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Hierarchical Femininities and Masculinities in Australia Based on Parenting and Employment: A Multidimensional, Multilevel, Relational and Intersectional Perspective

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ABSTRACT. Parenting and working are central to constructions of adulthood in Australia, although the value attached to different qualities, characteristics and practices of parenting and working vary for women and men. This theoretical paper firstly explores and integrates existing theories of gender hegemony into a multidimensional, multilevel, relational and intersectional perspective for exploring internal and external relations within and between hierarchical configurations of femininities and masculinities. It then explores existing multidimensional evidence on Australian regional-level hierarchies of femininities and masculinities based on parenting and employment, focusing on patriarchal-capitalist power relations, but including examples of other intersections. The extant research suggests hegemonic femininities are configured around intensive mothering and part-time working, hegemonic mascu-

linities are configured around breadwinning and involved fathering, and nuanced non-hegemonic femininities and masculinities are configured around complicit, compliant, non-compliant, pariah, precluded and marginalised qualities, characteristics and practices, depending upon the nature and degree of non-conformance to hegemonic configurations and the challenges they present to capitalist-patriarchal power relations, in the context of intersections with other power relations.

Keywords: pronatalism; capitalism; hegemony; femininities; masculinities; Australia

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1. Introduction

Get a job, get married, have children: the trappings of adulthood in Australian society. In particular, working and procreating are the means by which adults are seen to contribute to, and be worthwhile members of, society. However, the value placed on working and procreating varies for women and men. This theoretical paper explores hierarchical configurations of adult femininities and masculinities at the regional (that is, country or societal) level in Australia, based on parenting and employment, focusing on patriarchal-capitalist power relations, but also considering other intersectional influences. Before we explore existing evidence of regionally hierarchical masculinities and femininities in Australia, we discuss (in section two) and integrate (in section three) existing theories of gender hegemony, to suggest a multidimensional, multilevel, relational, intersectional perspective for exploring symbolic hierarchies of femininities and masculinities. We also outline symbolic hierarchies' implications for individual performances, particularly transgender, intersex, non-binary and gender fluid performances. Section four applies our perspective by discussing extant evidence of multidimensional and intersectional configurations of femininities and masculinities at the regional level in Australia's patriarchal-capitalist society, based on diverse parenting and working qualities, characteristics and practices. Section five integrates the theory and existing evidence to explore current hierarchical and intersectional relations between femininities and masculinities. Section six outlines the limitations, conclusions and implications.

2. Theoretical Background: Patriarchy, Capitalism and Hierarchical Femininities and Masculinities

Patriarchy and capitalism are systems of unequal power relations between men and women, and capital-owning and employer classes and employee classes, respectively (Connell & Pearse, 2015; Wright, 2005), which are reproduced by gendered and classed structures and discourses (Acker, 1988; Connell, 1987). Gender and class are patterns of social relations which are socially and discursively produced: at interacting local, regional and global-levels; and across interacting dimensions, including individual performances; human relations; divisions of labour and consumption; symbolism and discourses; and direct exercises of power (Connell & Pearse, 2015; Connell & Messerschmidt, 2005; Wright, 2005). Although patriarchy and capitalism entail unequal power relations between men and women, and capital-owning and employer-classes and employee classes, there are also hierarchies within femininities, masculinities and workers (Bottero, 2004; Connell, 1987). Connell, Messerschmidt (1987; 2005; 2018), Schippers (2007) and Paechter's (2018) theories facilitate an understanding of how femininities, masculinities and workers are hierarchically configured in support of patriarchal-capitalist power relations.

Connell's (1987) theory (revised by Connell and Messerschmidt (2005) and revisited by Messerschmidt (2018)) argues there exist multiple and hierarchical masculinities. Hegemonic masculinities consist of contextual patterns of social practice that are produced at interacting local (interpersonal interactions within families, organisations and communities); regional (the nation state or "culture," evidenced in discourse, policy and demography); and global (world politics, transnational business and media) levels; and multidimensionally through discourses, political, media and institutional structures, cultures, nondiscursive practices such as wage-labour and childcare; and embodied social practices and interactions (Connell & Messerschmidt, 2005; Messerschmidt, 2018). Accordingly, hegemonic masculinities are not individuals' physical or personality characteristics, and although they may be associated with social ascendancy, they are not necessarily constituted by patterns of "dominant" masculinities or those enacted by objectively powerful men or majorities of men (Connell, 1987; Connell & Messerschmidt, 2005). Rather, hierarchical masculinities are patterns of social practice that exist in relation to each other in order to maintain and legitimate unequal gender relations. Such hierarchies are dynamic and contextual: varying historical, social, cultural and institutional contexts configure shifting masculinities, to the extent that there may be multiple patterns of hegemonic masculinities at a particular level or in a particular context, and individuals may enact conflicting or, to borrow Messerschmidt's (2018) term, "fleeting," aspects of

masculinities, depending on the context (Connell, 1987; Connell & Messerschmidt, 2005).

