamente para comprobar su contenido y calidad. Se utilizó la Escala de calificación de aplicaciones móviles (MARS) para evaluar la usabilidad y la interacción con las aplicaciones.	La mayoría de las aplicaciones (85,71 %) incluían una política de privacidad a la que se podía acceder fácilmente desde la aplicación. Aproximadamente la mitad de las aplicaciones (47,62 %) incluían una notificación como función. En cuanto a los desarrolladores de aplicaciones, la mayoría de las aplicaciones (57,14 %) fueron desarrolladas por una entidad comercial, seguida de un equipo dirigido por un médico (19,05 %), un desarrollador desconocido (14,29 %) y una organización sin fines de lucro (9,53 %).	Aproximadamente la mitad de las aplicaciones se basaban únicamente en la TCD, mientras que las demás integraban componentes de la TCD para complementar otras habilidades terapéuticas, y la mayoría de las aplicaciones estaban diseñadas para usarse sin un terapeuta. Nuestra revisión sistemática de aplicaciones móviles basadas en TCD reveló 21 aplicaciones que se podían descargar, eran gratuitas y funcionales. 33 no podían descargarse o no eran gratuitas.
Gasteiger N, 2023	Proporcionar una descripción general de las consideraciones metodológicas para realizar revisiones de aplicaciones de salud comerciales para teléfonos inteligentes (revisiones de mHealth), con el objetivo de sistematizar el proceso y respaldar evaluaciones de alta calidad de las aplicaciones de mHealth Revisión sistemática con revistas de informática médica (por ejemplo, The Lancet Digital Health, npj Digital Medicine,	Presentamos siete pasos para apoyar el rigor en la realización de revisiones de aplicaciones en el ámbito de la salud: 1) redacción de una pregunta de investigación, 2) realización de búsquedas de alcance y desarrollo del protocolo, 3) determinación de los criterios de elegibilidad utilizando el marco TECH, 4) realización de la búsqueda final y selección de aplicaciones de salud, 5) extracción de datos, 6) calidad, funcionalidad y	Las revisiones de aplicaciones comerciales de mHealth pueden brindar información importante sobre el mercado de aplicaciones de salud, incluida la disponibilidad de aplicaciones y su calidad y funcionalidad.

	Journal of Biomedical Informatics y Journal of the American Medical Informatics Association).	otras evaluaciones y 7) análisis y síntesis de los hallazgos. Presentamos el novedoso enfoque TECH para desarrollar preguntas de revisión y los criterios de elegibilidad, que tienen en cuenta el usuario objetivo, el enfoque de la evaluación, la conectividad y el dominio de la salud. Se reconocen las oportunidades de participación y compromiso de los pacientes y el público, incluido el desarrollo conjunto del protocolo y la realización de evaluaciones de calidad o usabilidad.	
Geldsetzer P, 2022	Identificar y evaluar sistemáticamente las aplicaciones de mHealth orientadas al proveedor que se utilizan para detectar, diagnosticar o monitorear las ENT en PIBM. Revisión sistemática en PubMed, Web of Science y Cochrane Central. Incluimos estudios de tecnologías que eran: (i) basadas en teléfonos móviles o tabletas, (ii) capaces de detectar, diagnosticar o monitorear una ENT de importancia para la salud pública en PIBM, y (iii) dirigidas a profesionales de la salud como usuarios.	Se excluyeron los artículos que describían o evaluaban: (i) intervenciones no destinadas al diagnóstico, detección y/o seguimiento (*n* = 49); *ii)* intervenciones basadas en tecnología no móvil (*n* = 85); (iii) intervenciones dirigidas a los pacientes en lugar de a los profesionales de la salud como usuarios (*n* = 43); (iv) el estado general de las tecnologías actuales (*n* = 48); (v) enfermedades transmisibles (*n* = 34), o que *vi)* no tenían un texto completo disponible (*n* = 42); (vii) no estaban disponibles en inglés (*n* = 14); (viii) eran revisiones sistemáticas (*n* = 36); (ix) eran protocolos de estudio o implicaban pruebas no humanas (*n* = 6); (x) presentaban tecnología que simplemente digitalizaba protocolos, puntuaciones u otros procedimientos que se podían realizar en papel (*n* = 103).	La mayoría de las publicaciones evaluaron productos creados en países de altos ingresos. Las tecnologías de mHealth informadas están bien desarrolladas, pero su implementación en los países de ingresos bajos y medios enfrenta la incompatibilidad del sistema operativo y un descuido relativo de las ENT que causan la mayor carga de enfermedad. La mayoría de los estudios describieron tecnologías para detectar, diagnosticar o monitorear enfermedades dentro de los dominios clínicos de la medicina cardiovascular (89/315), oftalmología y otorrinolaringología (51/315), neurología (39/315), medicina general (22/315) y salud materno infantil (17/315). Las ENT específicas en orden de frecuencia descendente, fueron arritmias (n = 40), enfermedad de Parkinson (*n* = 20), patologías de la retina (*n* = 14), pérdida de audición (*n* = 13), melanoma y otros cánceres de piel (*n* = 11), diabetes (*n* = 10), anemia (*n* = 7) y discapacidad visual (*n* = 7). Los estudios centrados en estas afecciones.

