

Lesbian, Gay, Bisexual, Trans + (LGBT+) Care in Later Life: A short review of the research and evidence to

1. Introduction

There is a substantial, rich and cumulative body of evidence on the experiences of lesbian, gay, bisexual, trans, queer and questioning people (LGBTQ+) in later life. This provides some benchmarks and a base for identifying the knowledge, understanding and insights needed by development of the learning framework for LGBTQ+ ageing was informed by a literature review from the UK context. International sources have been drawn on to address any gaps or to take advantage of transferable examples of best practice.

This body of evidence reveals a range of concerns and challenges for people who identify as Lesbian, Gay, Bisexual and Trans and other sexual and gender minoritised groups as they enter into their later years. It also documents the strengths, contributions of the community and their recommendations for what can be done to support the workforce in developing and improving

Language and terminology is important when talking about or communicating with members of the Lesbian, Gay, Bisexual and Trans community and is as much about our approach as the words we use. This review uses the acronym LGBT+ in recognition that everyone has a right to self-identify and that people will use a variety of terms and labels to express themselves. Adding a plus (+) sign signals recognition of other less articulated sexual and gender identities. The term Queer has been reclaimed over the last two decades as a deliberately provocative and political radical alternative to LGBT and as an umbrella term for people who are not heterosexual or cisgender. Some people in the older community have not used this to describe their identity perhaps due to its very negative connotations from earlier life.

The Learning Framework for LGBT+ Ageing

While LGBT+ older individuals may experience the same challenges as their heterosexual and cisgender peers¹ they also face very unique challenges in accessing healthcare directly related to their gender or sexual identity. The literature strongly points to a lack of appropriate and inclusive health and social care and support.^{2 3 4 5 6 7}

A key and consistent message recommended in the research literature concerns the gaps in education and training needed to equip the care workforce with better knowledge, skills and assumptions in care provision.^{8 9 10 11 12 13 14 15} The social work and social care curriculum on ageing and the learning resources that it relies upon, tends not to address LGBT+ issues^{16 17} and/or lacks diversity when it does.^{18 19 20}

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The learning framework for knowledge, skills and values for working with LGBT+ people in later life is designed to support the development of a 'learning framework for working with LGBT+ people in later life' in social care. Whilst a framework can't cover everything, it aims to direct learners, educators, leaders, practitioners, providers and commissioners in social care, to the essential knowledge, skills and values that help to underpin and enable better practice.

It is designed to be used as a means of exchanging research knowledge with those in practice. These resources give particular emphasis to the personal stories and narratives of people with lived experience and are co-produced with LGBT+ older people and their advocates.

2. Who are the LGBT+ ageing population?

There is a lack of large-scale quantitative data in the UK on its older LGBT+ population and a limited understanding of their needs in the media. Historically, this has been problematic and contributed to a detailed lack of knowledge about the lives and needs of the LGBT+ population. This is partly due to a lack of monitoring for sexual orientation/gender identity in routine public services data collection²¹ and reluctance of care providers and practitioners to ask²² and an understandable reluctance for individuals to share, which can be particularly pronounced in the older community due to life experience and living at a time when it was illegal to be gay.²³

In 2017, the UK Government conducted a national survey of LGBT people. One hundred and eight thousand (108,000) people provided information about their experiences of living in the UK and of accessing public services such as education, healthcare, personal safety and employment. Some of

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For example, a meta-analysis of 29 datasets on health or care indicators on LGBT+ people³² revealed that (LGB) men and women experiencing poor self-rated health 1.2 times higher than for heterosexual people, and poor self-rated health was a predictor of future mortality, and poor outcomes for health, disability and life expectancy.³³

In the context of not having a reliable source of how many people aged 65 years and over identify as LGBT+ in the UK, some conservative estimates have been put forward. One suggests that LGBT+ people represent 0.700% in 2018 to 1.0% in 2019 of this age category (120,000, from that

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Experiences of discrimination can contribute to material disadvantage (for example poverty from workplace exclusion), poorer mental health, and create barriers to accessing services in the future.⁴⁵ Highlights the additional pressures on trans patients to educate primary care professionals, such as GPs, to ensure they are able to provide safe and effective care.⁴⁶

The Equality Act 2010 gave LGBT employees protections from discrimination, harassment and victimisation at work. The legislation brought together existing legislation and added protections for trans workers, solidifying rights granted by the Gender Recognition Act. The Equality Act 2010 prohibits discrimination on the grounds of nine protected characteristics, including religion, sexual orientation and gender reassignment (expanded by case law to include transgender).^{47 48 49 50} Discriminatory practice.