Against this background, hegemonic masculinities are defined as contextual configurations that are taken to legitimate unequal gender relations (Connell & Messerschmidt, 2005), or, as revised by Messerschmidt (2018: 75), locally, regionally or globally constructed patterns of practice that "legitimate an unequal relationship between men and women, masculinity and femininity, and among masculinities." Hegemonic masculinities are subject to challenge, necessitating policing, penalising, suppressing, and sometimes appropriating elements of, non-hegemonic masculinities (or femininities). These include: complicit masculinities, the majority who do not strictly fulfil hegemonic configurations, but consent to hegemonic masculinities' social ascendancy in order to maintain men's dominance of women and benefit from the patriarchal dividend (the authority, respect and material rewards flowing to men overall from men's dominance of women); subordinated masculinities, which deviate from heterosexuality or blur distinctions between masculinities and femininities; marginalised masculinities within subordinated classes or ethnicities, which are excluded from hegemony regardless of their conformance; and protest masculinities constructed in protest against social configurations of race and class (Connell, 1987; Connell & Messerschmidt, 2005; Poynting et al., 1999).

Although Connell (1987) conceptualises masculinities in the context of unequal gender relations, she describes an internal hierarchy within masculinities, without considering relations between non-hegemonic masculinities and femininities in detail. In relation to femininities, Connell (1987; Connell & Messerschmidt, 2005) argues maintaining hegemonic masculinities requires complex relations between masculinities and femininities, by which masculinities exclude and discredit femininities, and among multiple femininities. However, Connell (1987) argues no femininity is hegemonic because: all femininities are subordinated to masculinities; nurturing, compliant and empathic femininities are devoid of power, dominance, authority and aggression, and thus incapable of ascendancy; and there is no pressure for any femininity to subordinate other femininities. Rather, femininities consist of: "emphasised" heterosexual, nurturing, empathic femininity, which accommodates men's needs and wants; and other femininities configured around strategies of compliance, cooperation, non-compliance and resistance, which are silenced and excluded from cultural expression. Messerschmidt (2012) further clarified that hegemonic femininities do not exist within Connell (1987) and Connell and Messerschmidt's (2005) theoretical formulations, because "hegemony" exists to legitimate unequal gender relations between men and women, and relations within femininities do not do so. Messerschmidt (2012) explains gender hegemony can only be identified through relations between

hegemonic masculinities that maintain "superior" gender qualities, and emphasised femininities that maintain complementary and "inferior" gender qualities: relations which justify unequal gender relations. Messerschmidt therefore uses "emphasised femininity" to understand unequal gender relations through relations with hegemonic masculinities, and contextually unique "dominant femininities," the most current, common or celebrated form of femininity, or "dominating femininities," which exercise power, command and control in specific contexts, to understand unequal relations between femininities. Although emphasised femininities may in some contexts be dominant or dominating, that is only the case if dominant or dominating femininities contribute to legitimating unequal gender relations.

We highlight our diverging perspective. Connell's (1987) argument there is no power in emphasised (heterosexual, nurturant and empathic) femininities relies on a stereotypically masculine definition of power equating to aggression, authority and dominance; overlooks the power inherent in the status attached to idealised configurations; and is inconsistent with Connell and Messerschmidt's (2005) definitions of hegemonic masculinities as legitimating unequal gender relations, which do not require masculinities to be aggressive or dominant. Furthermore, despite emphasising masculinities are dynamic and contextual, Connell's (1987) argument relies on a static construction of emphasised femininity (Paechter, 2018), which takes no account of how femininities may be contextually reconfigured to buffer hegemonic masculinities and unequal gender relations from emerging intersectional challenges. Although Connell and Messerschmidt (2005: 848) acknowledged "new configurations of women's identity and practice," they did not describe such configurations as hegemonic. However, Messerschmidt (2012) recognised that emphasised femininities are contextual, and may in some contexts be constituted by dominant or dominating femininities if they exist in relation to hegemonic masculinities in order to legitimate unequal gender relations.

