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PROFESSIONAL DOCTORATES

Exploring barriers and developments in men's mental health access

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Exploring barriers and developments in men's mental health access.

Matthew Taylor, Dr Christopher Saville, Dr Elizabeth Burnside

Bangor University

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Thesis Summary

This thesis explores inequalities in men's mental health provision within the UK, beginning with a literature review exploring efforts to rectify low engagement rates and poor treatment outcomes. Causal factors for these issues are discussed from feminist, atheoretical and masculinities perspectives. The review evaluated the approaches used to improve mental health outcomes among men and found a preponderance of studies which include stigma reduction strategies, activities to improve engagement with services and third-sector community-based approaches. The review highlights the need for further work in establishing a person-centred approach to men's mental health issues, noting difficulties conceptualising men's needs.

The second paper details a quantitative analysis of secondary data from a national health survey. The tested qualitative predictions from previous studies with a high-power, statistical analysis. Findings illustrate clear barriers to service access faced by men, with female participants 48-60% more likely to be in receipt of mental health care than their male counterparts, when controlling for psychological distress and other demographic variables. These findings are discussed as a mixture of internal and external factors that may prevent men from accessing services, including identification with certain forms of masculinity and biases within services that may unfairly disadvantage men.

The third paper is a reflective account of conducting the literature review and empirical research. This begins with a discussion of the inequalities in societal attitudes and treatment efficacy in areas predominantly affecting male service users, such as substance use and suicidality. Implications for research and practice are discussed, with reference to conflict around the conceptualisation of men's mental health difficulties. Finally, the researcher reflects on the process of conducting research in the area of men's mental health. Of note are the challenges associated with what appears to be a polarised and hostile cultural climate surrounding discussions of gender and inequality.

Paper 1: How is the literature shaping men's mental health? A systematic review of developments in male-oriented psychological interventions.

Matthew Taylor, Dr Christopher Saville, Dr Elizabeth Burnside

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<u>0appendices%20are%20not%20included</u>.

<u>Abstract</u>

Introduction

Evidence consistently shows systemic inequalities in mental health outcomes for men (Baker, 2018). The present study aimed to collate and detail adaptations made by healthcare services to improve psychological wellbeing for male service-users. These adaptations are discussed in relation to their utility to researchers aiming to develop their own interventions and highlight gaps in research.

Methods

A systematic search of three electronic databases (PubMed, PsychINFO and Web of Science) was conducted in May 2022 to identify relevant intervention assessment reports using the following title and abstract keywords: (men OR men's OR male OR boys OR masculin*) AND (mental health OR psycholog* OR wellbeing) AND (intervention OR trial OR project) and screened for relevance. Included articles were analysed using the Synthesis without Meta Analysis (SWiM; Campbell et al., 2019) framework.

Results

34 articles were deemed relevant for review. Services primarily made adaptations by attempting to improve service access through inclusion of activities designed to appeal to male service users and employing stigma reduction strategies. Adaptations also tended to focus on outcomes relevant to men's mental health, though showed a tendency to focus on social isolation. Some studies attempted to address demographic vulnerabilities that intersected with gender such as age and ethnicity. Few studies utilised gender-adapted or gender-specific psychotherapeutic models.

Discussion

Studies demonstrated a wide range of variance in reporting quality of gender-tailoring procedures and adaptation replicability. Studies also varied in the adaptation strategies employed. This was understood as the result of a lack of coherent framework to understand men's mental health issues. Recommendations include investing more resources into interventions which specifically target mental health issues that disproportionately affect men, such as specialised trauma services, substance use programmes and suicide prevention approaches. Likewise, a greater focus on recommendations such as early-intervention approaches, male-only treatment groups and interagency strategies should be researched more thoroughly.

Introduction

Social inequalities in relation to healthcare

Recent shifts in cultural awareness have reinforced the need for close examination of the specific inequalities faced by different groups within society. Movements such as Black Lives Matter and #MeToo have shed a spotlight on gaps in understanding and empathy within society, allowing us to engage in more open discussions about the challenges people face and where society can make improvements. Highlighting systemic inequalities can enable us to improve the way we construct and deliver services, allowing individuals to be heard and receive more person-centred, culturally sensitive treatment for their mental health needs.

In the context and spirit of these discussions, it bears acknowledgement that men occupy an unusual position within society. They represent the extremes, with the most powerful and wealthy individuals in organisations and politics noted as being overwhelmingly male (Kauppinen & Aaltio, 2003) while men also represent approximately 85% of homeless individuals (Office for National Statistics (ONS), 2021a), 95.97% of prison inmates (Ministry of Justice, 2022) and are 57.14% more likely to be the victims of violent crime (ONS, 2021b). They disproportionately suffer from alcohol and substance misuse difficulties (McHugh et al., 2018; Nolen-Hoeksema, 2004) and complete suicide at three times the rate of their female counterparts (ONS, 2021c). All these issues constitute risk factors for and/or sequelae of serious mental health difficulties (Fergusson et al., 2000). Additional evidence shows that women and girls outperform boys and men at every level of education (Machin & Pekkarinen, 2008) and that men have consistently poorer outcomes in physical and mental health as they age in comparison to their female peers (Hajian-Tilaki et al., 2017; Kiely et al., 2019).

This evidence paints a paradoxical picture of men's position within society, varying with socioeconomic class, age (and generation), ethnicity, culture, and personal experience (Baker, 2018, Seidler et al., 2018; Smith et al., 2018). One important issue which represents a consistent source of inequality between men and women is men's comparatively lower rates of engagement with services providing

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mental health support. Men disproportionately struggle at all levels of service engagement, with a lower likelihood of initial referral, lower rates of engagement in psychotherapy, higher dropout rates during psychotherapy and low follow-up effect sizes in comparison to their female peers (Robertson et al., 2018).

Present state of literature

In exploring this issue, multiple theorists and researchers have attempted to explain the barriers to men's engagement with services. Recent guidance from the American Psychological Association (APA) for Psychological Practice with Boys and Men (APA, 2018) draws upon feminist theory to inform its recommendations for treating men with mental health issues. Feminist and intersectional authors discuss these issues in reference to hegemonic masculinity (expectations that society places upon men which are internalised and, subsequently, valorised) and toxic masculinity (expressions of masculinity that are harmful to the individual or others; Coles, 2007; Courtenay, 2000; Evans et al., 2011; Ridge et al., 2011). While such perspectives offer recommendations for clinicians – for example, that they should explore the impacts of cultural expectations of masculinity with clients – it is not made explicit when and how clinicians should do this.

Multiple scholars, including feminist authors, demonstrate flaws in the conceptualisation of toxic/hegemonic masculinity. The guidance issued by the APA (APA, 2018) was subject to controversy, with multiple prominent academics criticising the guidelines (see Wright, 2019, expanded upon further in the discussion section and Paper 3 of this thesis). In contrast to the APA guidance, alternative recommendations offer concrete strategies such as prioritising person-centred treatment among males, specialised men's services, male-only treatment groups, rehabilitative psychological assessment and treatment in prisons, stigma reduction strategies, adopting early intervention and multi-agency approaches, addressing systemic inequalities, recognising men's struggles to accept support and proactively engaging them, and *sensitively* expanding individuals' views of masculinity *only as an adjunct* to other treatment methods (MHF, 2009; Pollard, 2016; Rice et al., 2022; Rice et al.,

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2018a; Rice et al., 2018b; Robertson et al., 2015; Sagar-Ouriaghli et al., 2019; Sagar-Ouriaghli et al., 2020). However, to date there exist no reviews exploring how these recommendations are put into practice, which are employed most frequently and why.

Aims of present study

In investigating men's mental health provision, various authors have conducted specific reviews into employee wellbeing in male-dominated industries (Hulls et al., 2022), behavioural workplace interventions to improve sleep in men (Soprovich et al., 2020), male-only lifestyle interventions to improve mental health (Drew et al., 2020), and programmes to improve help-seeking in men (Sagar-Ouriaghli et al., 2019). There had, however, been no reviews at the time of authorship which detailed broader adaptations that mental health services have made to improve the provision of psychological support for men. Given issues establishing the correct course of action (noted above), recent academic interest in structural inequalities, and the growing evidence base around men's mental health, it is necessary to provide an overview of the current evidence base in translating psychological theory into clinical practice. This process would offer insight into which aspects of theory that clinicians are currently attempting to adapt into practical interventions for their male service users and how these adaptations are made. From this, clinicians may be able to gain information on how to adapt their own services and examine alternatives where theory is not currently being translated into practice. The purpose of this review, therefore, was to collate and describe such adaptations for those interested in developing psychological services to better meet the needs of male service users.

<u>Methods</u>

Review Protocol

The study was initially intended to be registered on PROSPERO; however, this was not possible due to an error made during initial registration in January 2022. A brief report of the review protocol, as originally submitted, is provided in Appendix A, however.

Search Strategy

Three electronic databases (PubMed, PsychINFO and Web of Science) were searched in May 2022, without any restrictions on language or methodology. Title and abstract keywords were entered as follows: (men OR men's OR male OR boys OR masculin*) AND (mental health OR psycholog* OR wellbeing) AND (intervention OR trial OR project).

Eligible Articles

The review screened articles in two stages. Abstract screening aimed to remove all articles that explicitly noted methods conflicting with the criteria stated in Table 1. Only articles published in the last 20 years based on relevance were included, as older results were unlikely to reflect current service provision or cultural shifts. Inclusion/exclusion criteria were based on the "PICO-S" design (Eriksen, 2018) to systematise the screening process. Criteria were intentionally broad as the current evidence base on adaptations for men's psychological wellbeing is in the early stages of development. This allowed the review to capture a wide range of studies to assess the extent of current adaptations being made in clinical practice.

PICOS Component	Inclusion Criteria	Exclusion Criteria
Population	Male participants of any age, ethnicity, nationality and other demographic variable. These were not restricted as the review intended to capture as broad a range of groups as possible, especially given the intersectional nature of men's mental health.	Studies which did not demonstrate a specific focus on male participants or conduct sub- analysis differentiated by sex, as the aim is explicitly to explore adaptations made for male service users.
		Papers that specifically explored sub-groups of sexuality (regardless of orientation) within men, on the basis that this constituted part of a distinct, specific, and detailed literature on sexuality (often in the context of physical/sexual health), which was beyond the scope of the current study.
		Studies which selected participants based on medical diagnoses. The literature around clinical health psychology and masculinity was felt to be beyond the scope of this review due to its size (see discussion section for further elaboration).
Intervention/exposure	Only individuals participating in psychosocial interventions focused on one or more of the	Studies employing physical health interventions with no psychosocial element
	ionowing.	were excluded, even if mental health

Table 1: Screening criteria

	i.	Improving men's mental health	outcome was measured, as this is not
		with either male only groups or	generally the primary target outcome.
		groups with gender-specific	
		adaptations	Studies which focused on the prevention of
	ii.	Stigma reduction campaigns	criminal behaviour only were also excluded
		aiming to encourage men to access	as they fall outside of the focus of the
		mental health services	current review and are better understood by
	iii.	Interventions aiming to make	forensic literature. However, studies
		services more accessible to male	assessing the mental health outcomes of
		service users (e.g., outreach	forensic populations were eligible for
		programmes)	inclusion.
	These in	terventions could include one or	
	more of	the following:	
	i.	Formal psychotherapy	
	ii.	Psychoeducation programmes	
	iii.	Social support groups for	
		vulnerable adults	
	iv.	Interventions aimed at	
		challenging/expanding	
		masculinities.	
	To meet	inclusion criteria, these	
	interver	tions must also include an element	
	or desig	n philosophy informed by the	
	literatur	e on men's mental health.	
Comparison	Studies	were not included or excluded based	N/A
	on com	parison or control groups to include	
	as wide	a range as possible.	
Outcome	Studies	were not included or excluded based	N/A
	on outco	ome measure to include as wide a	
	range as	s possible.	
Study Design	All resea	arch methodologies and study types	N/A
	were inc	cluded for review due to the broad	
	nature o	of the review question. This allowed	
	for the i	nclusion of all forms of	
	qualitat	ve/quantitative studies, pilot	
	studies,	experimental and quasi-	
	experim	ental studies, observations, RCTs and	
	non-RC1	evaluations.	

Synthesis

No meta-analysis was conducted to evaluate effect sizes of interventions as the aim of the review was not to establish treatment efficacy. The heterogeneity of research and intervention paradigms made such an approach impossible. The SWiM (Campbell et al., 2019) guidelines were used to record this synthesis method instead. While many of these guidelines apply to reviews that attempt to derive information regarding outcome measures and synthesised measures of efficacy, this study does not attempt to do so. As such, items 2, 3, 5, 6 and 7 were not deemed applicable. However, items 1, 4, 8 and 9 are addressed below.

Item 1: Grouping studies for synthesis

Descriptive information was extracted, including a comparison and contrast of common elements. These elements include 1) the psychosocial treatment method, 2) The focus of adaptation(s) made and 3) the process of "gender-tailoring" studies (in this instance, how researchers informed their adaptations).

Three groups of psychosocial intervention were identified for the synthesis:

- Psychotherapeutic interventions
- Social programmes
- Psychoeducation programmes

Each of these groups were chosen based on the vehicle of change through which each intervention aimed to achieve its goals. Psychotherapeutic interventions relied on traditional forms of psychotherapy such as cognitive behavioural therapy or behavioural activation which may have also been developed or adapted to improve psychiatric outcomes for male services users. Social programmes consisted of community-based groups which tended to focus on positive interpersonal relationships to improve service users' psychological wellbeing. Psychoeducational programmes offered more informative resources which aimed to increase awareness or knowledge about specific areas without necessarily challenging individuals' preconceptions or engaging them in traditional therapy.