The Equality Act 2010 strengthened previous equalities legislation in important ways to help tackle discrimination and inequality, with the potential to secure greater fairness and equality for older lesbian, gay, bisexual and trans people in the UK. The Act applies to all organisations that provide a service to the public or private.

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4. An overview of why LGBT+ older people face barriers to accessing care and support

Research clearly demonstrates that LGBT+ people in later life report poorer health than the general population and have worse experiences of care^{54 55}. This research, which used multiple data sources and an unparalleled sample size (over 2,500 LGB men and women) enabled a better understanding the extent of health inequalities in later life. Some of the inequalities in self-rated health included, long-term illness, smoking, suicide attempts, and life satisfaction.

Such health inequalities are irrespective of whether LGBT+ people are accessing cancer, palliative/end of life,^{56 57} dementia and/or mental health services.^{58 59} LGBT+ older people for a number of reasons, may not have the expansive family networks of support as they enter old age

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These inequalities in outcomes are attributed to a number of issues, including a lifetime of exposure to prejudice and discrimination resulting in 'minority stress'⁸⁰ and/or use of adaptive or behaviours to compensate for example, problematic substance use.⁸¹ The theory of minority stress has posited that LGBT+ people are at risk of mental health issues from chronic social stressors related to the experience of stigma and prejudice and which in turn can manifest in physical signs of stress.⁸²

LGBT+ older people frequently report the anticipation or experience of discriminatory attitudes among care providers in the form of heterosexism, homophobia, biphobia and transphobia. These fears and experiences in turn contribute to delay in access and a lower uptake of health services which further impacts health and wellbeing.^{83 84 85 86}

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J] k] Yj [\] e g f klj Yl] k' Y' Q' f] 'ka'] 'Pik' Yd' YhhjgY [\ 'f 'kge] 'Yj] Yk' g^ [Yj] \$⁹⁷ where greater awareness and knowledge of the lifestyles and cultural needs of LGBTQ+ older people could lead to better tailoring of health and social care. There is an urgent need to address this within care homes^{98 99 100} and provide advocacy and support for people as they transition to long-term care. Alarmingly, some trans people have describe being open to euthanasia as a strategy to avoid residential care where the level of fear of being misunderstood, misgendered and ridiculed is so great.¹⁰¹ The process of disclosure about sexual and gender identities within closed care environments can thus be extremely stressful for someone and may exacerbate anxiety around 'who knows what'.¹⁰² >gj] pYe hq' \$f 'kge] [d' [mæ k l Yf [] k \$ \ d' h d' qk' g^ kYe] %] p' Y] [l' g' f [Yf ' d' ghYj \ a'] '] l] jgk] pmYd' d' j d' f \ k' d' k' Yf\ ' j] d' l' g' f k' ' d' k' o' d' [Yj] ' k l Y'^ &¹⁰³

Advanced care planning is important for LGBT+ people and raises distinct issues such as providing h j g l] [l' g' f ' g j ' h Y j l f] j k' Yf\ 'ka' f d' [Yf l' g l'] j k' o' ' g' e a' ' l' g l'] j o' d' k' f gl' Z] j] [g_ f d' k] \ Yf\ 'lg' e Yc] ' and record plans for future care.¹⁰⁴ < d' l' f [l' d' k n] k' d'] f l' d'] \ 'f [d' h] ' f gl' ' c f go f _' o' ' g' l g' f g e f Yl] ' in decision making roles as well as being able to nominate 'important others' as next of kin, which e a' ' l' e] Yf ' kYe] %] p' h

5. The value of education and training on LGBT+ ageing

health and social care workforce. Baiocco et al¹⁰⁷ model includes cultural awareness, cultural knowledge, cultural sensitivity and compassionate attitudes towards LGBT+ service users.