Moreover, Connell's (1987) argument all femininities are subordinated to masculinities implies no femininities can be hegemonic because femininities must be subordinated to masculinities in order to maintain unequal gender relations. Thus, despite theorising internal hierarchies within masculinities that legitimate external gender hierarchies, Connell appears to situate all femininities against their external relations with hegemonic masculinities. Likewise, Messerschmidt (2012; 2018) defines hegemonic masculinities as legitimating unequal relationships between women and men, femininity and masculinity, and among masculinities, but argues hegemonic femininities cannot exist because power hierarchies within femininities do not contribute to the legitimation of unequal gender relations. In response to Connell (1987) and Messerschmidt (2012), we argue *external* subordination to masculinities does not negate unequal power within *internal* hierarchies of femininities,

which are configured as such in order to legitimate unequal gender relations. Connell's (1987) suggestion there is no pressure to subordinate alternative femininities ignores the utility of elevating femininities that support, and penalising and suppressing femininities that inadequately uphold or actively challenge, unequal gender relations. To that end, hegemonic projects may confer rhetorical status and value upon "emphasised" femininities, and stigmatise and devalue alternative femininities (Schippers, 2007), as they relate internally to each other, and externally to masculinities. As such, Connell's (1987) compliant, co-operative, non-compliant and resistant femininities, as well as marginalised femininities, require elaboration. Indeed, Connell and Messerschmidt (2005) emphasise the importance of empirical research on femininities, largely because they contribute to constructions of masculinities. This (perhaps unintentionally) theoretically and empirically subjugates femininities to masculinities, rather than recognising different configurations of femininities and masculinities are relational and equally theoretically and empirically salient to each other's constructions, the legitimation of unequal gender relations, and the implications for individuals' performances and experiences. In this respect, Messerschmidt (2012) laudably shifted the emphasis of the importance of research on femininities from understanding constructions of masculinities, to understanding the legitimation of unequal gender relations.

Overall, a more detailed explication of how femininities' internal hierarchies legitimate the external gender order, in the context of intersecting power relations, is warranted. In this vein, Schippers (2007) and Paechter (2018) offer important contributions. In contrast to Connell and Messerschmidt's (2005; 2018) multidimensional conceptualisation, Schippers (2007) argues hegemonic masculinities and femininities, as one feature of a broader system of gender relations, are purely symbolic, functioning to ideologically and discursively justify and normalise the gendering of social locations ("woman" and "man"), embodiments, practices and structures. Schippers' theory incorporates hegemonic masculinities *and* femininities, whose significance lay in the "idealized quality content" of what it is to be a "man" and "woman" in respect to their heterosexual relationships with each other (90).

In this context, Schippers defines hegemonic masculinities and femininities as contextually unique symbols constituted by characteristics defined as manly or womanly, that "establish and legitimate a hierarchical and complementary relationship" between masculinities and femininities (2007: 94). Although Schippers defines hegemonic femininities according to their external relations with hegemonic masculinities, she positions hegemonic femininity as internally hegemonic over other femininities, which are also constructed against femininities and masculinities' idealised relationships. Rather than "subordinated" femininities (because all femininities are subordinated to masculin-

ities), Schippers argues there are "pariah" femininities, which contaminate and threaten complementary and hierarchical gender relations by deviating from hegemonic femininities and possessing hegemonic masculinities' qualities: simultaneously failing to complement hegemonic masculinities and threatening men's dominance of women. Pariah femininities include lesbian, promiscuous, sexually inaccessible, frigid and aggressive femininities. Such femininities are penalised and stigmatised in order to contain the threats they represent and discourage contagion. While Schippers frames pariah femininities as *not* inferior to hegemonic femininities, we argue penalising and containing such femininities necessitates their symbolic configuration as socially and morally inferior, and thus internally subordinated, to hegemonic femininities. Furthermore, Schippers' definition links pariah femininities to hegemonic masculinities, the enactment of which may not always subject femininities to pariah status, given masculinities are dynamic, contextual and intersectional. However, "pariah femininities" remains an enlightening description of femininities that are subordinated because they subvert and challenge gender relations.

Schippers (2007) also discards "subordinated masculinities": in the symbolic realm, no masculinities can be subordinated, as masculinities are always superior to femininities. Instead, male enactments of hegemonic femininities are configured as "male femininities". While this argument has weight externally, Connell's (1987) subordinated masculinities remain helpful in elucidating internal hierarchies within masculinities. Furthermore, linking male femininities to hegemonic femininities implies a fixed concept of hegemonic femininity (Paechter, 2018) as submissive, emotional and empathic, which may not always be the configuration that maintains complementary and hierarchical gender relations.