Gunasekeran DV, 2021	Revisar las aplicaciones de inteligencia artificial (IA), telesalud y otras soluciones de salud digital relevantes para las respuestas de salud pública en el entorno operativo de atención médica en medio de la pandemia de COVID-19. Revisión sistémica de las aplicaciones de salud digital para respuestas de salud pública. Utilizamos un enfoque de revisión de alcance para mapear el alcance y la naturaleza de la evidencia, con el fin de responder nuestra pregunta fundamental: "¿Qué formas de salud digital se habían aplicado para las respuestas de salud pública al COVID-19?".	Solo 20 artículos (8,1 %) investigaron la aceptación de estas tecnologías por parte de los pacientes y/o proveedores, de los cuales 17 estudios se centraron en la aceptación, mientras que tres estudios transversales habían incluido la evaluación de la aceptación. Los dominios tecnológicos que se describieron con mayor frecuencia para las respuestas a la COVID-19 fueron la inteligencia artificial (44,9 %, n = 111/247), la telesalud (40,1 %, n = 99/247) y los macrodatos (36,0 %, n = 89/247).	Se han reportado investigaciones mínimas para la aceptación de pacientes y/o proveedores.
Grayek E, 2023	Abordar dos preguntas críticas con respecto a los ensayos clínicos de aplicaciones de software como dispositivo médico (SaMD): ¿Qué tan bien informan los investigadores las métricas de adherencia y participación en los estudios de efectividad y eficacia? y ¿Qué análisis de eficacia utilizan los investigadores para tener en cuenta la falta de adherencia y qué tan apropiados son sus métodos? Se buscó en ClinicalTrials.gov, los sitios web de las empresas y MEDLINE los artículos de ensayos clínicos y estudios. Se resumieron los datos de adherencia y participación para cada uno de los 24 artículos identificados, correspondientes a 10 terapias SaMD.	La mayoría de los ensayos (18/22, 82%) especificaron una dosis recomendada para su aplicación, como la frecuencia de uso o la cantidad de módulos a completar. En general, 11 (50%) ensayos o estudios estudiaron aplicaciones que utilizaron un diseño basado en módulos con una dosis recomendada para la aplicación, mientras que 7 (32%) ensayos o estudios estudiaron aplicaciones que utilizaron un diseño de uso continuo con una dosis recomendada para la aplicación.	La mayoría de los ensayos (23/24, 96 %) recopilaron alguna información sobre la participación, pero solo una minoría (9/20, 45 %) informó sobre todas las facetas prescritas de la adherencia. La mayoría de los ensayos informaron sobre métricas de inicio (17/24, 71 %) e implementación (18/24, 75 %), y menos ensayos (11/24, 46 %) informaron sobre métricas de persistencia.
Hernández E, 2020	Realizar una revisión sobre la utilidad de las diferentes intervenciones en salud digital que están reportadas en la literatura científica, para la prevención de suicidio en la población adolescente y adulta joven, en el contexto de la Atención Primaria de	6 estudios primarios con diferentes diseños: 4 estudios clínicos Aleatorizados y 2 estudios observacionales pre-test y post-test. Se demostró que la estrategia de evaluación conductual logró disminuir	Se detectó una deserción del 50 % y una falta total de interacción con la plataforma del 64 %. Las aplicaciones deben ser pertinentes dentro del contexto del usuario para contar con la aprobación y el posterior uso.

	Salud. Se realizó una búsqueda de la literatura para identificar estrategias de prevención de suicidio en adolescentes y adultos jóvenes que involucren recursos tecnológicos,	episodios de autolesiones “cutting” sin fines suicidas. Los resultados observados mejoraban con la aplicación repetida de la herramienta. Se desarrolló una aplicación móvil para la prevención del suicidio (mindfulness) y terapia basada en la aceptación, demostraron una disminución discreta y estadísticamente no significativa en el desenlace primario de la ideación suicida.	Otro estudio mostró una disminución de los pensamientos y comportamientos suicidas; sin embargo, no evidenció un efecto significativo y sostenido sobre estos más allá del periodo de uso de la herramienta. Con respecto a los desenlaces secundarios de depresión y el distrés psicológico, se observó un descenso.
Islam et al, 2022	Revisar y evaluar sistemáticamente aplicaciones de alta calidad para la adherencia a la medicación para la diabetes (gratuitas) y presentar las características técnicas de las aplicaciones. Realizamos una búsqueda sistemática en la App Store de Apple y en Google Play de aplicaciones que ayuden a la adherencia a la medicación para la diabetes.	8 aplicaciones de alta calidad. La calificación media de los usuarios fue de 4,7. Solo 2 aplicaciones mostraron una alta adherencia y 2 aplicaciones mostraron una adherencia moderada.	Algunas de las aplicaciones descritas en este estudio podrían ser utilizadas por todos los pacientes con diabetes. Por el contrario, otras aplicaciones estaban dirigidas específicamente a pacientes con DM2 o para aquellos con DM1, DM2 o DM gestacional.