Four groups of adaptation focus were identified for the synthesis:

- Improving men's access to mental health services
- Addressing demographic vulnerabilities
- Focus on men's mental health issues
- Use of male-specific psychotherapeutic models

These were chosen as each represented a distinct approach in the study's attempts to improve wellbeing for men. Those which targeted demographic vulnerabilities, for example (such as conceptualisations of masculinity or the impacts that aging or ethnicity may have on these conceptualisations), did not necessarily also focus on men's mental health issues, such as suicidality or substance use. Likewise, improving access to men's mental health services via stigma reduction campaigns or community outreach programmes did not necessitate the development of a maleorientated psychotherapeutic model. While none of these adaptations were mutually exclusive (and many studies contained more than one of these elements), they did represent discrete tactics employed by study designers, intended to address a specific target.

Demographic vulnerabilities and men's mental health issues were initially grouped within one category. However, it became clear that these two approaches reflected different theoretical underpinnings. Those adaptations aimed at targeting demographic vulnerabilities tended to have a more feminist background, focusing on hegemonic and toxic conceptualisations of masculinity. Conversely, those grouped as focusing on men's mental health issues tended to focus more directly on the particular symptoms experienced (such as suicidality, social isolation or substance use).

The process of gender tailoring was identified as a specific element during synthesis as all studies at least alluded to the process by which they designed and implemented adaptations. However, they differed notably on the theoretical perspectives, guidelines and approaches used in their adaptations.

Studies were also grouped in terms of their overall quality, described in more detail below.

Item 4: Criteria used to prioritise results for summary and synthesis

As the intent of the review was to provide a descriptive exploration of the existing literature around male-specific service adaptations, no statistical or qualitative analysis was performed to establish an effect size. A bespoke quality assessment of the studies was performed by the primary researcher to assess the quality of reporting (as opposed to the study design itself) in order to prioritise studies for

summary. This involved examining each study to assess the level of detail supplied in the methods section to ascertain replicability of adaptations and the introduction section to determine the extent of men's mental health literature utilised in designing and implementing these adaptations. A reliability analysis (detailed below) was conducted by two independent assessors from a sample of the reviewed literature. Each study allocated to one of the four groups detailed in Table 2.

Table	2:	Quality	assessment	criteria
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	Criterion		Description
1	Studies which: a) elaborated manualised, male- oriented adaptations, with b) clear citations to theory and research around masculinity and mental health.	a)	These studies must offer clear and replicable guidance on how to conduct each stage of the intervention with supporting materials, scripts, information leaflets etc., where appropriate.
		b)	Studies should provide clear rationale for developing male-oriented adaptations in the introduction, with reference to issues in men's mental health (including "masculine" expressions of distress such as suicidality, substance use, violence and/or criminal behaviour) and research informing the format of such adaptations (including those that recommend male- only intervention groups, proactive engagement strategies and/or stigma reduction).
2	Studies which: a) elaborated easily replicable (but either non-manualised or improvised) male- specific adaptations with b) clear citations to theory and research around masculinity and mental health.	a)	These studies must offer clear guidance on how to conduct each stage of the intervention, with guidance and materials as above, but may lack precision on certain elements or include elements which focus on <i>structured</i> group discussion.
		b)	Studies should provide clear rationale in developing male-oriented adaptations <i>and</i> research informing the format of such adaptations, as above.
3	Studies which: a) gave non-replicable (or difficult to replicate) descriptions of their adaptations and/or b) did not clearly identify links to existing theory and research around masculinity and mental health to inform decisions.	a)	These studies may possess specific dynamics or lack specifics/materials, rendering replication impossible or prone to considerable divergence from the study. Examples may include studies which rely heavily on social dynamics or specific individuals (such as those found in mentor/mentee relationships) but whose structure could be repeated. This may also include studies without clear instructions on how the intervention should be performed.
		b)	These studies may lack clear reference to men's mental health issues in the rationale of the study or may not use research to inform the specifics of the intervention.
4	Studies which: a) did not elaborate adaptations made (but discussed having made them) and/or b) used little/no theory and research around masculinity and mental health to inform decisions.	a)	These studies may not be possible to replicate, lacking details such as intervention length or content of sessions or the required materials to conduct elements of the intervention.
		b)	These studies may contain no references (or only one or two) to men's mental health issues in either the rationale or intervention design.

Reliability analysis was conducted using the ratings from the primary researcher and two independent assessor's study ratings. Independent assessors were given two stratified samples of the articles containing 10 items each, with ratings representative of the overall articles. Two Spearman's rank correlations were computed to assess the relationship between the primary researcher's (PR) ratings and the ratings of each independent assessor (IA1, IA2), as data met the assumption for a non-parametric test. There was a non-significant, moderate correlation found between PR and IA1 (ρ (8) = .53, N = 10) and a significant, strong correlation between PR and IA2 (ρ (8) = .83, ρ = .003, N = 10).

Studies rated as 1 or 2 were considered "high quality", in this review, as some interventions may be too early in the development process to manualise. However, manualised interventions were distinguished on the basis that there is a paucity of replicable, systematised adaptations that services can make to increase outcomes in male clients. These studies are of high value to clinicians. However, studies rated as 2 are also valuable to inform service development. Studies rated as 3 were considered of "informative" quality for informing service development but may lack key replication details and/or theoretical links. Studies rated as 4 demonstrated "insufficient" theoretical basis for their adaptations and/or did not describe adaptations in enough detail to inform service development.

Item 8: Reporting results

Results are discussed with reference to three elements of the synthesis. Firstly, the quality of the studies included is addressed, i.e., how informative they are for researchers aiming to adapt or implement new approaches within their own services. Secondly, the types of psychosocial intervention employed by the various studies is discussed. Finally, the target of their interventions is addressed.

Item 9: Limitations of the synthesis

Limitations of the synthesis are detailed in the discussion section.

Results

See Figure 1 for results of screening process.



Figure 1: PRISMA flow diagram

Study Quality

Studies are discussed in accordance with the categories numbered in the methods section. Due to the broad inclusion criteria, necessity required that ad-hoc ratings were applied to certain studies. Those studies which evaluated naturalistic services and could not report the development strategy would have no recorded process for gender-tailoring (see Cordier et al., 2016; Culph et al., 2015; Mahoney

et al., 2020; McGeechan et al., 2017; Taylor et al., 2018 for examples). In these instances, the level of literature used to inform interventions was, instead, assessed by establishing the literature researchers used to evaluate the service.

Studies were mostly of an informative to high quality (M = 2.38), with 27 of the 34 studies reviewed belonging to categories "2" (N = 13) and "3" (N = 14). Five studies were rated as "1" and only two were rated as "4" (see Table 3 for individual study ratings). Few studies could be rated as "1" as they tended not to meet the criterion of providing fully manualised interventions. A small number was expected and interpreted as a reflection of the developing nature of the evidence-base for men's mental health. The two studies rated as "4" were either non-replicable in the reporting (Kennedy et al., 2020) or made no reference to mental health literature in informing their intervention (Murphy & Gardner, 2019).

Those rated as "2" and "3" varied dramatically in their reporting of interventions. Some studies reported interventions that were replicable but have the potential to differ considerably as they relied on group members to shape or direct interactions. Others reported more structured interventions but left out details that could have a wide range of impacts on replicability. Similarly, the usage of men's mental health literature to inform adaptations varied considerably. Some studies relied on few men's mental health citations to inform their intervention design, whereas others included detailed literature review, an iterative development process or drew on service user and clinician consultation. Homogeneity of quality should, therefore, not be assumed when evaluating individual examples of either categories "2" or "3". However, those studies that only relied on weak evidence or gave difficult-to-replicate interventions would not be rated as "2" or above. Studies rated either "1" or "2" should all be considered of high value to clinicians in guiding service development, with those rated as "3" or below offering inconsistent informative value. See Table 3 for descriptions and ratings for each study.

Study	Authors	Study	Method	Population	Sample
		Quality			size
Can lifestyle interventions improve	Sharo et	1	Quasi-	Age: 35+	60
Canadian men's mental health? Outcomes	al. (2021)		experimental	Group: Weight-	
from the HAT TRICK programme				based	

				Region: Canada	
Intervention: 12-week program utilising gen	der-sensitised	delivery o	f physical activity	schedule, diet manage	ment and
social connectedness informed by Social Co	gnitive Theory	and Self-	Determination Th	heory. Included 90-min	ute group
sessions, weekly challenges, activity monitori	ng with fitness	tech, and	informational res	ources.	
Outcome Measures: BMI, depression risk (M	ale Depression	Risk Scale), health-based qu	uality of life (SF-12).	
Building community-based helping	Giusto et	1	Quasi-	Age: 33-45	9
practices by training neer-father	al (2021)	-	experimental	Group: Alcohol use	Ū.
counselors: A novel intervention to reduce	ui. (2021)		experimental	Region: Kenva	
drinking and depressive symptoms among				Region. Renya	
fathers through an expanded masculinity					
Intervention: Law counselling training for	community le	aders to	deliver interver	tions for problematic	drinking
Interventions utilised Behavioural Activat	ion Motivatio	nal Inte	rviewing and di	scussions aimed at e	evnanding
concentualisations of masculinity			incluing and a		cxpanang
Outcome Measures: Lay counsellor competi	encies (FNACT	& MITI) (rlinical skills inter	rvention fidelity accent	ability for
counsellors and clients.		α winny, (ability for
Breliminary Evaluation of a Brief Web and	Fogartey	1	Quasi-	Δαο: ~30	1//
Mobile Phone Intervention for Men With	otal	1	evnerimental	Group: Depression	144
Depression: Men's Desitive Coning	(2017)		experimental	Region: Australia	
Strategies and Associated Depression	(2017)			Region. Australia	
Resilience and Work and Social					
Functioning					
Intervention: Regular mood symptom and	hehaviour mo	nitoring a	and short interact	tive sessions based on	Cognitive
Behaviour Therapy and Problem-Solving Ther	any delivered	via wehsit	e and mobile nho	ne	cognitive
Outcome Measures: Depression (PHO-9) ext	ernal symptom	s of male of	listress (MDRS) re	silience (CD-RISC) work	and social
functioning (WSAS)	emarsymptoms				
Supporting mon through their transition	Elatchar	1	Quaci	Ago: 16 EE	101
to fatherhood with messages delivered to	otal	T	Quasi-	Age. 10-33 Group: Now fathors	101
their smartphones: a feasibility study of	(2017)		experimental	Bogion: Australia	
SMS4dade	(2017)			Region. Australia	
Intervention: Brief text messages sent three	about the wee	k on a fo	ur wook syste to	promoto doopor connor	ction with
children and partners with mood-tracking ou	estions sent eve	erv 3 wee	ke	promote deeper conner	
Outcome Measures: Mood (Kessler K6 & 12-) and experien		v father and conr	oction with child and n	ortnor (in
app ratings)	and experien	ces as nev			
app ratings).	Malff at	1		A === 10 :	220
implementation and effectiveness of	vvoin et	T	KUI	Age: 10+ Crown Incorporated	230
treatment for incorporated man	al. (2015)			Group: incarcerated	
treatment for incarcerated men.				Region: USA	
Intervention: Comparison of trauma and ad	diction troatmo	nt for inc	arcorated man us	ing the Socking Sofety	and Mala
Trauma Recovery Empowerment Models				ang the seeking salety a	
Outcome Measures: PTSD severity (PCI-C CA	APS GSI self-re	nort) self	-esteem (SES) cor	ning (PCI) and self-effica	cy (GPFF)
The Wildman Brogramme Experiences	Høogmark	2 2	Ouaci		20
from a first implementation of a nature-	otal	2	evnerimental	Age. 10-70 Group: Chronic	20
hased intervention designed for men with	(2022)		experimental	health and stress	
stress and chronic illnesses	(2022)			Region: Denmark	
Intervention: Nine-week wilderness retreat a	roun rehabilitat	ion progr	am for stress and	chronic health condition	s Weekly
3h sessions incorporating mindfulness ho	dy awareness	commun	antitor scress and o	ature informed by the	Bionhilia
Hypothesis Stress Reduction Theory Suppor	tive Environme	nt Theory	and Attention Reg	storation Theory	ыортша
Outcome Measures: Quality of life (WHOOO)	-BREE) and str	ass (DCC)		storation meory.	
Cutcome Measures. Quality of the (WHOQO		255 (F 33).	DCT	A == 047 C7	
and Beconnection with Network for March	nøegmark	2	KUI	Age: 47-67	114
and Reconnection with Nature for Men	(2021)			boalth and stress	
A Matched-Control Study	(2021)			Region: Denmark	
A matcheu-control study.		ion progr	am for stross and	chronic hoalth condition	
The socions incorporating mindfulness for the socions incorporating mindfulness has	dy awaranas	.ion progra	ann for stress and (turo informed by the	S. VVEEKIY,
Sin sessions incorporating minarumess, DO	uy awareness,		and Attention De-	storation Theory	ыориша
Outcome Measures: Quality of life (MULCOO)		IL THEORY	and Attention Res	storation Theory.	
Outcome ineasures: Quality of life (WHOQO	-BREF) and stre	255 (PSS).	<u> </u>		
An Online Behavioral Health Intervention	Watkins	2	Quasi-	Age: 18-30	40
Promoting Mental Health, Manhood, and	et al.		experimental	Group: Young black	
Social Support for Young Black Men: The	(2020)			men	
VBMen Project				Region: USA	