The targeting of education and training also needs to be supported by policies and benchmarking standards^{108 109 110 111 112} include leadership;¹¹³ organisational initiatives to improve care¹¹⁴ and community engagement.¹¹⁵

Two systematic reviews of education on LGBT+ ageing,^{116 117} have focused on identifying the pedagogic principles that can improve how training is delivered and received and looked at the outcomes from interventions used to educate the health and social care workforce. The reviews recommended areas for improvement such as; giving more attention to the curriculum content and improving teaching and assessment strategies that tackle barriers to including LGBT+ in

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The framing of 'successful ageing' in UK ageing policies has been critiqued for its failure to recognise the individual experiences of LGBT+ people in later life from diverse backgrounds.¹⁷² Taking a lifecourse approach¹⁷³ helps to consider how the accumulation of advantages and disadvantages over time can shape outcomes in later life. In other words, a negative experience or instance of adversity will have a more detrimental impact on an individual if it has been preceded by several similar negative instances.¹⁷⁴ This highlights the importance of intersectionality as we explore ageing in the LGBT community. Intersectionality describes how themselves potentially subject to forms of discrimination and marginalisation.¹⁷⁵

There is much less research into the experiences of LGBTQ+ people from diverse racial and cultural backgrounds. Research¹⁷⁶ has described the unique challenges for older LGBTQ+ people of color who have experienced discrimination based on race, gender, and sexuality in all phases of their lives, often bearing witness to and helping to start various equal rights and social justice movements. These unique challenges may involve the importance of religion and spirituality which can be a support but also a potential site of further oppression. These experiences call for particular skills in later life around coping and developing resilience to a wider range of situations the individual might face.

In one London Health and Wellbeing Board,¹⁷⁷ it was found that certain population groups identifying as black African. High population turnover, including high rates of external migration, higher diverse population of LGBTQ+ people in terms of ethnicity. Leaders must ensure a continuous process of strategic assessment and planning with a core aim to develop local evidence-based priorities for commissioning. This will improve the peoples' health and reduce inequalities by analysing the populations' needs, and agreed priorities, to determine the actions needs, and to address the wider determinants that impact on health and wellbeing.

8. Participation and co-production with LGBT+ older people

There is a growing movement among LGBTQ+ ageing research and practice which promotes given their stake in using services in later life if this is properly supported and valued. This requires creativity, commitment and resources to facilitate this. For example, Smith et al¹⁷⁸ found that the lives of LGBT+ people with dementia themselves seem almost entirely absent from literature about them and suggested that the use of photovoice was found to be the most common innovative method for engaging people with dementia in research.

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There are many and growing examples of partnerships involving LGBT+ older people.^{179 180} Another example is¹⁸¹ work carried out with a large care home provider which showed that enabling structured expertise, such as that of the volunteer community members is a powerful learning opportunity. This for critical exploration of what makes good care. Action research involving members of the LGBTQ+ community as 'community advisors' to enhance inclusive care in residential homes demonstrated that collaboration, participation and co-production can be valuable in producing new, multi-faceted and authenticity of challenge and change to care home cultures.^{182 183} Another example is the Trans¹⁸⁴

9. Summary

This short review of some of the most relevant research evidence conveys a range of complex issues



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- ¹ Gendron, T., Maddux, S., Krinsky, L., White, J., Lockeman, K., Metcalfe, L., Aggarwal, S. (2013) Cultural Competence