Jang S, 2023	Evaluar la eficacia de la rehabilitación musculoesquelética mediante DHC (rehabilitación mediante atención médica digital). Revisión sistemática y metanálisis se realizó utilizando PRISMA. Bases de datos: PubMed, Ovid-Embase, Cochrane Library y PEDro Physiotherapy Evidence Database.. Se define DHC como una intervención de atención médica que utiliza tecnologías basadas en Internet, tecnologías asistidas por teléfono, respuesta de voz interactiva, videoconferencia o aplicaciones de teléfonos móviles, en línea con estudios previos.	La rehabilitación con DHC mejoró significativamente mejoró el dolor en comparación con el grupo de control. En individuos con dolor musculoesquelético agudo o subagudo, la rehabilitación DHC resultó en resultados más favorables en comparación con el grupo de control, mientras que en individuos con dolor crónico, la diferencia fue marginalmente significativa. La mayor reducción del dolor se observó con una duración de seguimiento de menos de un mes. El efecto de DHC en la reducción del	La mayoría de los estudios MSD incluidos (n = 22) se realizaron en pacientes con articulaciones de rodilla o cadera afectadas 1 se realizó en pacientes sometidos a artroplastia de cadera, 55 y 9 en pacientes sometidos a artroplastia de rodilla. Además de los estudios sobre liberación del túnel carpiano y MSD de hombro, se incluyeron estudios en pacientes con esguinces de tobillo, fibromialgia, fracturas de radio distal, y discos lumbares. Todos los demás estudios se realizaron en pacientes con dolor musculoesquelético (n = 25).

		dolor disminuyó a medida que aumentó la duración del seguimiento.	
Jang I, 2021	Analizar el impacto de la educación sanitaria entre los pacientes en tratamiento con warfarina mediante una aplicación móvil. Se realizaron búsquedas en las bases de datos electrónicas MEDLINE, EMBASE, CINAHL, Web of Science y Cochrane.	Se centró en el autocuidado y la autogestión mediante la inducción de una mejora en la adherencia a la medicación de los sujetos que tomaban warfarina y la activación del paciente. Algunos programas incluyeron la autogestión para participar en la toma de decisiones clínicas, la identificación de síntomas, el algoritmo de determinación de dosis de medicamentos y la participación en la determinación de la dosis de warfarina.	Las aplicaciones para teléfonos inteligentes y tabletas tienen el potencial de educar activamente a los pacientes proporcionándoles información oportuna a través de notificaciones automáticas. Los estudios se llevaron a cabo en los Estados Unidos de América (n = 3), China (n = 3), Alemania (n = 2), los Países Bajos, Brasil, Taiwán y Arabia Saudita (n = 1)
Kapoor A, 2020	Evaluar la disponibilidad y caracterizar las características de autogestión de las aplicaciones móviles gratuitas para sobrevivientes de cáncer de mama en Google Play (Android) y Apple App Store (iOS). Se realizó una revisión de las aplicaciones de salud móvil para apoyar a los sobrevivientes del cáncer de mama. Se usa PRISMA. Se aplicó el marco PICO (Población/Intervención/Control/Resultado).	Un total de nueve aplicaciones (ocho de Google Play y una de Apple App Store) cumplieron con todos los criterios y se incluyeron en la revisión final.	Breast Cancer: Information about breast cancer. My Breast Cancer Support. BECCA – The Breast Cancer Care App . My Cancer Coach. Breast Cancer.
Koepp J, 2020	Realizar una revisión sistemática de estudios publicados sobre aplicaciones móviles y una encuesta sistemática en tiendas de aplicaciones en busca de aplicaciones desarrolladas para identificar, evaluar, tratar y/o prevenir úlceras por presión en adultos, y evaluar dichas aplicaciones en función de las características de calidad del software. Esta revisión siguió las pautas PRISMA. Se realizaron búsquedas en las principales bases de datos bibliográficas y se realizó una encuesta sobre aplicaciones en las	La búsqueda de aplicaciones sobre úlceras por presión en sitios web y tiendas web identificó 18 aplicaciones.	Wound Rounds, Staging PI, Pressure Ulcer, Pressure Ulcer Guide, Riesgo de Úlceras Por Presión (Pressure Ulcer Risk).

	tiendas de aplicaciones. Se evaluaron de acuerdo la ISO/IEC 25010:2011.		
Lee H, 2020	Evaluar los efectos de las intervenciones de eSalud para mejorar la adherencia a la medicación en pacientes con trasplante de órganos en comparación con la atención habitual o convencional sola. Búsquedas en MEDLINE a través de PubMed, Excerpta Media dataBASE (EMBASE), Cochrane Register Controlled Trials, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PsycINFO y seis bases de datos nacionales coreanas para identificar ensayos controlados aleatorizados (ECA).	Estas intervenciones utilizaron autogestión basada en aplicaciones móviles, aplicaciones móviles para la gestión de medicamentos, educación basada en la web, monitoreo de medicamentos basado en teléfonos móviles, recordatorios automáticos de medicamentos con un frasco de píldoras inalámbrico y notificaciones al médico. Los resultado fueron la adherencia a la medicación (n = 7) y el conocimiento de la medicación (n = 2). Tofos los estudios mostraron que los métodos de medición de la adherencia a la medicación fueron significativamente heterogéneos.	Se proporcionó al grupo de intervención una aplicación móvil para la gestión de medicamentos. Las características de la aplicación incluían recordatorios que informaban sobre el estado de la medicación, monitoreaban el estado de la medicación del participante y brindaban educación sobre inmunosupresores. Se brindó educación sobre la medicación a través de un sitio web. El grupo de intervención recibió señales recordatorias personalizables (luz, timbre), llamadas telefónicas o mensajes de texto en el día y la hora de la dosis prescrita. También fueron contactados por mensaje de texto, correo electrónico o teléfono cuando las alertas indicaban incumplimiento de la medicación.