improving social connection Outcome Measures: Depression (PHO-9, GM	DS) and mase	rulinity (CM	NI)		
Strengths and weaknesses of the Young Black Men, Masculinities, and Mental Health (YBMen) Facebook project.	Watkins et al. (2017)	2	Quasi- experimental	Age: 18-30 Group: Young black men Region: USA	40
Intervention: Social media-based psychoed improving social connection.	ucational pro	gram prom	oting mental hea	lth, challenging masculir	nities and
Outcome Measures: Qualitative results obtain	ined via syste	matic analy	sis of post-interve	ntion interview.	
Naturalistic evaluation of a sport-themed mental health and wellbeing app aimed at men (MindMax), that incorporates applied video games and gamification.	Cheng et al. (2020)	2	Observational	Age: 16-35 Group: Sports enthusiasts Region: Australia	131
Intervention: Sports-themed psychoeduca Psychoeducational modules, based on ACT viewership.	tional mobi and Positive	le app inc Psycholog	luding social fe y, offered in-app	ed and casual footba currency rewards to e	III game ncourage
Outcome Measures: Help-seeking (GHSQ),	wellbeing (WEMWBS),	connection (Ass	essment of Self-Group	Overlap)
tiourishing (Flourishing scale) and resilience (CD-RISC).				
Can a documentary increase help-seeking intentions in men? A randomised controlled trial.	King et al. (2017)	2	RCT	Age: 18+ Group: General male population Region: Australia	337
Intervention: Viewing a three-part documer suicidality, with the goal of improving help-se Outcome Measures: Help-seeking (GHSO), m	ntary (Man U eeking behavi pasculinity (Cl	p), which e ours. MNI-22, GR(xplored masculini	ty, mental health, well-t	peing and
social connection (MOS Social Support Survey	y) and resilier	nce (CD-RISC	c).		
Effectiveness of a brief stress management intervention in male college students.	Kim et al. (2017)	2	RCT	Age: ~20-26 Group: College students	40
over five, four-hour sessions. Components Cognitive Theory. Outcome Measures: Depression (CES-D-K), a Meaning-Centered Men's Groups: Initial Findings of an Intervention to Enhance	based on Jo nxiety (STAI), Heisel et al. (2019)	hari Windo suicidal ide 2	w model, Cogniti ation (SSI) and ag Quasi- experimental	ve Behaviour Therapy a gression (AQ). Age: 55+ Group: Retirement	nd Socia
Resiliency and Reduce Suicide Risk in Men Facing Retirement.				age men Region: USA	
Intervention: Existentially-oriented, commur reduce suicidality in those transitioning to Logotherapy.	nity-based psy retirement.	chological ہ کelivered o	group intervention ver 12, 90-120mi	n aiming to improve resil n, weekly sessions and	iency an based o
Outcome Measures: Meaning in life measu suicidal ideation (GSIS), depression (GDS), ho	ire (EMIL), lif pelessness (B	e satisfactio HS) and lon	on (SWLS, SWLRS eliness (UCLA Lon), psychological wellbeir eliness Scale).	ng (PWB
Think You Can Shrink? A Proof-of-Concept Study for Men's Health Education Through Edutainment.	Ungar et al. (2017)	2	Quasi- experimental	Age: Unknown Group: General male population Region: Canada	24
Intervention: Psychoeducational, multi-episo TV format modelling supportive behaviour.	de web serie	s aiming to i	mprove help-seek	king and communication	via realit
Outcome Measures: Usage stats and survey	on learning o	utcomes, be	havioural intentio	ons related to material.	
Silence is deadly: a cluster-randomised controlled trial of a mental health help- seeking intervention for young men.	Calear et al. (2017)	2	RCT	Age: 16-18 Group: High school students Region: Australia	800
Intervention: Suicide prevention program to aimed at challenging gender norms that act models.	improve hel as barriers to	p-seeking b help-seekir	ehaviours for 12– ng delivered over	18-year-old males. Grou 45-60min by traditional	p sessio male rol
Outcome Measures : Help-seeking (AHSQ, A' (GRCS-A) and behaviour risk (YRBS).	TSPPH-SF, GH	isq, ssosh), psychological di	istress (DQ5), gender-rol	e conflic

The challenge and impact of engaging Curran et 2 Quasi-A Age: 18-45 34 Inard-to-reach populations in regular al. (2016) experimental Group: Hard-to-reach men Region: UK Region: UK Region: UK Region: UK Football in the Community' men's health programme. Region: UK Intervention: Community based football intervention to promote physical and mental health delivered over 12, biweekly, two-hour sessions of football programme. 131 Formal intergenerational mentoring at Cordier et 2 Observational Age: 9-81 131 Australian Meris Shed: a targeted survey al. (2016) Group: Men's Shed users and guality. Intergrete descress, programmes. Region: Australian Region: Australian Meria Shed: 104 Intergeted excress/CSI internation of al. (2011) Group: Sedentary males Region: UK Region: Ireland Intergrete descress/CSI intervetoin of al. (2022) Quasi-Age: 18-61 104 Group: Suidial 104 <td< th=""><th></th><th>-</th><th></th><th></th><th></th><th>-</th></td<>		-				-
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Outcome Measures: Google analytics data, e	emails and online	e survey.						
Exploring the Effectiveness of an	Bird et al.	3	Quasi-	Age: 20-35	5			
Integrated Mixed Martial Arts and	(2019)		experimental	Group: Young men				
Psychotherapy Intervention for Young				at risk of suicide				
Men's Mental Health.				Region: Ireland				
Intervention: 10-week intervention combining mixed martial arts classes and individual psychotherapy to improve help-								
seeking behaviour.								
Outcome Measures: Thematic analysis.			-					
Men's Perceptions of a Gender-Tailored	Drew et	3	Quasi-	Age: ~38-60	125			
eHealth Program Targeting Physical and	al. (2021)		experimental	Group: Depression				
Mental Health: Qualitative Findings from				Region: Australia				
the SHED-II Recharge Irial.		• - :		antal haalth via wavaha				
Intervention: Inree-month, self-directed, eHealth program to improve physical and mental health via psychoeducation								
Outcome Measures: Depression (PHO-9) w	aight (BMI) and g	omi_stru	ictured interviews					
Mon's Shads and the experience of		2	Naturalistic	Δαο: 52.77	12			
depression in older Australian men	ol (2015)	5	obsorvation	Age. 52-77 Group: Mon's shod	12			
depression in older Australian men.	ai. (2013)		Observation	users at risk of				
				depression				
				Region: Australia				
Intervention: Men's Shed community-based	d social health a	nd wellb	peing projects invo	lving manual activities a	and social			
engagement.				-				
Outcome Measures: Depression (BDI-II) and	qualitative inter	views.						
The Effect of Floorball Training on Health	Wikman	3	RCT	Age: 65-76	22			
Status, Psychological Health and Social	et al.			Group: Older adult				
Capital in Older Men.	(2017)			males				
				Region: Denmark				
Intervention: One-hour, biweekly floorbal	l group aiming	to impr	rove physical and	psychological health a	and social			
connectedness.								
Outcome Measures: Physical health (SF-12),	anxiety and dep	ression ((HADS), qualitative	interviews.				
	-		-					
Exploring men's perceptions of a	McGeech	3	Observational	Age: 18-69	32			
Exploring men's perceptions of a community-based men's shed programme	McGeech an et al.	3	Observational	Age: 18-69 Group: Men's shed	32			
Exploring men's perceptions of a community-based men's shed programme in England.	McGeech an et al. (2017)	3	Observational	Age: 18-69 Group: Men's shed users	32			
Exploring men's perceptions of a community-based men's shed programme in England.	McGeech an et al. (2017)	3	Observational	Age: 18-69 Group: Men's shed users Region: UK	32			
Exploring men's perceptions of a community-based men's shed programme in England. Intervention: Men's Shed community-based engagement.	McGeech an et al. (2017) d social health a	3 nd wellb	Observational	Age: 18-69 Group: Men's shed users Region: UK Iving manual activities a	32 and social			
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Indigenous men taking their rightful place in society? A preliminary analysis of a participatory action research process with Yarrabah Men's Health Group.	Tsey et al. (2002)	4	Observational	Age: Unknown Group: Indigenous men at risk of suicide Region: Australia	Unclear				
Intervention: Community-based social health and wellbeing project aiming to reduce problem drinking, suicide and									
Outcome Measures: Qualitative analysis									
The ripple effect: a digital intervention to reduce suicide stigma among farming men.	Kennedy et al. (2020)	4	Quasi- experimental	Age: ~29-59 Group: Rural farmers at risk of	238				
				suicide Region: Australia					
Intervention : Multimedia digital intervention informed by adult learning and social cognitive models (including videos, postcard messages, psychoeducation and goal-setting) aiming to reduce suicidality.									
Outcome Measures: Qualitative interviews, suicide stigma (SOSS) and suicide literacy (LOSS) measures.									
Pharmacists' acceptability of a men's mental health promotion program using the Theoretical Framework of Acceptability.	Murphy & Gardner (2019)	4	Quasi- experimental	Age: Unknown Group: Pharmacy users Region: Canada	31				
Intervention: Training for pharmacists to deliver men's mental health promotion resources.									
Outcome Measures: Qual interviews of knowledge and sustainability.									

Psychosocial Element

Of the psychosocial elements included in studies, there was an even split of intervention types. Studies all fell into three groups: formal psychotherapy, psychoeducational programmes with no active formal psychotherapy and "social interventions." Studies could belong in more than one group, depending on the components of the intervention. 13 interventions each comprised a psychotherapeutic, psychoeducational and/or social intervention.

Adaptations

Improving men's access to mental health services

This area was the most frequently targeted by researchers, with 32 such adaptations discussed within the 34 studies. In these adaptations, researchers altered their delivery methods with an explicit intent to improve male engagement with mental health services and/or reduce the impact of stigma in preventing men from accessing services.

Studies were most likely to include sporting activities as a parallel activity alongside the psychosocial intervention to reduce stigma and increase engagement. Eight studies chose this approach and included activities such as football (Curran et al., 2016; McEwan et al., 2019; McGale et al., 2011;

McGrane et al., 2020), Mixed Martial Arts training (Bird et al., 2019), floorball (Wikman et al., 2017) and individual exercise (Sharp et al., 2021, Young et al., 2021). These were generally used to improve engagement rates with more traditional forms of CBT-based psychotherapy.

The next most common group of adaptations were from six observational studies evaluating Men's Sheds (Cordier et al., 2016; Culph et al., 2015; Mahoney et al., 2020; McGeechan et al., 2017; Taylor et al., 2018). Men's Sheds are community projects which make use of workshop-based activities to aid in the formation and maintenance of social connections between men. Studies found the inclusion of practical, parallel activities and mentoring schemes were of particular benefit to service users.

The 18 remaining studies reviewed included a wide variety of improvement targets and solution methods. As such, descriptions shall be kept brief. For example, two studies draw on evolutionary psychology and the biophilia hypothesis to structure the delivery of their intervention around areas of natural beauty (Høegmark et al., 2021; Høegmark et al., 2022). Another made use of behavioural activation and motivational interviewing, delivered by peer counsellors to improve support access in an economically deprived area (Giusto et al., 2021). Two projects used social media to facilitate an intervention focusing on challenging masculinities (Watkins et al., 2017; Watkins et al., 2020). The MindMax project used mobile videogaming to improve social connection and deliver psychoeducation (Cheng et al., 2020).

Other studies delivered a digital, mixed-media intervention (Kennedy et al., 2020), developed a psychoeducation campaign to be delivered by local pharmacists (Murphy & Gardner, 2019), produced a psychoeducational documentary (King et al., 2018; King et al., 2019), delivered "edutainment" programs designed to encourage discussion and reflection (Ungar et al., 2017), utilised web-based CBT (Fogarty et al., 2017), used a text message service to educate and engage new fathers (Fletcher et al., 2017), adapted their delivery methods to be more engaging (Calear et al., 2017), utilised male-specific therapeutic models (Wolff et al., 2015), examined community projects (Tsey et al., 2002) or hosted

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service-user led activity groups (Gleibs et al., 2011). Finally, one study noted adaptations made to improve access for men but lacked detail on how they achieved this (Chopra et al., 2021).

Addressing demographic vulnerabilities

14 studies made explicit reference to adaptations made to address proposed mechanisms of vulnerability faced by males and other qualities that intersect with "maleness". Of these, eight studies made efforts to either challenge or expand conceptualisations of masculinity within service-users in relation to additional demographic vulnerabilities. Six focused on difficulties men may disproportionately experience due to aging and two which related to ethnicity and mental health difficulties.

Of the eight studies which focused on challenging/expanding masculinity, only four detailed their methodology in sufficient detail to discuss. Two of these studies were from the same intervention group (King et al., 2018; King et al., 2019) and involved the production of a documentary and website designed to encourage help-seeking behaviour and reduce stigma in men. The two remaining studies focused on challenging pre-existing conceptualisations of masculinity within group members of community projects (Giusto et al., 2021, Tsey et al., 2002).

Of the six studies which focused on aging, four were studies examining the effectiveness of formal generational mentoring projects within men's sheds (Cordier et al., 2016; Culph et al., 2015; Mahoney et al., 2015; Wilson et al., 2013). These studies highlighted the social, psychological, and practical values of mentoring for both mentor and mentee, alongside the advantages of including parallel activities. The remaining two focused on suicide prevention through therapeutic group work (Heisel et al., 2020) and building social connections through group activities for care home residents (Gleibs et al., 2011).