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- 26 G [] 'g] F Ylajf YdKIYl&l&l&l k\$Z (*)!K] pnYdgj&f Ylajf i n] klajf \] n] d]he] fl 'g] ;] f knk *(*) ' Ilhk2' o o o g] f k&g n&rc' [] f knk' censustransformationprogramme/questiondevelopment/sexualorientationquestiondevelopmentforcensus2021 (accessed 21/7/2022).
- 27 Brown, 2009 ibid.
- 28 @Y gj\%D] I[' P] d.\$L&H] rr] dY\$9&; gff] d\$K&M] c\$E \$Bnj] c\$9&\$@a_ f k\$9&\$&&&D] o k% jggc] \$K&Z (*)!&D] Y] f f_ 'lg\] d] j D? : L' Y_ \ \ [Y] 2=phd] f_ Yf\ \ g] me] fl f_ Z] kl' h] Y[l&l] k' f' h] g] k' k' a] f' YdYf\ ng[Ylajf Yd] \ n] Ylajf i' jgm_ ' i'] 'Og] d' ; Y' e] i' g\& 9_ f_ Yf\ 'Kg[&l] q\$) %* &\ g& (& () / ' K () , , . O. P*) (((, ,) &
- 29 K&e hkgf \$H& 9&e Y[c\$C&O Yd'] j] c\$H&Z () O! O!] l] j] Yl'] e ' Yd'] ' kYe] O!] ' Yl&am\] k\$cf go d' _] ' Yf\ ' h] Y[l&l] k' g' k' iY' ' [gf [] j] f_ gd'] j] d' kZ&f \$ _ Yq\$Z&k] pnYdYf\ ' l] j] Yf k] j] k&l] f l k' f' [Y] ' ge] k\$O9_] f_ Yf\ ' Kg[&l] q&+Oz' ! \$O. 1E011&
- 30 :] Y[' \$: &Z () 1! j] Y&k' f_ ' i'] i nYd] q] BY_ @] Yd' ' f'] i nYd] &l] k' Ye gf_ 'gd] j] D? : L' h] gh] d' ' f'] ' MC&Dgf\ gf \$D; \$M D\$; Y] \ a ' M' an] j k&q&
- 31 @] _ Y] l] q\$H& < gff] d] \$D\$ < m] l] gf \$H& > &? adf_ ' Ye \$K&N] [[' &l] \$N&Z' * (! M' \] j k' iYf\ f_ ' g' ^' l] j] k] p2L'] ' E] Yf f_ k' g' ^' Me Z]] d' ' L] j] e k Yf\ ' Gh& f' k' 9Zgm' E] \ &l] YdYf\ ' Kg[&l] j] khgf k] k' 9e gf_ 'DYqh] gh] d' ' f'] ' M' f' \ ' K' iY] k' Yf\ ' M' f' \ ' C&f_ \ ge \$Hkq] ' g] d' _ q' g' ^' K] pnYd Orientation and Gender Diversity , 8 (1), 25-27.
- 32 Beach, 2019 ibid.
- 33 Beach, 2019 ibid.
- 34 G [] 'g] F Ylajf YdKIYl&l&l&l k\$Z () 1! K] pnYdgj&f Ylajf \$MC&=ph] j&e] f YdKIYl&l&l&l k' g' k] pnYdgj&f Ylajf ' f'] ' ' MC' f' * () 1' Zq] j] _ ajf \$ k] p\$Y_] \$e Y] &l] YdKIYl&l&l&l i' ' f' &l] &l] q' Yf\ ' kg[aj] % [gf ge &l] [d' Yk& [Ylajf \$nk&f_ \ ' YlY' '] ge ' l'] ' 9f f nYdHghn&l] ajf ' K'n] n] q' 9HK! & Ilhk2' www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/bulletins/sexualidentityuk/2019 (accessed 21/7/2022).
- 35 HnZ&l] '@] Yd' ' =f_ d' f\ ' Z' () 1! H] j] g\ n] f_ ' e g\] d] \] kl&e Yl] k' g' ^' l'] ' k&e] ' g' ^' l'] ' d' kZ&f \$ _ Yq' Yf\ ' Z&k] pnYdZ? : ! hghn&l] ajf ' g' ^' =f_ d' f\ ' > f' Yd]] hg] l] & Ilhk2' Ykk] l] k&anZ&k' f_ ' &l] jn&l] & g n&rc' _ gn] j] f e] f l' n] h] d] Y\ k' k' q' k] e ' n] h] d] Y\ k' YlY [' e] f l' W' YlY' p' d' ' - O- +, 1' H@=W&f YdW j] hg] l] W&f 9DW& J 9>LW, & * & () . F: * + () / n' & \ ^' Z [[] k] k' \ ' * ' / ' * (* * ! &
- 36 K] d [l' ; ge e &l]] ' gf ' HnZ&l] ' K] jn&l] ' Yf\ ' <] e g_ j] Yh' &l] ' ; ' Yf_] &
- 37 ? gn] j] f e] f l' = i nYd] &l] k' G [] \$* () O&Z& &
- 38 E Yf l' g] h] \$B&Z' ((+!&f ' _ c !