Leong Q, 2022	Caracterizar el estado actual de las plataformas de mHealth diseñadas para la ansiedad o la depresión que están disponibles para investigación, uso comercial o ambos. Se realizó una revisión sistemática utilizando un enfoque doble: búsqueda de literatura relevante con términos de búsqueda preespecificados para identificar plataformas en investigaciones publicadas y búsqueda simultánea en 2 tiendas de aplicaciones importantes (Google Play Store y Apple App Store) para identificar plataformas disponibles comercialmente.	Los ejemplos de plataformas encontradas en múltiples estudios fueron Deprexis (6/169, 3,6 %), MoodGYM (6/169, 3,6 %), Happy@Work (4/169, 2,4 %), myCompass (4/169, 2,4 %) y Partners in Parenting (4/169, 2,4 %). 116 (68,6%) se enfocaron en la depresión, 22 (13%) se enfocaron en la ansiedad y 31 (18,3%) se enfocaron en ambas. Los roles desempeñados por estas aplicaciones variaron: Situman proporcionó conocimiento de la situación a la plataforma Moodbuster, TeleCoach implicó llamadas semanales para ayudar con la adherencia a la intervención MoodManager y LifeRhythm ayudó en la recopilación de datos para el	Las 8 aplicaciones se encontraron en Google Play Store, mientras que un subconjunto (6/8, 75 %) estaba disponible comercialmente en Apple App Store. Ninguna plataforma se informó como dispositivo médico. Sin embargo, de las 169 plataformas, 2 (1,2 %) (myStrength y HelpID) se informaron como utilizadas en entornos de atención médica. myStrength se utilizó como una intervención psicológica y tenía afiliaciones con proveedores de atención médica, mientras que HelpID estaba incluida en planes y seguros de atención médica.

		sistema DepWatch.	
Moghimi E, 2021	Evaluar la eficacia de las intervenciones de eSalud específicamente para el tratamiento del trastorno por atracón (caracterizado por el consumo excesivo compulsivo de alimentos, en un período relativamente corto y sin conductas compensatorias como purgas o ayuno). Se realizó una búsqueda en las bases de datos electrónicas PubMed, Web of Science, Embase, MEDLINE y CINAHL de ensayos controlados aleatorios que compararan la eficacia de las intervenciones de tratamiento de eSalud con controles de lista de espera.	3 estudios (298 participantes en total) cumplieron con los criterios de inclusión. Todas las intervenciones fueron formas de terapia cognitiva conductual guiada basada en Internet. Los resultados del análisis demostraron que, en comparación con los controles de la lista de espera, las personas inscritas en intervenciones de eSalud experimentaron una reducción en los episodios de atracones objetivos, la psicopatología de los trastornos alimentarios y de peso.	Estos hallazgos proporcionan resultados prometedores para el uso de la terapia cognitiva conductual basada en Internet para el tratamiento del trastorno por atracón y respaldan la necesidad de realizar investigaciones futuras para explorar la eficacia de estas intervenciones de eSalud.
Muhammad A, 2023	Determinar la efectividad de las intervenciones de mHealth en la adherencia a la medicación entre pacientes con enfermedades cardiovasculares, una de las principales causas de mortalidad a nivel mundial. Basándose en PRISMA, se realizó una búsqueda bibliográfica en las bases de datos PubMed, Medline y ProQuest para encontrar estudios primarios que investigaran el impacto de mHealth en la adherencia a la medicación para enfermedades cardiovasculares. Un total de 23 ensayos controlados aleatorizados con 34.915 participantes cumplieron los criterios de selección.	Los tipos de intervenciones basadas en teléfonos móviles variaron desde intervenciones de SMS individuales; intervenciones de voz interactivas; una intervención multifacética que incluye la conciliación y adaptación de la medicación; educación del paciente; atención colaborativa entre un farmacéutico y el médico de atención primaria del paciente y mensajes de voz; mensajes de texto interactivos; dispositivos de automonitoreo inalámbricos; una aplicación basada en la web que utiliza herramientas interactivas de asistencia al paciente; comparación individual y entre pares de alarmas recordatorias; intervención de tratamiento hablado que involucra SMS y llamadas de voz; WeChat + una aplicación de recordatorio de BlackBerry; un dispositivo de recordatorio electrónico de alerta (frasco de pastillas inalámbrico) con un mensaje automático enviado al	Nueve ensayos utilizaron la Escala de Adherencia a la Medicación de Morisky-8 para medir la adherencia. Uno utilizó la Escala de Adherencia a la Medicación de Morisky-4. un estudio utilizó una pregunta personal para la adherencia a la medicación y registros electrónicos. Los estudios encontrados sobre la mejora de la adherencia a la medicación tuvieron resultados contradictorios: 17 estudios (73,9%) informaron una mejora significativa en la adherencia a la medicación, mientras que 6 estudios (26%) no lograron demostrar un impacto sustancial de la intervención en la adherencia a la medicación. Diez ensayos mostraron una mejora significativa en la adherencia a la medicación en pacientes con enfermedades cardíacas isquémicas

		individuo por correo electrónico, mensaje de texto o llamada telefónica automatizada; y aplicaciones móviles avanzadas.	Tres ensayos produjeron una disminución significativa en la presión arterial y una mejor adherencia a la medicación. Los enfoques intervencionistas basados en tecnología como mHealth, eHealth y telesalud se han convertido en herramientas esenciales. La tecnología mHealth es al mismo tiempo evaluable, más rápida y aceptable para la comunidad.