The two studies that challenged masculinity with a specific focus on ethnicity (from the same research group; Watkins et al., 2017; Watkins et al., 2020) reported concerted attempts to deconstruct notions of traditional black masculinity. As noted above, however, it is not possible to replicate such

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deconstructions from their reporting and they noted no significant changes to masculinity on any instrument used in any case.

Focus on men's mental health issues

With a similar frequency to access adaptations, 31 studies made explicit reference to adaptations they had made to influence outcome measures that are noted as being significant areas of difficulty in men's mental health. Twenty of these focused on improving male social networks, while nine included a specific focus on suicide-prevention, one focused on substance abuse and another on treating trauma in forensic populations. These studies included Men's Sheds groups, studies which employ meaning-focused logotherapy to reduce suicidality, and forensic groups which used a male-adapted version of the Trauma Recovery and Empowerment Model (M-TREM; Wolff et al., 2015).

It is possible that the search strategy may have skewed this spread of results. However, terms were intentionally kept as broad as possible and special effort was taken to ensure the inclusion of studies which assessed the psychological wellbeing of individuals in forensic populations or those struggling with substance misuse difficulties (due to the aforementioned predominance of men in these populations). Given that, the number of studies attempting to reduce suicidality and substance misuse or improve the mental health of forensic populations is surprisingly low, especially given that these are arguably three of the most serious men's mental health issues.

Adapted Psychotherapies

A total of 10 studies adapted existing "gender blind" psychotherapies for use with male participants. This varied from adaptations to materials and delivery to increase accessibility for men to the development of courses which were purposely designed for use with male-only populations. As with other adaptations, there was a high degree of variation. Studies drew on a wide range of theoretical and clinical models including: biophilia, evolutionary psychology, social cognitive theory, selfdetermination theory, behavioural activation, motivational interviewing, logotherapy, meaningfocused therapy, cognitive behavioural therapy, the transactional model of stress and coping, the Johari window model, problem-solving therapy and the male trauma recovery and empowerment model (M-TREM).

Gender Tailoring Process

The gender-tailoring process for each study was reviewed. All but three studies (Chopra et al., 2021, Kennedy et al., 2020; Murphy & Gardner, 2019) reported at least some form of gender-tailoring procedure. These studies were still included for review as adaptations were clearly present, but the process of adaptation was not recorded. This is, again, felt to reflect the low-level of systematisation due to the emerging quality of the evidence-base (discussed further below).

Of the remaining 31 studies, procedures were divided into the following categories (and studies could include more than one): naturalistic service developments with no recorded process (N = 7), use of and clear citation to literature (N = 23), service-user consultation (N = 7), clinical consultation (N = 1), pilot studies (N = 2), use of existing or novel male-specific psychotherapy models (N = 4) and service user involvement in the research or intervention development process (N = 2). 18 of the studies used only one of these methods and this was most likely to be to be a sole reliance on literature (N = 12). The remaining six of this 18 consisted of naturalistic adaptations.

Discussion

Overview of findings

The most commonly studied approaches were the inclusion of physical activities to engage men (Bird et al., 2019; Curran et al., 2016; McEwan et al., 2019; McGale et al., 2011; McGrane et al., 2020; Sharp et al., 2021; Young et al., 2021; Wikman et al., 2017) and observations of pre-existing community projects such as Men's Sheds (Cordier et al., 2016; Culph et al., 2015; Mahoney et al., 2020; McGeechan et al., 2017; Taylor et al., 2018). While guidance raised in the introduction does not emphasise the use of physical activities to improve engagement, clinicians consistently note the value of such adaptations. Almost half of the studies made efforts to expand conceptualisations of

masculinity, though the mechanisms deployed to do this were not always made clear and appeared inconsistent across studies (e.g., Calear et al., 2017; Watkins et al., 2017; Watkins et al., 2020). Fewer studies focused on intersectional vulnerabilities such as aging (Cordier et al., 2016; Culph et al., 2015; Gleibs et al., 2011; Heisel et al., 2020; Mahoney et al., 2015; Wilson et al., 2013) or ethnicity (Watkins et al., 2017; Watkins et al., 2020). A preponderance of those studies reviewed focused on improving social networks (Cheng et al., 2020; Fletcher et al., 2017 Fogartey et al., 2017; Høegmark et al., 2021; Høegmark et al., 2022; Watkins et al., 2017; Watkins et al., 2020), while relatively few focused on suicidality and almost none focused on substance abuse, criminality or trauma in forensic populations. Multiple studies noted adopting a different stance towards intervention delivery and engagement with male service-users. Researchers discussed changing their language, adopting a more informal approach, utilising gender-specific materials, and the use of humour to engage and destigmatise. It was not always clear exactly how researchers developed this last set of adaptations towards delivery, and it is possible that many were informed by pre-existing assumptions about what male service-users would prefer.

There was an absence of approaches which aimed to research rehabilitative treatment in forensic settings, specialised men's services, person-centred treatment strategies, early intervention approaches, multi-agency approaches and address systemic inequalities (such as socio-economic circumstances or education). Studies also demonstrated a restricted focus on mental health issues which predominantly affect males. Studies focused heavily on social connection, masculinity and suicidality, investing comparatively fewer resources into substance use, aggressive or criminal expressions of distress, trauma or homelessness.

Most studies reviewed are from European, Australian, and American research groups. Unfortunately, while some studies discuss cultural variations in how masculinity is defined and exercised within different societies, the current literature does not allow this to be explored in more depth. Likewise, there are multiple articles that are produced either by related research groups (Watkins et al., 2017;

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Watkins et al., 2020, King et al., 2018; King et al., 2019, Høegmark et al., 2021; Høegmark et al., 2022) or study similar interventions (Cordier et al., 2016; Culph et al., 2015; Mahoney et al., 2020; McGeechan et al., 2017; Taylor et al., 2018). This renders many of the adaptation types repetitious, skewing the data. However, this is not strictly an issue as this review aimed to assess the types of interventions being employed at present, rather than establish or compare effects of different intervention types.

Limitations of synthesis

The inter-rater reliability analysis of the quality assessment tool suggested that correlation between raters had a moderate-to-strong reliability. This may be a result of vaguery in the operationalising terms leading to disagreement between assessors. Future efforts to review the literature in this area may benefit from the use of pre-existing methods of reviewing mixed studies (e.g., the Mixed Methods Appraisal Tool; Pluye et al., 2009; Pace et al., 2012).

As noted above, the inclusion criteria discounted all studies which selected groups based on sexual orientation. While exclusion was not based on any specific orientation, it is acknowledged that this is likely to have disproportionately excluded studies focusing on sexual minorities. Likewise, excluding those studies which selected groups based on medical diagnoses will have masked the needs of those under the care of clinical health psychology. These decisions were not made lightly; it is important to acknowledge that these groups form a broader picture of masculinity and will have unique insights to offer, especially when discussing concepts such as hegemonic masculinity. As mentioned previously, however, the studies in question represented part of a vast literature on sexuality, clinical health psychology and masculinity that is already well-documented. Inclusion would have rendered review impossible due to the number of studies that would have been eligible. It was hoped that this review would capture, at least in part, a wide range of views via the broader studies included. However, it is necessary that future reviews highlight and incorporate these views into the literature. Efforts to explore the interactions between sexuality, physical health and mental health may highlight additional

resilience factors or treatment vectors. As a result, this paper is best conceptualised as a broad starting point examining the unique strengths and difficulties diverse groups of men may face.

Recommendations for clinicians and future research

In general, the studies employed a wide range of intervention approaches, theoretical literature underpinning the adaptations and study designs. The range of literature employed to inform adaptations may be reflective of broader conflicts within the field regarding exactly how to frame men's mental health difficulties (see Wright, 2019). While the use of physical activity is more prominent in the research, it is not as heavily recommended as other adaptations. Meanwhile, the naturalistic studies researching community-based programmes are difficult to adapt into service interventions. Similarly, the methods and target populations vary to such a degree that it is difficult to recommend specific strategies to clinicians from the reviewed studies alone.

In lieu of clear guidance, clinicians may, instead, choose to focus their approaches on the most concrete recommendations offered by researchers and, potentially, contribute to the developing evidence base (MHF, 2009; Pollard, 2016; Rice et al., 2022; Rice et al., 2018a; Rice et al., 2018b; Robertson et al., 2015; Sagar-Ouriaghli et al., 2019; Sagar-Ouriaghli et al., 2020). Possible areas of study may focus on those areas noted above, with a broader focus on men's mental health issues, including substance use, aggression, criminality and trauma, for example. Likewise, the inclusion of studies examining specialist men's services, early intervention approaches and strategies to combat systemic inequalities would be valuable.
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Appendices

Appendix A – Review protocol

The rationale for the review was to explore how mental health treatment programmes had been developed specifically for male service users or how existing programmes had been adapted for male service users.

Studies reporting mental health interventions which were developed or adapted to be culturally appropriate for men and boys, based on the literature on men's health, were eligible. Studies with any design were eligible. Those studies which focused on men's sexual health, criminality or physical health were excluded as they constituted distinct, well-researched areas of literature. PubMed was initially listed as the primary source of articles but this was broadened during the review to encapsulate as much of the literature as possible. The search strategy was recorded as articles published in the last 20 years containing ((men[Title] OR men's[Title] OR male[Title] OR boys[Title] OR masculin*[Title]) AND health[Title/Abstract] OR psycholog*[Title/Abstract] (mental OR wellbeing[Title/Abstract])) (intervention[Title/Abstract] AND OR trial[Title/Abstract] OR project[Title/Abstract]).

Studies were to be screened using Zotero and information about gender-specific adaptations and theoretical underpinnings extracted using Excel spreadsheets using pre-determined inclusion criteria, with two independent reviewers checking for accuracy. Priority will be given to those studies which give clear, replicable adaptations that are well-informed by literature on men's psychological wellbeing.

Paper 2: Is gender a moderating factor in accessing mental health

services? A secondary data analysis using logistic regression.

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British Journal of Clinical Psychology Author Guidelines:

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Papers%20describing%20quantitative&text=Brief%20reports%20should%20not%20exceed,online%2

<u>0appendices%20are%20not%20included</u>.

<u>Abstract</u>

Introduction

Research exploring inequalities in men's mental health outcomes propose a variety of internal and external factors which may limit men's engagement with mental health services. The present study aimed to explore whether predications made by smaller scale/qualitative studies, specifically that men face barriers to mental health service access, are supported by statistical models. The study hypothesised that men would experience a low rate of engagement with mental health services compared to their female counterparts when controlling for psychological distress.

Methods

Secondary data from the Welsh Health Survey (Welsh Government, 2004-2015) was used to explore sex differences in mental health service access. Data was randomly allocated to an exploration and replication dataset for transparency and to demonstrate reliability. Binomial mixed effects logistic regressions were conducted on each, exploring the individual contributions of sex and other potential confounding variables. Level of mental health distress was controlled using the SF-36 mental health subscale (Ware, 2002).

Results

Descriptives showed that datasets were representative of the UK population and homogenous. Regression results from both datasets showed that the SF-36 significantly predicted service access for both sexes (exploration adjusted odds ratio = 25.64% (95% CI [.25, .26], p < 0.001; replication adjusted odds ratio = 25.64% (95% CI [.25, .26], p < 0.001).

Both sets of analysis showed that female respondents were significantly more likely to receive mental health care than their male counterparts with estimates ranging from a 48-60% increase in service access for female participants, depending on model. These results did not appear to be a result of other demographic variables exaggerating the difference.

Discussion

Findings from the study support the theoretical predictions, demonstrating that men are less likely than women to be in receipt of mental health care when controlling for level of distress. Findings are interpreted as reflecting a combination of factors, including referrer bias, poor sensitivity of instruments to male symptoms of distress, sex differences in treatment efficacy and societal expectations of masculinity.

Introduction

Research over the past decade has highlighted the importance of developing culturally sensitive approaches to mental health resource provision. Reviews have shown that a lack of awareness and cultural sensitivity in healthcare provision can alienate service users and reduce the therapeutic impact of interventions (Anderson et al., 2003). Studies show that culturally diverse services that reflect the populations served and are well-educated in cultural norms are better equipped to meet the needs of service users, increase client satisfaction, reduce inappropriate variations in healthcare provision, and minimise health outcome inequalities (Brach & Fraser, 2000). Frameworks proposed by researchers discuss how staff diversity, training programmes and culturally appropriate healthcare settings can improve access for service users from a variety of cultural backgrounds (Anderson et al., 2003).

These approaches have been used to improve the healthcare outcomes of individuals from ethnic minority backgrounds (Handtke, Schilgen & Mösko 2019), women (Chandra et al., 2019; Miers, 2002), people with disabilities (While & Clark, 2010) and people from low socioeconomic backgrounds (Murali & Oyebode, 2004). Comparatively little attention, however, has been given to improving the cultural sensitivity and awareness of psychological services for men. To date, most studies which explore the barriers men face in accessing mental health resources are primarily qualitative (Sagar-Ouriaghli et al., 2019), suggesting that individual conceptualisations of masculinity may deter men from help-seeking behaviour (Coles, 2007; Courtenay, 2000; Evans et al., 2011; Ridge et al., 2011). Meanwhile, other perspectives note societal barriers such as referrer bias (Cochran & Rabinowitz, 2003; Kerr & Kerr, 2001; Mahalik et al., 2012), social stigma towards men suffering from mental health difficulties (Addis & Mahalik, 2003; Levant et al., 2014; Pederson & Vogel, 2007) and services which are ill-equipped to facilitate treatment methods appropriate to male service users (Seymour-Smith et al., 2002; Vogel et al., 2003).