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- 57 Higgins et al, 2018 *ibid*.
- 58 Hjā] \$=&Z'() (!& ge ā_gm'lg[Yj] 2? YqYf\ 'd kZāf [Yj]jkō]ph]jā f[[k g^)\ e] flā'k]jnā] k&@]Yd' Yf\ 'Kg[ā'd; Yj] 'ā']' : ge e nřāq\$) O\$) . (Đ) . O&
- 59 O]klo gg\ Yf\ '=&Hjā] 'Z' (**'j] 'l' 'D? : L] #]H]ghđ Yf\ '<] e] flā'29'? gg\ HjY[lā] '? nā] 'ž jY\ 'g] '<] e] flā'K]jā kl&B] kqā Y' Cā_kđ qHnZā']jk&
- 60 : 'g&K&E]q]j\$A&Z'() . !D? : L'9_ā_29]j] nā o'g'j]k]Yj['P'f\ā_k\$]f]\k\$Yf\ 'hgā qāe hđ Ylāgf'k' Ilhk2'o āāYe kāf klām] &Yo & ucla.edu/publications/lgbt-aging/ (accessed 21.7/2022).
- 61 J]āā\$=&@Y g]j\%đ]l['P]đ \$L\$DYe Z]j]f\$Z' (*(!Oge]f_Y_ā_ 'kgđ'ā'ā] d'f\29f]phđ]Yl g]qk l m'q'g^o ge]f'đ'h]jkh] [lā]k'gf' j]d'lāgf'k'ā' h'klYlnk Yf\ 'm]nj] [Yj] & nYāYlān] 'Kg[ā'dO g]c&) 1ž!/-Đ!*<G&Z) (đ) //') , /++* - () O/1.) +Ognj'fYā&Y_]hnZā'ge''ge]'i ko &
- 62 OYj\ \$J \$J an]j k\$A&K m']j d'f\ \$E 'Z' (*) *! ž \k! D] kZāf \$? Yq\$: ā] pñYdYf\ 'LjYf_k H] ghđ '2_ ājYh' ā YdYhhjgY ['] k'g] 'ā [dñkan] ' care and support, London, Jessica Kingsley.
- 63 E [? gn] jf B&Z'() , !L'] 'g]_gll] f 2\] e] flā'Yf\ 'l'] Y_ā_ 'D? : L [ge e nřāq&B?] jgf lgdK g['O g]c&- /Z! 'O , - % / & \ gā2) (đ (O' () . + , +/* & () , & (() .) &
- 64 E [? gn] jf \$' (*) , 'āā &
- 65 Hjā] \$=&Z' (*) !&? YqYf\ 'd kZāf [Yj]jk29_] ā_ā'] 'k' Y\ go 'g^)\ e] flā' & 9_] ā_ Yf\ 'Kg[ā] lq\$+*\$-) . Đ- +* &
- 66 Cā_ \$9&K Yf l gk 9 ; & ; jgo ` n]kl\$A&Z'() /! K] pñYā] k J] k] Yj [' 2 ; jāā Yd' A] j] đ [lāgf k \$ < a] j k] E] l' g \ gđ_ ā k \$ Yf \ ' H j Y [lā Y d Applications, London, Routledge.
- 67 Cā_ \$9&9đ Y [c \$ C \$ Q a n Y n f _ K & Z' () ! ' G d] j D] k Z ā f \$? Y q \$: ā] p ñ Y d Y f \ ' L j Y f k H] g h đ 2 E ā \ ā _ ' l '] c f g o đ \ _] _ Y h k & A ' G d] j ' D] k Z ā f \$? Y q \$: ā] p ñ Y d Y f \ ' L j Y f k H] g h đ & D g f \ g f \$ J g m đ \ _] &
- 68 : Yj]jk MC Z' (*) ! \$ Ō K I Y I] ' g ' ; Yjā_ '* (*) & 9 kf Yhk' gl' g^mf hYā [Yj] 'ā'] ' MC \$ Ō * (*) & S f d f] ū 9 n Y ā Y Z đ 2 ' Ilhk2' [Yj] j k m c & g j _ ' ā Y _] k J] k] Y j [' ; M C V K I Y I] V g ' W Y j ā _ W (*) V j] h g j l V b] Z ā h ' 7 W Y 5 * đ 1 * - (* . 1 (& . 1 0 0 / - + (đ . + . (1 0 - * 0 % (1 / - 0 * - + đ . + . (1 0 - * 0 (accessed 21/7/2022).
- 69 Makita, M., Bahena, A., Almack, K. (2020) "The role of sexual orientation, age, living arrangements and self-rated health ā' h' d' f' ā' 'g]] f \ % g ' ā] [Y j] ' g j ' đ k Z ā f \$ _ Y q Y f \ Z ā] p ñ Y d Z D ? : ! ' g d] j ' h] g h đ ' ā '] ' M C \$ Ō K] p ñ Y ā] k \$ ' Ilhk2' \ g ā g j _ ') (đ) // ') . + , . (/ * (1 + * + 0) &