Myers Annie, 2021	Revisar sistemáticamente las aplicaciones disponibles comercialmente para el autocontrol de la depresión, incluida una evaluación exhaustiva de la calidad, la funcionalidad y las características utilizando una metodología de revisión validada. Revisión sistemática de apps móviles para la depresión en tres mercados de apps móviles principales: Android Google Play Store, Apple App Store y Amazon Appstore.	Las aplicaciones con mejor rendimiento fueron Pacifica, Youper, Innerhour-Live Happier, Wysa, Joyable y Woebot.	Pacifica (now Sanvello), Wysa: Anxiety and Depression Bot, Youper: AIMindfulness, InnerHour: Live Happier , Elevatr, GG Depression, etc.
Magwood O, 2023	¿Qué tan bien informan los investigadores las métricas de adherencia y participación en los estudios de efectividad y eficacia? y ¿Qué análisis de eficacia utilizan los investigadores para tener en cuenta la falta de adherencia y qué tan apropiados son sus métodos? Buscamos en la base de datos de registros de la Administración de Alimentos y Medicamentos registros de terapias SaMD de uso repetido y de cara al paciente. También en ClinicalTrials.gov, los sitios web de las empresas y MEDLINE los artículos de ensayos clínicos. Se resumieron los datos de adherencia y participación para cada uno de los 24 artículos identificados.	Solo 9 (45%) informaron sobre información de adherencia en todos los aspectos del uso prescrito: 15 (75 %) informaron sobre métricas para el inicio del uso terapéutico, 16 (80 %) informaron sobre métricas que informaban sobre la adherencia entre el inicio y la interrupción del tratamiento terapéutico (implementación) y 4 (20 %) informaron sobre la interrupción del tratamiento terapéutico (persistencia). S unos pocos (2/20, 10 %) utilizaron métodos adecuados para evaluar la eficacia.	La mayoría de los ensayos incluidos en nuestra revisión sistemática informan datos que sugieren una falta de adherencia que podría haber afectado a la eficacia de la aplicación, sin evaluar suficientemente la eficacia en estas circunstancias. El uso apropiado de SaMD requiere una comprensión de cómo la adherencia podría funcionar como moderador de los resultados.
Pfeifer A, 2020	1) Investigar la eficacia de los	En los veintidós estudios se encontró	la mayoría de las aplicaciones también

	tratamientos basados en aplicaciones móviles para el dolor crónico no oncológico 2) Evaluar la calidad de las aplicaciones en términos de contenido, facilidad de uso y funcionalidad, desde el punto de vista del usuario. Revisión sistemática siguiendo directrices PRISMA; marco PICOS. Pacientes con dolor crónico no oncológicos (6-80 años).	un efecto pequeño pero significativo (d = −0,40) en comparación con las medidas iniciales o los grupos de control. Los resultados sugieren que el tratamiento basado en aplicaciones puede ser útil para reducir el dolor, especialmente a largo plazo. Como no teníamos acceso a la mayoría de las aplicaciones para usarlas o interactuar con ellas, decidimos no calificarlas.	ofrecían opciones de autogestión del dolor Uno de los estudios utilizó una aplicación con instrucciones para la autoacupresión [59], uno incluyó una herramienta de imágenes ópticas [55], uno una intervención de música digital [51], uno recordatorios diarios junto con mensajes de apoyo [52], dos utilizaron una combinación de ejercicios de fisioterapia guiados por la aplicación, atención plena y educación [46 , 49 , 53], uno empleó chats de autoayuda moderados por expertos [50], y una aplicación tenía una opción de administración de medicamentos [56].