To date, there has been a paucity of large-scale quantitative analyses available to complement these qualitative studies with statistical power. The current study, therefore, explored whether those barriers proposed above are reflected in widespread societal inconsistencies between men and women in healthcare access. Using data from national surveys, the aim was to assess whether women were more likely to be in receipt of mental health support, assuming equal levels of distress. The experimental hypothesis, drawn from existing data on men's mental health, is that men would be significantly less likely to be in receipt of mental health support when controlling for level of distress compared to their female counterparts.

Methods

Secondary Data Source

Data from the Welsh Health Survey (WHS; Welsh Government, 2004-2015) was used for analysis. The WHS was an annual cross-sectional survey series of adults living within Wales which ran for 12 years from 2004-2015. Respondents were recruited through stratified random sampling methods to ensure a representative spread of respondents from various localities within Wales. Respondents were contacted via telephone, assessed for eligibility, and participated in a face-to-face structured interview. Respondents were surveyed on a wide variety of health and social information. The study sample consisted of any respondents with comparable datasets from all 12 years of the survey data. In order to be utilised in the analysis, variables were required to be present across all years of the survey. A total of 180,462 participants met analysis inclusion criteria.

Outcome Measures

The dependent variable was defined as mental health service access (MHSA). This was measured by positive responses to the question "Are you currently being treated for depression/anxiety/another mental illness?" on the WHS. Participants gave a binary, categorical response (yes/no). This question

was the most appropriate measure of MHSA included in the WHS. Responses were used to form a predictive model of likelihood of MHSA, dependent on sex.

Predictor Measures

Sex was chosen as the primary predictor variable as the study aimed to establish whether an individual's sex impacts their likelihood of MHSA. Sex was measured by participants responses to the interviewer asking, "How would you describe your sex?" within the WHS. Responses were coded as "male", "female", "prefers not to respond" or "does not know". Only those individuals who gave responses of male or female were included for analysis.

Covariates

Inclusion of covariates was determined based on the literature which offers explanations for the barriers men face in seeking mental health support (Addis & Mahalik, 2003; Coles, 2007; Courtenay, 2000; Evans et al., 2011; Levant et al., 2014; Möller-Leimkühler, 2002; Pederson & Vogel, 2007; Rice et al., 2018b; Ridge et al., 2011; Sagar-Ouriaghli et al., 2019; Seidler et al., 2020; Seymour-Smith et al., 2002; Vogel et al., 2003). Of those available, it was reasoned that mental health distress (MHD), age, year of study, socioeconomic status (SES) and education level were likely to impact an individual's MHSA.

As a direct predictor of MHSA with well-documented sex differences, MHD was considered essential for inclusion as a mediating variable. There is a wealth of evidence detailing higher prevalence rates of mental health difficulties among women (Affi, 2007) which is likely to significantly influence sexspecific rates of service access. Failure to control for MHD could obfuscate any sex-differences in service access as an artefact of higher MHD rates among women.

MHD was measured using the mental health subscale component of the Medical Outcomes Study short-form general health survey-36 (SF-36; Ware, 2000). The measure consists of 36 items, including binary yes/no responses and Likert scale responses measuring respondents' perspectives on their own physical and mental health. The mental health subscale can be used to obtain eight domain scores

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(including emotional role, general health, mental health, pain, physical functioning, physical role, social function, and vitality) and an overall mental health summary score. High scores on the mental health subscale indicate a greater degree of psychological wellbeing. This instrument is widely used, well-researched (Lins & Carvalho, 2016) and shown to have strong correlations to other clinical instruments, such as the Depression Anxiety Stress Scales (Lovibond & Lovibond, 1995) and the Hospital Anxiety and Depression Scale (Stem, 2014).

The year of the study and age-group (in five-year intervals) of respondents were also selected as important covariates. This was done to explore the impact of cultural or generational shifts in either the attitudes and choices of those attempting to seek mental health support or those offering said support. Examples of such shifts could include changes in governmental policies towards education and employment among men and women or wider shifts in cultural values, particularly those which focus on expressions of masculinity and mental health (discussed above). Both of these were included in the models as continuous variables.

SES and education level were included in the model, with evidence indicating confounding effects on MHSA (Alegría et al., 2018; Fisher & Baum; 2010; Shim et al., 2014; Silva et al., 2016). Research suggests that those with higher levels of education or financial resources may be more able to leverage their own resources in securing support when required. Conversely, those with lower educational attainment or in more vulnerable financial positions may be prioritised more readily by service providers. Importantly, as men and women are reported to differ significantly in their SES and education level (Bolton & Lewis, 2023), any results could be an artefact of educational or occupational differences rather than gender itself. While such a dynamic would not preclude the existence of gender inequalities in healthcare provision, it could highlight their mechanical underpinnings and inform future research and changes to healthcare policy.

SES was assessed by respondents' self-reported occupation level. Answers were coded into the following categorical variables by interviewers: Never worked/long term unemployed, routine

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occupations, semi-routine occupations, lower supervisory and technical occupations, small employers and own account workers, intermediate occupations, lower managerial and professional occupations, higher managerial and professional occupations. Similarly, educational level was assessed via participant self-report with researchers coding responses into categorical variables prior to analysis as "degree-level qualifications", "other" or "no qualifications".

Specific determinants of MHSA, including ethnicity, nationality, sexual orientation, gender identity, religion and first language, are unlikely to confound results. However, while they would have been of interest to control for in order to examine mechanisms which may impact service access, these were not included in the model as the dataset did not consistently contain these variables.

A random intercept for each household was fit to the model to account for the nesting of respondents by household. This was done to address issues of non-independent data which can violate the assumptions of regression analysis.

Model

Binomial generalised linear mixed effects regression models, as implemented in the glmmTMB package (version 1.17; Brooks et al., 2023) for R (version 4.3.1; R Core Team, 2023) were used to analyse data. Data met the assumptions of a binomial mixed effects logistic regression (see Results section for further details).

Replication

Given concerns over recent years regarding replication of research studies (as discussed by Maxwell et al., 2015), it is imperative that studies not only seek to produce reliable results but do so with transparency. Large-scale statistical studies can easily be manipulated to find significant results and select significant data on a post-hoc basis. As such, this study has split the participant data into two sets – an exploration and replication set.

The intended purpose of the exploration dataset was to pilot the preliminary model without artificially increasing the risk of a type I error. This would allow for an evaluation of potential covariates to include in the final regression model and facilitate immediate replication to confirm findings. To do this, participants were randomly allocated to either the exploration or replication dataset using a randomised "seed" in the statistics software. This allows for replication to achieve an identical randomisation of data.



Figure 1: Chart to show relationship of regression variables

Due to the inclusion of multiple mediating and moderating variables (see Figure 1) and a replication dataset, the analysis was conducted in 5 stages:

Stage 1: A model was fit to the exploratory dataset with MHD as an independent predictor of MHSA to obtain a baseline for the model, as this was expected to be the best predictor of MHSA. This would then allow for an estimate of the explanatory power of other variables.

Stage 2: Sex was added as an independent predictor of MHSA, with MHD as a mediating covariate. This allowed for an assessment of MHSA between the sexes, assuming equal levels of distress.

Stage 3: A sequential analysis was then performed, including sex as an independent predictor of MHSA, with MHD as a mediator and the additional covariates of age, year, educational level and SES one at a time. This was done to assess whether each variable improved or reduced explanatory power in isolation prior to constructing a model combining all these variables.

Stage 4: A complex model, combining all the variables assessed in stage 3, was applied to the exploratory dataset to explore the mechanisms underlying any observed differences in MHSA between the sexes.

Stage 5: Stages 1-4 were repeated for the replication dataset.

Results

Analyses were conducted using the R Statistical language (version 4.3.1; R Core Team, 2023) on Windows 11 x64 (build 22621), using the packages glmmTMB (version 1.17; Brooks et al., 2023), Matrix (version 1.5.4.1; Bates et al., 2023), report (version 0.5.7; Makowski et al., 2023), foreign (version 0.8.84; R Core Team, 2022), ggplot2 (version 3.4.2; Wickham H, 2016) and psych (version 2.3.3; William Revelle, 2023; see Appendix A for analysis code). A mixed effects binomial logistic regression model was selected for each stage of analysis as both categorical and continuous data were being used to predict the likelihood of a binary outcome. Relationships were found to be linear during

analysis and the DHARMa package was used to confirm normal distribution of residuals. Each model included household as random effect. Standardized parameters were obtained by fitting the model on a standardized version of the dataset. 95% Confidence Intervals (CIs) and p-values were computed using a Wald z-distribution approximation. Beta coefficients (β), standardised beta coefficients (Std. β), 95% confidence intervals (CI) conditional R² and marginal R² were calculated in addition to providing adjusted odds ratios (AORs) for each model. A two-tailed p-value (<.05) was used for statistical significance. The null hypothesis is that there should be no difference between male and female MHSA when controlling for potential confounding variables. Any remaining difference would be supportive of the experimental hypothesis that sex differences impact the likelihood of MHSA.

Exploratory analysis

A total of 90,231 respondents were included in the exploratory analysis (54% female). 10.15% of respondents were currently accessing mental health services which is representative of the general UK population (Lubian et al., 2016). Mean score on the SF-36 was 73.52 (SD = 19.59), indicating a level of MHD representative of the UK average (72.82) among respondents (Jenkinson et al., 1999).

Stage 1: Baseline Model

A logistic mixed model was fit to the data (estimated using ML and Nelder-Mead optimizer) to predict MHSA with SF-36 score. The model's total explanatory power is substantial (conditional R^2 = .38) and the part related to the fixed effects alone (marginal R^2) is of .35. The model's intercept, corresponding to SF-36 = 0, is at -2.88 (95% CI [-2.93, -2.84], p < .001).

Within this model:

- The effect of SF-36 score is statistically significant and negative (β = -1.37, 95% CI [-1.40, -1.34], p < .001; Std. β = -1.37, 95% CI [-1.40, -1.34]; AOR = .25)

Stage 2: Basic Model

A logistic mixed model was fit to the data (estimated using ML and Nelder-Mead optimizer) to predict MHSA with sex and SF-36 score. The model's total explanatory power increased by 2% (conditional R^2 = .40) while the part related to the fixed effects increased by 1% (marginal R^2 = .36). The model's intercept, corresponding to sex = male and SF-36 = 0, is at -3.16 (95% CI [-3.22, -3.10], p < .001). Within this model:

- The effect of sex [Female] is statistically significant and positive (β = 0.46, 95% CI [0.41, 0.52], p < .001; Std. β = 0.46, 95% CI [0.41, 0.52]; AOR = 1.58)

- The effect of SF-36 score is statistically significant and negative (β = -1.36, 95% CI [-1.39, -1.33], p < .001; Std. β = -1.36, 95% CI [-1.39, -1.33]; AOR = .26)

Stage 3: Sequential Analysis

Analysis of the remaining covariates is provided in Table 1. Impact on the variable of interest (sex) is provided for each model. Results for the SF-36 and MHSA variables are not provided as these models aimed to assess the explanatory power of the remaining covariates. None were found to substantially increase the explanatory power of the model but each had an impact on sex as an explanatory variable.

Model	Variable	Conditional R ² Change	Marginal R ² Change	β	95% CI		p-value	alue Std. β 95% Cl		CI	AOR
Education		01	.00								
	No Qualifications			.36	.27	.45	<.001	.36	.27	.45	1.43
	Other Qualifications			.16	.07	.24	<.001	.16	.07	.24	1.17
	Sex			.48	.42	.53	<.001	.48	.42	.53	1.62
SES		.00	.01								
	Lower managerial & professional			.13	.02	.24	.019	.13	.02	.24	1.14
	Intermediate occupations			.30	.17	.43	<.001	.30	.17	.43	1.35
	Small employers & own account workers			.09	04	.21	.173	.09	04	.21	1.09
	Lower supervisory & technical			.20	.09	.32	<.001	.20	.09	.32	1.22
	Semi-routine			.33	.22	.44	<.001	.33	.22	.44	1.39
	Routine			.37	.26	.49	<.001	.37	.26	.49	1.45

	Never worked & long-term unemployed			.59	.42	.75	<.001	.59	.42	.75	1.80
	Sex			.45	.40	.51	<.001	.45	.40	.51	1.57
Year		.00	.00								
	Year			.04	.03	.05	<.001	.14	.12	.17	1.15
	Sex			.47	.41	.52	<.001	.47	.41	.52	1.60
Age		.00	.01								
	Age			.04	.04	.05	<.001	.16	.13	.19	1.17
	Sex			.47	.42	.53	<.001	.47	.42	.53	1.60

Stage 4: Complex Model

While none of the variables added substantial total explanatory power to the model, all were included in the complex model in order to further explore any mechanisms underlying the disparity between male and female MHSA. A logistic mixed model was fit to the data (estimated using ML and nlminb optimizer) to predict MHSA with sex, SF-36 score, education, SES, year and age. The model's total explanatory power equalled the basic model (conditional $R^2 = .40$) while the part related to the fixed effects increased by 1% (marginal $R^2 = .37$). The model's intercept, corresponding to sex = male, SF-36 = 0, education = 0, SES = 0, year = 0 and age = 0, is at -88.97 (95% CI [-105.24, -72.69], p < .001). See Table 2 for results.