- 70 Ke ā ' D \$; '] k '] j ' A \$ j] \ j ā k] f % g d k] f ' C \$ O Y j \ ' J ' S H ' ā h n k g f ' D \$ F] o e Y f ; = \$ <] d g e] ' > & Z' (* ! ' A n] k l ā Y l ā _ ' l '] ' d n] \] p h] j ā f [] ' g ^ D ? : L # ' h] g h đ ' o ā ' \] e] flā' Yf\ 'l'] ā [Yj] ' h y j l f] j k 2 Y ' k [g h ā _ j] n ā o & 9 _] ā _ Yf\ ' Kg [ā] l q & ' Ilhk2' \ g ā g j _ ') (đ) / ' k () , , . O . p * * ((- + 0 &
- 71 Cā_ \$9&Z' (*) ! l m] j] ' m] nj] k 7 ' > g j _] l ' ā i ' <] e] flā' \$ i m] j] ' l '] g j q Y f \ ' l '] ' d e ā k ' g ' g j e Y l ā n q & B g n j f Y d g ^ 9 _] ā _ ' K l m ā k ' ' Ilhk2' \ g ā g j _ ' org/10.1016/j.jaging.2021.100993.
- 72 Ke ā ' \$ = \$ R ā f k Y c \$ L & E \$ H g o] j \$ B & D g g f k \$ 9 & i : ā Z q \$; & Z' (*) ! & K g [ā ' d ā [d ñ k ā j f ' g ^ D ? : L l ' Y f \ _] f \] j \ ā n] j k] ' Y \ n l k ' o ā ' ā l] đ [l m Y d \ ā k Y Z ā ā q ā \ ā k Y Z ā ā q k] j n ā] k 2 9 ' k q k l e Y l ā ' j] n ā o ' g ^ l '] ' d] j Y l n j] & B g n j f Y d g ' 9 h h đ \ ' J] k] Y j [' ' ā ' A] đ [l m Y d < ā k Y Z ā ā q k \$ + - ž] \$, . Đ - 1 &
- 73 : Yj]] I \$; \$; jYe] j ā \$ H \$ D Ye Zgnj f] \$ K \$ Y f \ ' D Y I ' Ye \$ B Z' () - ' Y I ' O ' ' 9 j] ' K l ā ā] Y q É ' 9 f ' = n ā] f [] : Y k \ ' ? n ā] ' l g ' A [d ñ k a n] ' K] j n ā] k ' g j ' D] k Z ā f \$? Y q \$: ā] p ñ Y d Y f \ ' L j Y f k H] g h đ ' D a n ā _ ' o ā ' <] e] flā' & E] Z g n j f] 2 9 n k l j Y d f ' J] k] Y j [' ;] f l j] ' ā ' K] p \$ @] Y d ' ' Y f \ ' K g [ā] l q \$ D Y ' Trobe University.
- 74 : Yj]] I \$; \$; jYe] j ā \$ H \$ D Ye Zgnj f] \$ K \$ D Y I ' Ye \$ B j ' Y f \ ' O ' q] \$; ' Z' () - ' Z ! M f \] j k l Y f \ ā _ ' l ']] p h] j ā f [] k Y f \ f]] \ k ' g ^ d k Z ā f \$ _ Y q \$ Z ā] p ñ Y d Y f \ ' L j Y f k ' 9 n k l j Y d f ' k ' d n ā _ ' o ā ' \] e] flā' Yf\ 'l'] ā ' h y j l f] j k & 9 n k l j Y d f ' k ā f ' B g n j f Y d g f ' 9 _] ā _ , \$ + , Đ - 0 &
- 75 : Yjā \$ 9 & K ā h] j e Y f \$ E ' Z' (* ! ' > g j _ g l l] f ' d n] k 2 j Y f k ' g d] j ' Y \ n l k ' d n ā _ ' o ā ' \] e] flā' Y l ' l '] ' ā l] j k] [l ā j f ' g ^ [ā _] f \] j ā e \$ Y Z đ ā e ' [g _ f ā ā ā k e ' Y f \ Y _] ā e & K] p ñ Y ā] k * - \$) / Đ) +) &
- 76 @ ā _ ā k ' 9 & K ' Y j] c < & F g d f ' E & K '] j ā \$: \$ > d f Y _ Y f \$ H \$ K d ā n ā Y ā] \$ K & < g f f] d E & & \$ i ' O Y d k ' \$ & Z' (*) ! & E p] \ e] l ' g \ k] n Y d h Y l ā j ' g ^ Y f ' ā l] j \ ā k [ā d f ' Y j q k] p ñ Y ā] q] \ m] Y l ā j f ' h j g _ j Y e e] ' g j ' k l Y ' o g j c ā _ ' o ā ' h] g h đ ' o ' g ' Y n] Y f [i m ā] \ ' h ' q k ā Y d \ ā k Y Z ā ā q & B g n j f Y d g ^ 9 \ n Y f [] \ ' F m j k ā _ \$. O ž) ! \$ * - - 1 Đ * - . 1 &
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116 Higgins et al 2019 ibid.