Robert J, 2022	Desarrollar intervenciones de salud digital más efectivas mediante la identificación de factores que influyen en el uso continuo de aplicaciones de salud móvil dirigidas a las enfermedades no transmisibles. Revisión sistemática de acuerdo al método PRISMA. Términos de búsqueda relacionados con aplicaciones de mHealth	los autores de 34 (63%) estudios destacaron su aplicación como efectiva y los autores de 20 (37%) estudios destacaron su aplicación como ineficaz.	Aproximadamente el 95 % (92/96) de los estudios informaron datos sobre el uso real basado en datos objetivos de uso de la aplicación, y el 4 % (4/96) de los estudios informaron datos basados en comentarios cualitativos de los usuarios. autogestión de ENT (17/97, 18%); salud mental (20/97, 21%); uso de sustancias (9/97, 9%); nutrición (7/97, 7%); actividad física (6/97, 6%); pérdida de peso (9/97, 9%); intervenciones de estilo de vida de múltiples componentes (8/97, 8%); y atención plena, incluidas intervenciones de respiración y meditación (9/97, 9%)
Rodríguez M, 2017	Realizar una revisión sistemática acerca de la información publicada sobre las diferentes aplicaciones móviles creadas, relacionadas directamente con la parálisis cerebral infantil o con utilidad potencial en ella, con el fin de describirlas, analizarlas y clasificarlas para su mejor conocimiento. Revisión sistemática sobre aplicaciones móviles con diseño específico o utilidad en la PCI publicadas en la literatura científica. A su vez, se analizaron otras fuentes de	De los 5 artículos seleccionados, 3 se centraban en aplicaciones específicas para PCI y los 2 restantes en aplicaciones con potencial utilidad en PCI.	Protocolo para realizar un estudio prospectivo cuya finalidad se centrará en desarrollar una herramienta llamada *Baby moves app*, aplicación diseñada para la evaluación del movimiento general para identificar a los lactantes con alto riesgo de PCI u otra enfermedad del neurodesarrollo.

	información propias del ámbito de las aplicaciones móviles (app markets).		
Sadler S, 2023	Evaluar los estudios que investigan el uso de aplicaciones de mHealth para la evaluación y el manejo de la salud de los pies relacionada con la diabetes en los pueblos de las Primeras Naciones de Australia y en las poblaciones no indígenas de todo el mundo. Búsquedas en PubMed, Informit's Indigenous Collection database, Ovid MEDLINE, Embase, CINAHL Complete, y Scopus. Estudios que describían aplicaciones de mHealth desarrolladas para la evaluación y el manejo de la salud de los pies relacionada con la diabetes.	No se identificaron estudios que incluyeran específicamente a los pueblos de las Primeras Naciones en Australia. Se incluyeron seis estudios en poblaciones no indígenas con 361 participantes. La educación sobre el cuidado de los pies fue el componente principal de todas las aplicaciones de mHealth.	1 (17%) informó altos niveles de aceptabilidad del contenido de la aplicación de mHealth para el autocuidado por parte de personas con diabetes y especialistas en diabetes; los 5 restantes (83%) informaron que los participantes habían mejorado el conocimiento relacionado con la diabetes y las habilidades de autogestión después de usar su aplicación de mHealth.
Sapouna V, 2023	Mapear y describir los contenidos de las aplicaciones de mHealth disponibles para su uso en niños y adolescentes con enfermedades pulmonares crónicas. Revisión sistemática mediante PubMed, Scopus y Cochrane Library. children aged < 18 years with CPDs; and studies published in English on mHealth apps.	Describieron siete aplicaciones de mHealth para Android e iOS, diseñadas para asma (n = 5) o para fibrosis quística (n = 2). Se identificaron cinco áreas de contenido: educación/información; tratamiento farmacológico; emergencia; apoyo; y tratamiento no farmacológico.	Evaluaron una aplicación llamada Genia, que está dirigida a pacientes con fibrosis quística. También examinaron la aplicación mHealth llamada MyCyFAPP, que se desarrolló como una herramienta de autogestión para pacientes con FQ y sus familias. Aplicaciones (para iOS y Android) estaban dirigidas a pacientes con asma: Kiss my Asthma; Ask Me, AsthMe!; ASTHMAXcel; Asthma First Aid; y Menzies Asthma APP.
Schneider C, 2023	Proporcionar una descripción general de las terapias de apoyo para personas con demencia y las formas en que influyen en la calidad de vida de un individuo. Pregunta de investigación: "¿Cuál es el impacto de las terapias de apoyo en la calidad de vida de las personas con demencia?". Revisión del alcance utilizando el marco propuesto por Arksey y O'Malley y las recomendaciones de Preferred Reporting Items for Systematic Reviews y Meta-Analyses Extension for Scoping Reviews.	Los DAT se categorizaron en terapéutica digital (n = 109), monitoreo de pacientes (n = 30), diagnóstico digital (n = 2), apoyo de atención (n = 2) y software clínico del sistema de salud (n = 1). Se identificó que estas categorías impactan varios aspectos de la calidad de vida Las terapias digitales ayudan a las personas con discapacidad a mantener o recuperar su capacidad para realizar actividades de la vida diaria, como preparar comidas,	Los países con el mayor número de entradas fueron el Reino Unido (n = 38, 21,1 %), Australia (n = 17, 9,4 %), los EE. UU. (n = 14, 7,8 %), Canadá, China y Noruega (n = 11, 6,1 % cada uno).

	Fuentes de datos: Cochrane, Embase, PubMed, Scopus y Web of Science	administrar medicamentos o comunicarse.	