Variable	β	95% CI		p-value	Std. β	95% CI		AOR
Sex	.47	.41	.53	<.001	.47	.41	.53	1.60
SF-36	-1.34	-1.37	-1.31	<.001	-1.33	-1.36	-1.30	.26
Education								
No Qualifications	.15	.04	.25	.006	.15	.04	.25	1.16
Other Qualifications	.08	01	.17	.091	.08	01	.17	1.08
SES								
Lower managerial & professional	.11	.00	.23	.044	.11	.00	.23	1.12
Intermediate occupations	.28	.14	.42	<.001	.28	.14	.42	1.32
Small employers & own account workers	.05	08	.18	.440	.05	08	.18	1.05
Lower supervisory & technical	.16	.04	.28	.011	.16	.04	.28	1.17
Semi-routine	.28	.16	.41	<.001	.28	.16	.41	1.32
Routine	.32	.19	.44	<.001	.32	.19	.44	1.38
Never worked & long- term unemployed	.58	.40	.75	<.001	.58	.40	.75	1.79
Year	.04	.03	.05	<.001	.15	.12	.18	1.16
Age	.04	.03	.04	<.001	.13	.10	.16	1.14

Replication analysis

A total of 90,231 respondents were included in the exploratory analysis (53.72% female). 10.20% of respondents were currently accessing mental health services, representative of the general UK population (Lubian et al., 2016). Mean score on the SF-36 was 73.60 (*SD* = 19.46), in line with the UK average (Jenkinson et al., 1999).

Stage 1: Baseline Model

A logistic mixed model was fit to the data (estimated using ML and nlminb optimizer) to predict MHSA with SF-36 score. The model's total explanatory power is substantial (conditional $R^2 = .38$) and the part related to the fixed effects alone (marginal R^2) is of .35. The model's intercept, corresponding to SF-36 = 0, is at -2.87 (95% CI [-2.92, -2.82], p < .001).

Within this model:

- The effect of SF-36 score is statistically significant and negative (β = -1.37, 95% CI [-1.40, -1.34], p < .001; Std. β = -1.37, 95% CI [-1.40, -1.34]; AOR = .25)

Stage 2: Basic Model

A logistic mixed model was fit to the data (estimated using ML and nlminb optimizer) to predict MHSA with sex and SF-36 score. Both the model's total explanatory power and the part related to the fixed effects increased by 1% (conditional $R^2 = .39$; marginal $R^{2=}.36$). The model's intercept, corresponding to sex = male and SF-36 = 0, is at -3.12 (95% CI [-3.18, -3.06], p < .001). Within this model:

- The effect of sex [Female] is statistically significant and positive (β = 0.41, 95% CI [0.36, 0.47], p < .001; Std. β = 0.41, 95% CI [0.36, 0.47]; AOR = 1.51)

- The effect of SF-36 score is statistically significant and negative (β = -1.36, 95% CI [-1.39, -1.34], p < .001; Std. β = -1.36, 95% CI [-1.39, -1.33]; AOR = 0.26)

Stage 3: Sequential Analysis

Remaining covariates are presented in Table 3. In the replication dataset, SES, year and age contributed slight improvements to the explanatory power of the model.

Model	Variable	Conditional R ² Change	Marginal R ² Change	β	95% CI		p-value	Std. β	. β 95% Cl		AOR
Education		.00	.00								
	No			.29	.20	.38	<.001	.29	.20	.38	1.34
	Qualifications										
	Other			.11	.03	.19	.010	.11	.03	.19	1.12
	Qualifications										
	Sex			.40	.35	.46	<.001	.40	.35	.46	1.49
SES		.01	.00								
	Lower			.15	.04	.26	.006	.15	.04	.26	1.16
	managerial &										
	professional										
	Intermediate			.20	.06	.33	.004	.20	.06	.33	1.22
	occupations										
	Small			.04	09	.16	.563	.04	09	.16	1.04
	employers &										
	own account										
	workers			10							
	Lower			.19	.07	.30	.002	.19	.07	.30	1.21
	technical										
	Semi-routine			.30	.19	.42	<.001	.30	.19	.42	1.35
	Routine			.29	.18	.41	<.001	.29	.18	.41	1.34
	Never			.66	.50	.82	<.001	.66	.50	.82	1.94
	worked &										
	long-term										
	unemployed										
	Sex			.40	.34	.45	<.001	.40	.34	.45	1.49
Year		.01	.00								
	Year			.04	.03	.05	<.001	.15	.12	.17	1.16
	Sex			.41	.36	.47	<.001	.41	.36	.47	1.51
Age		.01	.01								
	Age			.05	.04	.05	<.001	.17	.14	.20	1.19
	Sex			.42	.37	.47	<.001	.42	.37	.47	1.52

Table 3: Exploration sequential analysis regression results

Stage 4: Complex Model

In order to replicate findings, all variables were included in the final model. A logistic mixed model was fit to the data (estimated using ML and nlminb optimizer) to predict MHSA with sex, SF-36 score, education, SES, year and age. The model's total explanatory power and the part related to the fixed effects alone increased by 1% when compared with the basic model (conditional $R^2 = .40$; marginal R^2

= .37). The model's intercept, corresponding to sex = male, SF-36 = 0, education = 0, SES = 0, year = 0 and age = 0, is at -93.20 (95% CI [-109.44, -76.96], p < .001). See Table 4 for results.

Variable	β	95% CI		p-value	Std. β	95%	S CI	AOR
Sex	.39	.33	.45	<.001	.39	.33	.45	1.48
SF-36	-1.35	-1.38	-1.32	<.001	-1.34	-1.37	-1.31	.26
Education								
No Qualifications	.10	01	.20	.066	.10	01	.20	1.11
Other Qualifications	.05	04	.14	.241	.05	04	.14	1.05
SES								
Lower managerial & professional	.13	.02	.24	.025	.13	.02	.24	1.14
Intermediate occupations	.16	.02	.30	.021	.16	.02	.30	1.17
Small employers & own account workers	02	15	.11	.753	02	15	.11	.98
Lower supervisory & technical	.15	.03	.28	.015	.15	.03	.28	1.16
Semi-routine	.26	.14	.38	<.001	.26	.14	.38	1.30
Routine	.24	.11	.36	<.001	.24	.11	.36	1.27
Never worked & long- term unemployed	.66	.48	.83	<.001	.66	.48	.83	1.94
Year	.04	.04	.05	<.001	.15	.13	.18	1.16
Age	.04	.03	.05	<.001	.15	.11	.18	1.16

Table 4: Replication complex model regression results

Discussion

Results indicated that participants' sex was significantly predictive of MHSA within both the basic and complex models in the exploration and replication datasets. When controlling for level of MHD using the SF-36, AORs suggest women in the WHS were 51-58% more likely to be accessing mental health support in comparison to their male counterparts, dependent on the sample. When controlling for other appropriate demographic variables, these estimates changed to 48-60%. This suggests that sex differences in MHSA are not an artefact of those demographic variables assessed. The basic models, examining only the predictor variables of sex and SF-36 score were substantially powerful in their explanatory power, explaining 36-40% of the observed variance. Controlling for education, SES, participant age and year of study did not substantially increase the total explanatory power of models. SF-36 was the most predictive measure of MHSA, accounting for 35-38% of the variance. However, sex was the next most predictive factor, accounting for more variance than all remaining variables combined (though still only 1-2%).



Figure 2: Graph showing increased likelihood of MHSA for women

Evaluation of Findings

The study's findings are sufficient to reject the null hypothesis that men and women show no sex differences in their MHSA. Propositions for this from the literature tend towards one of two explanations, noted in the study's rationale. These perspectives can be summarised as internal/external barriers to men's MHSA. External barriers include referral bias (Cochran & Rabinowitz, 2003; Kerr & Kerr, 2001; Mahalik et al., 2012), social stigma against men who experience mental health difficulties (Addis & Mahalik, 2003; Levant et al., 2014; Pederson & Vogel, 2007) sex differences in treatment efficacy (Sagar-Ouriaghli et al., 2019), and assessment tools which fail to adequately capture masculine expressions of MHD (Seymour-Smith et al., 2002; Vogel et al., 2003).

Internal barriers may best be described in terms of an individual's personal beliefs and behaviours which may impede their ability to engage with support provided by mental health services. Such barriers are framed by gender critical perspectives as rigid beliefs around masculinity and identification with toxic masculinity (Coles, 2007; Courtenay, 2000; Evans et al., 2011; Ridge et al.,

Model

2011). There is debate around the relative utility such terms, however. Both men's health advocates and feminist authors argue that such conceptualisations can be harmful or restrictive for both serviceusers and clinicians (Englar-Carlson & Kiselica, 2013; Kiselica & Englar-Carlson, 2010; Waling, 2019). These barriers can be conceptualised, instead, as internalisations of values imposed on men by wider society, which may require gender sensitive care and support from services (Baker, 2018).

External and internal barriers to MHSA (and their interactions) are not mutually exclusive and it is likely that all explanations account for an undetermined proportion of findings. Distinguishing between their respective impacts would be useful in guiding response strategies to improve mental health for men. Importantly, this study's findings demonstrated that, regardless of the precise causes, there exists a sizeable inequality in support accessibility for vulnerable men. Fortunately, researchers have begun to assemble a large range of materials for clinicians to inform adaptations to service provision and intervention methodology (Men's Health Forum (MHF), 2009; Pollard, 2016; Rice et al., 2022; Rice et al., 2018a; Rice et al., 2018b; Robertson et al., 2015; Sagar-Ouriaghli et al., 2019; Sagar-Ouriaghli et al., 2020).

In both samples, education and SES were negatively predictive of MHSA, with higher levels of educational and occupational attainment tending to reduce the likelihood of MHSA. This suggests that SES and education may represent barriers to MHSA or act as protective factors. It may also be that services are more proactive in engaging those who are more economically vulnerable. As the gap in MHSA between men and women remained similar when controlling for education and SES, results suggest that programs aimed solely at improving men's academic or occupational attainment are unlikely to reduce the observed sex differences in MHSA. It would be useful, firstly, to determine whether these factors are MHSA barriers or protective factors, as this could then be used to inform further service adaptations. Elements of resilience could be integrated into existing interventions, while barriers could be mitigated with outreach programs for those experiencing difficulties accessing services.

Year of study was positively predictive of MHSA, suggesting that availability has increased as time progresses. Age also positively predicted MHSA, with older individuals more likely to receive support. This may be due to the prevalence of older adults' services and the exclusion of data from those eligible for CAMHS services (measures begin at age 16).

Study Design

Using a regression on secondary data was selected as prior research has focused on small-scale studies, qualitative research, or has sampled different populations (Möller-Leimkühler, 2002; see Rice et al., 2018b; Scholz et al., 2022; Seidler et al., 2019 for examples). This methodology facilitated the triangulation of research findings by complementing other studies with a high-power, quantitative analysis. This approach also mitigated the lack of causal inference permitted by regression analysis. As pre-existing studies propose explanations for men's mental health difficulties (Möller-Leimkühler, 2002; Rice et al., 2018b; Seidler et al., 2020), this study aimed, instead, to test predictions made by other researchers. However, it is important to acknowledge that the exact nature of the barriers to access which men face is not clearly identifiable from this analysis alone.

As discussed, the secondary data from the WHS was used to answer the research question. The demographics, therefore, are reflective of the Welsh population. It is possible that results could be a phenomenon mediated by prominent aspects of this demographic. However, the study's findings do not appear to differ from predictions drawn from other methodologies (Addis & Mahalik, 2003; Coles, 2007; Courtenay, 2000; Evans et al., 2011; Levant et al., 2014; Möller-Leimkühler, 2002; Pederson & Vogel, 2007; Rice et al., 2018b; Ridge et al., 2011; Sagar-Ouriaghli et al., 2019; Seidler et al., 2020; Seymour-Smith et al., 2002; Vogel et al., 2003). Data from the WHS also spans a decade of assessment and constitutes a high-quality, representative sample of an entire country.

Evaluation of Measures

Interpretation of results relies on the assumption that the mental health subscale of the SF-36 represents a valid, reliable tool for measuring an individual's level of MHD. Other common

instruments used to assess clinical symptomatology have been found to correlate highly with this measure (Lins & Carvalho, 2016) and it is likely to represent an accurate reflection of respondents' level of MHD.

It is possible that the SF-36 items elicit a sex-specific response pattern which could confound results. The observed results, however, do not appear to support this. Prior research suggests that common measures fail to capture typically masculine expressions of distress, rather than exaggerate them (Seymour-Smith et al., 2002; Vogel et al., 2003). If this measure of MHD does result in sex-differential response patterns, then a more sensitive measure may increase the observed differences between males and females, not reduce it.

Other authors predict that men may respond to inquiry related to mental health difficulties in line with stoic masculine beliefs (Coles, 2007; Courtenay, 2000; Evans et al., 2011; Ridge et al., 2011). This should either lead to exaggeration of MHD as a demonstration of resilience or suppressed responses as a demonstration of "immunity". If this were true, then one would expect a different reporting pattern across all males in self-reported MHD when compared with females which was not observed. Only those men in receipt of mental health support demonstrate elevated levels of MHD, consistent with the pattern observed in women, suggestive of a genuine difference between the threshold required for men to access support. It is possible, however, that men engage in stoic masculine presentations by refusing to seek support when required, which could explain the observed results.