117 Bnj]c]l Yd\$(*) 'zA&

118 Higgins et al, 2019 ibid.

119 Bnj]c]l Yd\$(*) 'zA&

120 Kcaak'gj; Yj] Ô gfP\]f!oá` \a]j]f[] Ö llhk2'ooo&kcaak'gj[Yj] &j_&nc'<]n] qháf_%gnj% gjc'gj[]'; Yj] %gháf k' =i nYd\q%f\% \an]jkáf; gfP\]f!%á` %a]j]f[] &khpžY[[]kk] *, '/'***!&

121 Bnj]c]l Yd\$(*) 'zA&

122 : jY\ZnjqBgf]k\$; &E gduq\$=&; d'jc\$E &OYj\\$F &ž' (*(!?]f\]j\$]k] pmYd\an]jkáfYf\ 'h]g'f kka'f YdhjY[láf] 'd'Yj fáf_2pf\áf_k'jge Y' kqkl]e Yláf k]Yj[` Yf\]] náf o\$Kln\áf k'áf '@a`]j`=\n[Yláf \$, -žO!'.) O%. +. \$<GA2) (& (O' (+(/- (/8 ° f



Appendix 1

References

- 181 @Y gj\%D|[\`p]d.\$L\$Kæ hkgf \$H\$O adk\$H& \$S!`9de Y[c\$C&Z`()O!&<]n]ghaf_`f [dtkan] j]kà.]flà'd[Yj]`g]g'd.]j`d`kZà'f\$_Yq\$ Z&]pnYdYf\`ljYfk`D?: L!`h]ghd`29f`]nYdYlaj`g^!`] [Yj] ``ge] [`Yd`f_] `Y[laj`f`j]k]Yj[`h]g]d [l&@]Yd` `Yf\`Kg[à'd; Yj] `f`!`] ` ; ge e n f àq\$*. \$+) *D+*(&
- 182 @Y gj\%D|[\`p]d]l`Yd`*()O`z`a`&
- 183 Willis et al, 2018 ibid.
- 184 ljYfk`9_]`f`_Yf\` ; Yj] `lj9; ``llhk2`ljYfk`%_]`f`_&o`Yf`&[`&rc`&