Shen C, 2021	Evaluar la calidad y el contenido de las aplicaciones mHealth que admiten la verificación de interacciones medicamentosas en las tiendas de aplicaciones chinas. Revisión sistemática para identificar aplicaciones mHealth a partir de iOS y Androir. La calidad de las apps se evaluó mediante MARS. PRISMA.	3 (43%) indicaron fuentes de información (citas) y proporcionaron información que estaba de acuerdo con la evidencia existente. 4 (57%) indicaron la participación de médicos en el desarrollo de la aplicación, 3 (43%) habían sido evaluadas por expertos en el campo relacionado y 6 (86%) estaban afiliadas a organizaciones creíbles.	6 (86%) estaban disponibles de forma gratuita. Medication Assistant de DXY y Medication Assistant de People's Health, ofrecen una versión gratuita con acceso limitado a la información de DDI, con una suscripción VIP
Sheng L, 2022	Revisión sistemática y un metaanálisis para evaluar la efectividad de la dosis de las intervenciones de mHealth basadas en aplicaciones para la reducción de los síntomas de ansiedad y depresión. Revisión sistemática en bases de datos como: Ovid MEDLINE, Embase, PsycInfo, Scopus, Cochrane Library, ScienceDirect y ClinicalTrials, Ensayos controlados aleatorizados mHealth basadas en ansiedad y depresión.	15 estudios que involucraron a 2627 participantes para 18 intervenciones de mHealth basadas en aplicaciones. Los participantes en los grupos de intervención mostraron un efecto significativo sobre la ansiedad, pero no sobre la depresión. Las intervenciones de al menos 7 semanas de duración tuvieron mayores tamaños de efecto sobre la reducción de los síntomas de ansiedad. 8 aplicaciones móviles, de las cuales 8 (44%) estaban orientadas al manejo de los síntomas de la depresión, 4 (22%) estaban orientadas a la reducción de la ansiedad y 6 (34%) estaban orientadas tanto a la ansiedad como a la depresión.	Estos estudios se llevaron a cabo en los Estados Unidos (n = 4, 26%), Alemania (n = 2, 13%), Suecia (n = 2, 13%), Australia (n = 1, 7%) [35], Japón (n = 1, 7%) [37, Corea (n = 1, 7%), Suiza (n = 1, 7%), Taiwán (n = 1, 7%) y el Reino Unido (n = 1, 7%).
Shetty A, 2022	Considerar la prevalencia del uso de aplicaciones digitales para el manejo del dolor crónico. Revisión sistemática siguiendo el método PRISMA, realizando búsquedas en PubMed y ScienceDirect. Se usó la	Las aplicaciones de *Digital Medicine* pueden reducir significativamente los síntomas de dolor. El uso de aplicaciones de DM redujo los síntomas de depresión en comparación con la atención estándar	Las aplicaciones digitales tenían más probabilidades de ser efectivas en algunos países (por ejemplo, Estados Unidos, China) que en otros (por ejemplo, Irlanda, Noruega).

	estrategia PICO.	habitual Los síntomas de ansiedad entre los participantes después del uso de aplicaciones de DM mejoraron más que el grupo de control.	
Shi N, 2023	Identificar los componentes de las intervenciones basadas en aplicaciones de mHealth existentes para pacientes con cáncer de mama que se someten a quimioterapia y descubrir elementos de mejora de la autoeficacia entre ellos. Revisión sistemática con ensayos controlados aleatorizados. Se usó el Sistema Omaha y la teoría de autoeficacia de Bandura.	5 ensayos controlados aleatorizados (n = 537 participantes). La auto-vigilancia en el dominio de "Tratamientos y procedimientos" fue la intervención de mHealth utilizada con más frecuencia para mejorar el autocontrol de los síntomas en pacientes con cáncer de mama sometidos a quimioterapia. La mayoría de las aplicaciones de mHealth utilizaron varias estrategias de "experiencia de dominio", que incluían recordatorios, consejos de autocuidado, videos y foros de aprendizaje.	La adherencia de los pacientes a la auto-vigilancia disminuyó un 25,5% después de completar 4 ciclos de quimioterapia. Se requiere más evidencia para hacer recomendaciones concluyentes relacionadas con las herramientas de mHealth para el autocontrol de la quimioterapia del cáncer de mama.