Groups were compared based on their responses to direct inquiry of their biological sex. This raises issues around assumptions around sex and gender. The existing literature is suggestive that societal and/or individual beliefs about men, masculinity, and their expressions of MHD (rather than biological sex differences) impact men's ability to engage with services (Coles, 2007; Courtenay, 2000; Evans et al., 2011; Möller-Leimkühler, 2002; Rice et al., 2018b; Ridge et al., 2011; Seidler et al., 2020). Unfortunately, as the study did not enquire about gender identification, this was the most appropriate measure available. An assumption of the study, therefore, is that an individual's sex is predictive of

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their identification with the corresponding gender roles. While, largely, this is true – with approximately 0.5% of UK individuals identifying as non-binary or trans (ONS, 2023) – this method only measures gender indirectly. Responses where the individual chose not to or could not answer the question were not included in the analysis. It is possible that such responses may contain individuals who do not identify as their assigned sex and thus fails to capture their data. This is unfortunate as their inclusion would likely be more informative of the role and extent of gender differences.

MHSA was measured using responses to the question "Are you currently being treated for depression/anxiety/another mental illness?". This question is broad and may capture a variety of different treatment types. This could range from individuals who are being prescribed medication, those in receipt of brief psychoeducational interventions, those receiving long-term psychotherapeutic interventions, or individuals in inpatient settings. While this is not strictly a problem, it does prohibit any further exploration of the type of support that men and women are likely receive. The evidence is suggestive that this is important to consider, with men and women being more likely to be prescribed medication or offered psychotherapy for certain disorders and presentations, for example (Sagar-Ouriaghli et al., 2019). Such treatment is not equitable and cannot be determined with the dataset used as it does not contain a more detailed measure.

The question of whether individuals are currently accessing support for a "mental illness" may skew the data somewhat as some may find such a characterisation of their difficulties pejorative or stigmatising. It has become more common to phrase these needs, for example, as "mental health conditions", instead. It is possible that male participants rejected the label more commonly than females in line with stoic masculinity – associating illness with vulnerability or weakness – and thus responded negatively to a question aiming to assess whether they were currently being treated, rather than whether they had a mental health need.

Socioeconomic status was measured via occupational prestige based on most recent profession, a common measure recommended for social science research (Diemer et al., 2013). Inclusion of

additional measures, such as absolute and relative poverty measures or resource-based measures may provide a more comprehensive overview of SES in future studies.

The only available measure of academic achievement was, comparatively, broad. Responses were coded as "no qualifications", "other qualifications" or "degree level". This does fail to capture information as GCSE, A-level, college diplomas and apprenticeships would all be categorized the same and may offer more insight when distinguished.

Recommendations

The findings of this study highlight a serious systemic inequality in MHSA between men and women. As recommended by a growing evidence base, clinicians may wish to adapt provision strategies and familiarise themselves with evidence around the barriers and facilitators of men's access to services. Possible areas of focus may include engaging in reflective practice around personal views of men's mental health, developing specialised men's services, offering male-only treatment groups, improving psychological treatment in prisons, developing tools which better capture masculine expressions of distress, engaging in stigma reduction campaigns, and employing early intervention and multi-agency approaches (MHF, 2009; Pollard, 2016; Rice et al., 2022; Rice et al., 2018a; Rice et al., 2018b; Robertson et al., 2015; Sagar-Ouriaghli et al., 2019; Sagar-Ouriaghli et al., 2020).

The current study was designed to incorporate findings from other research and test predictions around men's mental health access. There is an absence of longitudinal or experimental studies attempting to establish causal pathways. Inclusion of such studies within the field would help to elucidate the relationship between external and internal barriers to MHSA for men and could inform further developments in clinical practice. This would also allow for the inclusion of measures specifically designed for the research question (noted below).

It would also be valuable to replicate findings across different demographics to explore variations as this may highlight protective or exacerbating mediators of men's mental health. As the current study found clear results indicating overall sex differences, it would be useful to extend this model and

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examine mediating variables in more detail. This would aid in the process of clarifying the extent of their positive and negative impacts. Future studies may benefit from the addition of components that were not possible to include within this study. Examples of these may include questions to determine individuals' nationality, sexual orientation, gender identity, religion and first language, updated questions with less stigmatising language, psychological treatment history, a more sensitive measure of diagnostic labels/psychological difficulties, questionnaires which assess individuals' experiences of and attitudes towards accessing support, and measures which more reliably capture masculine patterns of distress.
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Appendices

Appendix A – Analysis Code

```
install.packages(c('foreign', 'psych', 'ggplot2', 'report', 'glmmTMB', 'DHARMa')
library(foreign)
library (psych)
library(ggplot2)
library(report)
library(glmmTMB)
library(DHARMa)
DataFolder <- "D:/Documents/Uni/Assignments/LSRP/Data"
getwd()
setwd(DataFolder)
getwd()
#DATA SYNTHESIS
read.spss('WH_03_04_adults_archive.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2004
WHSa2004$wt_adult <- WHSa2004$int_wt
read.spss('WH_04_05_adults_archive.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2005
read.spss('wh_05_06_adults_archive.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2006
read.spss('wh 07 adults archive.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2007
read.spss('welsh_helth_08_adult_archiving.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2008
read.spss('welsh health 09 adult2 archiving.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2009
read.spss('welsh_health_10_adult_archiving.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2010
read.spss('welsh_health_11_adult_archiving.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2011
read.spss('welsh_health_12_adult_archiving.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2012
read.spss('welsh health 13 adult archiving.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2013
read.spss('whs 2014 adult archive.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2014
read.spss('whs_2015_adult_archive_v1.sav', to.data.frame = T, stringsAsFactors = F) -> WHSa2015
WHSa2004$wt adult <- WHSa2004$int wt
WHSa2004$wt_adult <- WHSa2004$int_wt
WHSa2004$q10dep -> WHSa2004$dep
WHSa2005$q10dep -> WHSa2005$dep
WHSa2006$q10dep -> WHSa2006$dep
WHSa2010[,colnames(WHSa2010) %in% colnames(WHSa2011)] -> WHSa2010x
WHSa2010x[,colnames(WHSa2010x) %in% colnames(WHSa2012)] -> WHSa2010x
WHSa2010x[,colnames(WHSa2010x) %in% colnames(WHSa2013)] -> WHSa2010x
WHSa2010x [, colnames (WHSa2010x) %in% colnames (WHSa2014)] -> WHSa2010x
WHSa2010x[, colnames(WHSa2010x) %in% colnames(WHSa2015)] -> WHSa2010x
WHSa2010x[,colnames(WHSa2010x) %in% colnames(WHSa2004)] -> WHSa2010x
WHSa2010x[, colnames(WHSa2010x) %in% colnames(WHSa2005)] -> WHSa2010x
WHSa2010x[,colnames(WHSa2010x) %in% colnames(WHSa2006)] -> WHSa2010x
WHSa2010x[,colnames(WHSa2010x) %in% colnames(WHSa2007)] -> WHSa2010x
WHSa2010x[, colnames(WHSa2010x) %in% colnames(WHSa2008)] -> WHSa2010x
WHSa2010x[, colnames(WHSa2010x) %in% colnames(WHSa2009)] -> WHSa2010x
WHSa2011[, colnames(WHSa2011) %in% colnames(WHSa2010x)] -> WHSa2011x
WHSa2012[,colnames(WHSa2012) %in% colnames(WHSa2010x)] -> WHSa2012x
```

WHSa2013[, colnames(WHSa2013) %in% colnames(WHSa2010x)] -> WHSa2013x WHSa2014[,colnames(WHSa2014) %in% colnames(WHSa2010x)] -> WHSa2014x WHSa2015[,colnames(WHSa2015) %in% colnames(WHSa2010x)] -> WHSa2015x WHSa2009[,colnames(WHSa2009) %in% colnames(WHSa2010x)] -> WHSa2009x WHSa2004[, colnames(WHSa2004) %in% colnames(WHSa2010x)] -> WHSa2004x WHSa2005[,colnames(WHSa2005) %in% colnames(WHSa2010x)] -> WHSa2005x WHSa2006[,colnames(WHSa2006) %in% colnames(WHSa2010x)] -> WHSa2006x WHSa2007[, colnames(WHSa2007) %in% colnames(WHSa2010x)] -> WHSa2007x WHSa2008[, colnames(WHSa2008) %in% colnames(WHSa2010x)] -> WHSa2008x WHSa2004x[,order(colnames(WHSa2004x))] -> WHSa2004x WHSa2005x[,order(colnames(WHSa2005x))] -> WHSa2005x WHSa2006x[,order(colnames(WHSa2006x))] -> WHSa2006x WHSa2007x[,order(colnames(WHSa2007x))] -> WHSa2007x WHSa2008x[,order(colnames(WHSa2008x))] -> WHSa2008x WHSa2009x[,order(colnames(WHSa2009x))] -> WHSa2009x WHSa2010x[,order(colnames(WHSa2010x))] -> WHSa2010x WHSa2011x[,order(colnames(WHSa2011x))] -> WHSa2011x WHSa2012x[,order(colnames(WHSa2012x))] -> WHSa2012x WHSa2013x[,order(colnames(WHSa2013x))] -> WHSa2013x WHSa2014x[,order(colnames(WHSa2014x))] -> WHSa2014x WHSa2015x[,order(colnames(WHSa2015x))] -> WHSa2015x WHSa2004x \$Year <- 2004 WHSa2005x \$Year <- 2005 WHSa2006x \$Year <- 2006 WHSa2007x \$Year <- 2007 WHSa2008x \$Year <- 2008 WHSa2009x \$Year <- 2009 WHSa2010x \$Year <- 2010 WHSa2011x \$Year <- 2011 WHSa2012x \$Year <- 2012 WHSa2013x \$Year <- 2013 WHSa2014x \$Year <- 2014 WHSa2015x \$Year <- 2015 rbind(WHSa2004x, WHSa2005x, WHSa2006x, WHSa2007x, WHSa2008x, WHSa2009x, WHSa2010x, WHSa2011x, WHSa2012x, WHSa2013x, WHSa2014x, WHSa2015x) -> WHSall nrow(WHSall) rbind(WHSa2004x, WHSa2005x, WHSa2006x, WHSa2007x, WHSa2008x, WHSa2009x, WHSa2010x, WHSa2011x, WHSa2012x, WHSa2013x, WHSa2014x, WHSa2015x) -> WHSall nrow(WHSall) #Should output 180462 #CORRECT EDUCATION VARIABLES as.numeric(as.character(WHSall\$sf36mh)) -> WHSall\$sf36mh as.numeric(as.character(WHSall\$sf36mhnb)) -> WHSall\$sf36mhnb

WHSall\$Education[WHSall\$qualhi %in% c('No qualifications', 'No qualifications')] <- 'No qualifications'

WHSall\$Education[WHSall\$qualhi %in% c('Degree/degree equivalent and above', 'Degree or Degree quivalent and above', 'Degree or Degree equivalent and above')] <- 'Degree' WHSall\$Education[WHSall\$qualhi %in% c('Other qualifications')] <-'Other' #RENAME VARIABLES names(WHSall) [names(WHSall) == "nssec8"] <- "SES"</pre> names(WHSall)[names(WHSall) == "age5yrm"] <- "Age"</pre> #CONVERT CATEGORICAL INTO NUMERICAL WHSall\$Age <- sapply(WHSall\$Age, unclass) #RANDOMLY SPLIT DATA INTO TWO SETS set.seed(123) WHSall\$Sample <- 'Discovery' WHSall\$Sample[sample(1:nrow(WHSall), nrow(WHSall)/2, replace = F)] <- 'Replication'</pre> table(WHSall\$Sample) #Should output 90231, 90231 WHSall[WHSall\$Sample=='Discovery',] -> WHS_discovery WHSall[WHSall\$Sample=='Replication',] -> WHS_replication # EXPLORATION ANALYSIS # model (DV \sim IV + IV... + househould, dataset, regression type) #BASELINE Exploration1 <- glmmTMB(mental ~ scale(sf36mh) + (1 | archhsn), data = WHS_discovery, family = binomial)</pre> report (Exploration1) #BASIC MODEL Exploration2 <- glmmTMB(mental ~ sex + scale(sf36mh) + (1 | archhsn), data = WHS_discovery, family = binomial)</pre> report(Exploration2) #EDUCATION Exploration3 <- glmmTMB(mental ~ sex + scale(sf36mh) + Education + (1| archhsn), data = WHS discovery, family = binomial) report (Exploration3) #SOCIOECONOMIC STATUS Exploration4 <- glmmTMB(mental ~ sex + scale(sf36mh) + SES + (1| archhsn), data = WHS_discovery, family =</pre> binomial) report(Exploration4) #YEAR Exploration5 <- glmmTMB(mental ~ sex + scale(sf36mh) + Year + (1| archhsn), data = WHS_discovery, family =</pre> binomial) report (Exploration5) #AGE

Exploration6 <- glmmTMB(mental ~ sex + scale(sf36mh) + Age + (1| archhsn), data = WHS discovery, family = binomial)

report (Exploration6)

#COMPLEX MODEL

Exploration7 <- glmmTMB(mental ~ sex + scale(sf36mh) + Education + SES + Year + Age + (1 | archhsn), data =
WHS_discovery, family = binomial)</pre>

report (Exploration7)

REPLICATION ANALYSIS

#BASELINE

Replication1 <- glmmTMB(mental ~ scale(sf36mh) + (1 | archhsn), data = WHS_replication, family = binomial) report(Replication1)

#BASIC MODEL

Replication2 <- glmmTMB(mental ~ sex + scale(sf36mh) + (1 | archhsn), data = WHS_replication, family = binomial)

report(Replication2)

#EDUCATION

Replication3 <- glmmTMB(mental ~ sex + scale(sf36mh) + Education + (1| archhsn), data = WHS_replication, family = binomial)

report(Replication3)

#SOCIOECONOMIC STATUS

Replication4 <- glmmTMB(mental ~ sex + scale(sf36mh) + SES + (1| archhsn), data = WHS_replication, family = binomial)

report(Replication4)

#YEAR

Replication5 <- glmmTMB(mental ~ sex + scale(sf36mh) + Year + (1| archhsn), data = WHS replication, family = binomial)

report(Replication5)

#AGE

```
Replication6 <- glmmTMB(mental ~ sex + scale(sf36mh) + Age + (1| archhsn), data = WHS replication, family =
binomial)
```

report (Replication6)

#COMPLEX MODEL

Replication7 <- glmmTMB(mental ~ sex + scale(sf36mh) + Education + SES + Year + Age + (1 | archhsn), data = WHS replication, family = binomial)

report(Replication7)

#RESIDUALS

simulationOutput	<-	simulateResiduals(fittedModel	=	Exploration1,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Exploration2,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Exploration3,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Exploration4,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Exploration5,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Exploration6,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Exploration7,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Replication1,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Replication2,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Replication3,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Replication4,	plot	=	T)
simulationOutput	<-	simulateResiduals(fittedModel	=	Replication5,	plot	=	T)

```
simulationOutput <- simulateResiduals(fittedModel = Replication6, plot = T)
simulationOutput <- simulateResiduals(fittedModel = Replication7, plot = T)
#ADJUSTED ODDS RATIOS GRAPHS
#Get ORs
data.frame(exp(confint(Exploration2))) -> ORs_1
data.frame(exp(confint(Replication2))) -> ORs_2
data.frame(exp(confint(Replication2))) -> ORs_3
data.frame(exp(confint(Replication7))) -> ORs_4
#Give each variable a "Term" which can be called for plots
row.names(ORs_1) -> ORs_1$Term
row.names(ORs_2) -> ORs_2$Term
row.names(ORs_3) -> ORs_3$Term
row.names(ORs_4) -> ORs_4$Term
#Create column telling it which model it is
ORs_1$Model <- 'Exploration Basic Model'
ORs_2$Model <- 'Replication Complex Model'
ORs_3$Model <- 'Replication Complex Model'
ORs_4$Model <- 'Replication Complex Model'
#Sticks them all together
rbind(ORs_1, ORs_2, ORs_3, ORs_4) -> ORs
ORs
```

#Plot

```
ggplot(aes(xmin=X2.5.., xmax=X97.5.., y = Model, colour = Model, x = Estimate), data = ORs[ORs$Term ==
'sexFemale',]) + geom_pointrange(size = 1) + geom_vline(xintercept=1, linetype='dashed') +
scale_colour_manual(values=c('darkseagreen4', 'darkorchid', 'darkseagreen', 'darkorchid1'))
```

Paper 3: Contributions to theory and clinical practice.

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Bangor University

Thesis rationale and development

The intention behind this thesis was to explore dynamics observed in research and clinical practice by the researcher. Longstanding gender inequalities in mental health, particularly men's suicidality, homelessness, substance use, and criminality have received comparatively limited attention from the field of clinical psychology (Smith, Mouzon & Elliott, 2018). Despite data showing large disparities in prevalence rates of these issues between men and women, the situation has remained largely unchanged over decades of observation (Nolen-Hoeksema, 2004; ONS, 2021a; 2021b; 2021c). This is unsurprising given the lack of investment to improve the state of men's mental health.

The thesis was constructed with the intent to raise awareness of these issues in a manner that could aid clinicians in approaching the issue proactively. While the developing evidence base has approached barriers to men's mental health from a largely qualitative basis, they do not reveal the full extent of the inequalities men suffer. The empirical paper, therefore, set out to provide a firm statistical overview of the state of men's mental health. The fact that female participants in this study were 48-60% more likely to be in receipt of mental health support than their male counterparts when controlling for common confounding variables, however, was startling. These data may go some way to explaining why we find men in the most disadvantaged areas of society, struggling with homelessness, criminal behaviour, substance use and, ultimately, suicide as necessity-driven copingstrategies for their difficulties (Whittle et al., 2015). As services, it is clear that we are failing to properly assess and treat these individuals and have been for decades, leaving them only with a host of options that are destructive both to the individuals and the wider social fabric.

Building on this, the literature review aimed to establish the current efforts to treat these issues by health services as an aid for clinicians. However, early in the process, the aims of this review were broadened to include a wider range of studies, as the evidence base was too limited to conduct a more specific review. Again, this was unexpected as the gender inequalities in mental health have been welldocumented for a large period of time (ONS, 2021a; 2021b; 2021c). Illustratively, replacing the gendered keywords in the search terms for this review with their female equivalents yielded approximately double the results, demonstrating a clear difference in priority among research groups. While the reasons for this can be debated, it does not appear appropriate, especially given a suicide crisis among men that is no longer recognised as such due to the length of its continuation.

Resultingly, it was hoped that the results of this thesis may serve as a stark but necessary call to reexamine how we meet the needs of our male service users, given a troubling inequality in service access and efficacy. While it is not clear whether these issues are due to individual factors, representative of wider cultural issues, or insufficiencies on the part of services to meet men's needs, it is clear is that such inequality is unacceptable. Likewise, well-intentioned clinicians hoping to develop their services and rectify these issues will find scant and, often, conflicting guidance on how to do so. While attempts have been made to distil such guidance into concrete, practical examples for clinicians, it is unfortunate that the field of men's mental health is still at such an early stage of development.

Implications for future research and theory development

The clearest result from the literature review is that there is a high demand for studies focusing on men's mental health. However, a potential barrier preventing growth in this field is that there appears to be conflict around how exactly men's mental health difficulties are framed which can largely be summarised with reference to two perspectives – those of feminist psychology and atheoretical authors on men's mental health.

Feminist scholars, for example, frame men's mental health issues as symptomatic of rigid conceptualisations of masculinity (Coles, 2007; Courtenay, 2000; Evans et al., 2011; Ridge et al., 2011). Specifically, these conceptualisations consist of hegemonic masculinity (a society's cultural expectations of masculinity) and toxic masculinity (which are the destructive outcomes that may occur as a result of individuals failing to meet hegemonic expectations). Hegemonic masculinity is described as societal expectations of men as being assertive, autonomous, in control, decisive, dominant,

emotionally restrained, physically strong, white, rational, middle-class and heterosexual. These expectations are framed as harmful, resulting in poorer mental health outcomes among those who do not meet them. Such perspectives contend that, in lieu of alternatives, failure to meet to this type of masculinity results in toxic masculinity, where their only outlets for emotional suffering are "socially acceptable" methods of self-harm or socially unacceptable harm towards others for which they are then punished (e.g., self-medication with alcohol and substance misuse, risky or harmful sexual behaviour, and physical violence). The proposition that follows is that challenging hegemonic and toxic masculinity would result in more willingness to seek support and reduce inequality.

In contrast to feminist views of masculinity, the academic literature presents contradictory evidence, with studies demonstrating high levels of trauma and untreated mental health difficulties in forensic populations (Cucciare et al., 2011; Jencks & Leibowitz, 2018; Men's Health Forum (MHF), 2009); that men are willing to engage and prefer psychotherapy over medication (Sierra Hernandez et al., 2014); that lower referral rates can be attributed, at least in part, to referrer bias (Cochran & Rabinowitz, 2003; Kerr & Kerr, 2001; Mahalik et al., 2012); that traditional psychotherapy is incompatible with typically masculine expressions of distress (Seymour-Smith et al., 2002; Vogel et al., 2003); that terms such as "toxic masculinity" (and, even, "healthy masculinity") are stigmatising and restrictive (Englar-Carlson & Kiselica, 2013; Kiselica & Englar-Carlson, 2010; Waling, 2019); and the detrimental influence of societal stereotypes on help-seeking behaviours (Addis & Mahalik, 2003; Levant et al., 2014; Pederson & Vogel, 2007).

Similarly, professional guidance from clinical bodies such as the APA, British Psychological Society (BPS) and Health & Care Professions Council (HCPC) presents conflicting recommendations and have been subject to criticism (Wright, 2019). For example, well-meaning clinicians following the APA's vague recommendations of how to challenge concepts of masculinity could potentially be violating expectations of person-centred care, professional integrity, consent, issues of power and respect (BPS, 2021; HCPC, 2022).

While these perspectives are often presented as mutually exclusive and conflicting, it is likely that they would benefit from synthesis – with many of the concepts related to toxic masculinity better framed in terms of cultural and social neglect leading to poor mental and physical health outcomes. In the absence of clear and appropriate framing and language to describe such difficulties, multiple authors have described guidance in sufficient clarity to inform research studies and clinical adaptations which have been presented throughout the thesis (MHF, 2009; Pollard, 2016; Rice et al., 2022; Rice et al., 2018a; Rice et al., 2018b; Robertson et al., 2015; Sagar-Ouriaghli et al., 2019; Sagar-Ouriaghli et al., 2020).

Implications for clinical practice

Due to the clear, cross-cultural and historically robust evidence for inequalities in men's mental health, it is reasonable to recommend immediate implementation of the guidance that does exist in addition to expanding the evidence base. Recommendations suggest that addressing widespread structural inequalities such as educational and occupational differences among men and women could improve men's overall mental health. For example, government-level changes reducing the growing deficit in boys' education should be considered, especially with the understanding that such changes take a long time to filter through to higher education and occupational attainment. Alongside grander proposals, however, services would benefit from considering the implementation of male-only groups for therapeutic interventions – especially those focused on trauma recovery; specialist male services; early intervention strategies; multi-agency approaches (linking in with physical health services, criminal justice teams and social services); *sensitively* developing individuals' conceptualisations of masculinity (where appropriate and with informed consent) and person-centred care in all instances. Additionally, it seems pertinent to suggest that a broader re-examination of the field may be necessary as there appears to be an element of compassion blindness when it comes to men's mental health. It

long as records have been kept on the issue and yet this has largely been the case. As stated in the

is hard to ignore that men have been suffering from a wealth of different challenges in society for as

introduction to the literature review, men disproportionately and overwhelmingly represent homeless individuals (ONS, 2021a), prison inmates (Ministry of Justice, 2022) victims of violent crime (ONS, 2021b) those suffering from alcohol and substance misuse difficulties (McHugh et al., 2018; Nolen-Hoeksema, 2004) and completed suicides (ONS, 2021c). The fact that these issues have gone unaddressed and largely undiscussed for so long (especially in a cultural climate where intersectional and systemic inequalities are at the forefront of discussion) highlights either a serious gap in awareness or an active disregard for the individuals we serve.

Limitations

One of the major limitations behind both the literature review and the empirical paper is the developing and complex nature of the field in question. As the literature around men's mental health is in its infancy, it is difficult to draw clear conclusions about the reasons behind the results observed in either case. For example, it is unclear why there is a relative lack of research around men's mental health to begin with. Likewise, the relative absence of service strategies aimed to reduce these difficulties is not well understood. While it is possible and appropriate that a greater focus on other demographic groups could be due to increased risk factors, this argument does not hold up well given the data around men's longstanding societal suffering.

Similarly, while care was taken to include demographic variables known to impact mental health access in the empirical model, these had relatively low explanatory power and little impact. Meanwhile a large proportion of the variance in samples went unexplained. As with any complex social phenomenon this is to be expected, however, it does leave an unanswered question as to whether the inclusion of other variables may reduce this gap, which they are and why. This unexplained variance made it difficult to highlight strategies which may be helpful in alleviating these gender inequalities.

Reflection on the research process

In conducting any research, it is always difficult to navigate and structure discussion and

argumentation, especially when the topic carries personal significance. As a male psychologist, I came to this profession with personal and anecdotal experience of men's mental health difficulties. Throughout my career, my interest in men's mental health has steadily increased – owing in no small part to the testimonies of male service users and personal acquaintances. These testimonies have frequently and emphatically highlighted the difficulties they have faced in requesting and accessing support for their difficulties, facing stigma (and sometimes abuse) from friends, colleagues and loved ones, expecting the same from me as a clinician. The courage required to engage in seeking professional help when fundamental aspects of your personhood will be called into question is inspirational, to say the least. These experiences, combined with my own reading and professional development, have brought me to this issue and, as a result, it is an ongoing challenge to ensure that my views are tempered with objectivity and a careful analysis of the literature. Over the course of my career, I have endeavoured to balance my views on this topic (and others) by engaging those with differing perspectives in discussion to examine holes in my own viewpoint and to explore new information. As such, I am accustomed to healthy disagreement and challenge.

For this research, however, I have found that my choice of topic, my perspective, my very language and even my moral fibre was scrutinised more heavily than it has been in any other field or setting. I have experienced colleagues cautioning me and advising that I choose a less "controversial" area of research, while others questioned the value of such a subject when men occupy the positions of power that they so often do. Unexpectedly, however, in attempting to discuss these issues (as I have done for years with no issue), I found myself ostracised and falsely accused of professional misconduct by members of my own doctoral cohort. In writing the body of my thesis I have found myself questioning my choice of language more than I have in any other context, obsessing over how things could be interpreted or misinterpreted. While personally distressing in their own right, these incidents seemed to be symptomatic of a broader, societal issue where perspectives have become heavily polarised, with nuance stripped away. It is my personal belief that this dynamic is unlikely to be a singular instance and that the comparative absence of research and service development may be indicative of

the intellectual hostility presented towards narratives that challenge the status quo in academia at present. It is my hope that the facts and research presented in this thesis, while challenging, may be of some benefit to the individuals we serve and the clinicians who serve them.

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