Silang K, 2021	Evaluar la efectividad de los ensayos aleatorios controlados sobre intervenciones de eSalud realizadas durante el embarazo con el objetivo de reducir el consumo de sustancias. Revisión sistemática apoyada en el Manual de la Colaboración Cochrane y PRISMA. Con base en Medline ®, PsychINFO, EMBASE, CINAHL y Cochrane CENTRAL	Las intervenciones se crearon de manera que la comunicación de los servicios se llevara a cabo mediante el uso de la tecnología (teléfono/mensajes de texto), en lugar del uso de una aplicación específica para reducir los comportamientos de consumo de sustancias. 4 intervenciones se entregaron mediante computadora o Internet, una se entregó a través de mensajes de texto (SMS) y una se entregó por teléfono.	Con respecto al tipo de sustancias estudiadas, tres de los estudios evaluaron el tabaquismo utilizando la abstinencia autoinformada sensible al tiempo, así como pruebas de dosis y dependencia de drogas Dos estudios evaluaron el consumo de alcohol con la abstinencia autoinformada sensible al tiempo
Spaulding M, 2021	Determinar si la participación de los usuarios en aplicaciones de teléfonos inteligentes para la prevención y el manejo de la enfermedades cardiovasculares está	Evaluaron la relación entre la participación del usuario y la reducción de peso (9/13, 69 %), IMC (3/4, 75 %), porcentaje de grasa	La interacción de los usuarios con las aplicaciones de teléfonos inteligentes puede estar asociada con resultados de factores de riesgo, incluida la reducción de peso y el IMC,

	asociada con un mejor cambio de comportamiento en materia de salud de estas y con mejores resultados en cuanto a factores de riesgo. Revisión sistemática apoyándose de PubMed, CINAHL y Embase. Se evalúa la participación del usuario usando aplicaciones de teléfonos inteligentes.	corporal (1/2, 50 %), circunferencia de la cintura (2/3, 67 %) y hemoglobina A 1c (3/5, 60 %). De 5 estudios, 3 (60 %) encontraron una relación estadísticamente significativa entre una mayor participación del usuario y un aumento en la actividad física medida objetivamente.	entre los adultos que usan una aplicación de teléfono inteligente para la prevención y el tratamiento de las ECV.
Tala Á, 2022			
Teepe G, 2021	Evaluar sistemáticamente el uso de los mecanismos just-in-time adaptive intervention (JITAI) en aplicaciones populares para personas con depresión. Se hizo una búsqueda que aborden depresión en la App Store y Google Play Store, así como en Anxiety and Depression Association of America, the United Kingdom National Health Service, and the American Psychological Association. Posteriormente, se buscaron base de datos publicaciones relacionadas con dichas apps.	Ninguna de las 28 aplicaciones revisadas utilizó mecanismos JITAI para adaptar el contenido a situaciones, estados o individuos. 3 (11%) no utilizaron ninguna medición, 20 (71%) utilizaron exclusivamente autoinformes que fueron insuficientes para aprovechar todo el potencial de las JITAI, y las 5 (18%) aplicaciones que utilizaron autoinformes y mediciones pasivas los utilizaron solo como indicadores de progreso o de tarea.	Aunque el 34% (23/68) de las publicaciones revisadas investigaron la efectividad de las aplicaciones y el 21% (14/68) investigaron su eficacia, ninguna publicación mencionó o evaluó los mecanismos JITAI. Los mecanismos prometedores de JITAI aún no se han traducido en aplicaciones convencionales para la depresión. Apps: *Calm*, *Headspace*, *Daylio*, *Youper*, *Moodpath*, *Wysa*, *Friend Shoulder*, entre otras.
Xu H, 2020	Recopilar sistemáticamente la evidencia disponible para determinar el efecto general de las aplicaciones de teléfonos inteligentes en el control de la presión arterial, la adherencia a la medicación y los cambios en el estilo de vida de las personas con hipertensión. Revisión sistemática de acuerdo con PRISMA. Se buscaron ensayos controlados aleatorizados de intervención basada en aplicaciones en personas con hipertensión.	El análisis agrupado de 6 estudios que evaluaron la presión arterial sistólica mostró un efecto general significativo a favor de la intervención con teléfonos inteligentes. El análisis agrupado de los estudios que evaluaron la adherencia a la medicación demostró un efecto significativo ($p < 0,001$) a favor del grupo de intervención. Una intervención con un teléfono inteligente reduce la presión arterial y aumenta la adherencia a la medicación en personas con	Las aplicaciones con intervenciones de cambio de comportamiento digital, como las dirigidas a la actividad física, demostraron poco efecto. El tamaño del efecto de las aplicaciones con funciones de instrucción conductual en el control de la presión arterial fue 9 veces menor que el de las aplicaciones sin estas funciones. La evidencia del impacto de las aplicaciones para teléfonos inteligentes en la actividad física fue insuficiente.

		hipertensión.	
Zheng C, 2020	Evaluar el papel de las aplicaciones móviles en el manejo del dolor por cáncer. Revisión sistemática. Se usaron las bases de datos MEDLINE, Embase, Cochrane, CINAHL, Scopus y PsycINFO. Los efectos de las aplicaciones sobre el dolor oncológico se evaluaron utilizando el software RevMan5.3, y las tasas de reacciones adversas a los medicamentos se analizaron utilizando el paquete de software estadístico R 3.5.3.	Las aplicaciones pueden reducir significativamente las puntuaciones de dolor. Se utilizaron aplicaciones que tienen un módulo de mensajería instantánea para el análisis de subgrupos; estas aplicaciones redujeron significativamente las puntuaciones de dolor de los pacientes.	Los pacientes que utilizan aplicaciones sin un módulo de mensajería instantánea no experimentaron una reducción en la puntuación del dolor. Otros resultados, como la catastrofización del dolor o la calidad de vida, demostraron una mayor mejora en los pacientes que utilizaban aplicaciones con módulos de mensajería instantánea en comparación con los pacientes que no utilizaban una aplicación.