Schippers (2007) also argues against defining masculinities and femininities from non-hegemonic races and classes as "different" (for example, "marginalised"), because culturally nuanced hegemonic masculinities and femininities can exist in non-white, non-middle classed contexts, in order to normalise unequal gender relations. While we agree with Schippers, "marginalised" remains a useful descriptor within hegemonically white, middle-classed contexts, where, in order to legitimate unequal race, class and other power relations, the qualities, characteristics and practices attached to non-hegemonic races, classes and other socially constructed identities, are marginalised and automatically excluded from hegemony, regardless of their conformance or otherwise to its current configurations. In this vein, Schippers' argument all masculinities are configured as dominant over all femininities elevates white, middle-class perspectives of gender relations. However, gender hierarchies cannot be conceptualised in isolation from intersecting power relations, which may be more salient than gender in particular contexts.

Paechter's (2018) theory focuses on hegemony by way of "truth": naturalising, internalising and consenting to patriarchal gender relations. While Paechter acknowledges hegemony is produced through "multiple and networked power relations" and "normalising forces which influence people's thinking as usual" (123), her theory focuses on how individuals' discursive performances reproduce hegemony locally. Paechter provides a gender-neutral definition of "hegemonic gender performances [as] those which act, within a particular context, to uphold a gender binary and maintain traditional social relations between genders" (124). This definition emphasises that hegemonic gender performances are contextual (that is, locally and intersectionally nuanced), such that possibilities of non-white and non-middle classed hegemonic performances depend on the context.

There is some common ground between the theorists. Messerschmidt (2012), Paechter (2018) and Schippers (2007) argue not all femininities and masculinities fall within hierarchical gender relations, but that some are simply "different" (Paechter, 2018) or irrelevant to hierarchical and complementary gender relations (Messerschmidt, 2012; Schippers, 2007). According to Schippers' theory, femininities and masculinities that do not constitute hegemonic femininities/masculinities, pariah femininities, or male femininities, presumably fall outside hierarchical configurations. While we agree some configurations might be irrelevant to patriarchal gender relations, additional nuanced configurations may be relevant. For example, some configurations may fall short of achieving hegemonic femininities and masculinities in ways that, for femininities do not threaten patriarchal gender relations and warrant pariah status, and for masculinities are not on the basis of enacting hegemonic femininities, but otherwise fail to adequately uphold complementary and hierarchical gender relations. Furthermore, intersections with other power relations may subsume otherwise non-hierarchical qualities within hierarchical configurations.

Finally, Messerschmidt (2018), Paechter (2018) and Schippers (2007) agree male bodies can perform femininities, and female bodies can perform masculinities. They diverge in that, while Connell and Messerschmidt (2005; 2018) and Paechter (2018) argue individual performances construct or reproduce hegemonic masculinities and femininities, Schippers (2007) argues that, as symbols purporting to ideologically justify unequal gender relations, only female enactments are configured as hegemonic femininities, and only male enactments are configured as hegemonic masculinities. We discuss our perspective and its implications in section three.

3. A Multilevel, Multidimensional, Relational and Intersectional Perspective of Hierarchical Femininities and Masculinities

The different theories of gender hegemony, and conflicts between them, are coherent in the context of their theoretical perspectives on, and positioning of, gender hierarchies. Thus, we start our theoretical integration by stating our perspectives. We agree with Schippers (2007) and Gramsci (1971), that hierarchical configurations of femininities, masculinities, classes, races and other "identities," are symbols that ideologically and discursively justify and naturalise existing power relations, and in turn shape ways of thinking, acting and interacting. However, we distinguish the symbolic nature and purpose of hierarchical configurations, from the mechanisms of their production. We suggest, in accordance with Connell & Messerschmidt (2005), that nuanced and contextual symbolic hierarchies of femininities and masculinities are produced through *interactions* between multi-level, multi-dimensional and intersectional influences, which have varying degrees of salience depending on the context.

However, we must emphasise a slight divergence. In clarifying that hierarchies of masculinities are constructed at interacting local (interpersonal interactions within families, organisations and communities); regional (the nation state or "culture"); and global (world politics, transnational business and media) levels, Connell and Messerschmidt (2005; 2018) appear to suggest that, at the local level, individual men and women can *construct* hegemonic masculinities that legitimate unequal gender relations between, for example, one man and one woman in one particular interaction. Conversely, our perspective emphasises hierarchies of femininities and masculinities are symbols that are produced through *interactions* between multi-level, multi-dimensional and intersectional influences. As such, we do not frame individual performances or interactions as "constructions" of femininities and masculinities, just as an influential policy or discourse at the regional or global level does not by itself "construct" hierarchical configurations. Instead, contextual hierarchies are produced not by individual performances *or* human interactions and relations *or* divisions of labour *or* policies *or* discourses, but by interactions between those dimensions, and between contextually and intersectionally nuanced local, regional and global levels.

Accordingly, we restate Connell & Messerschmidt's (2005) clarification that hierarchical configurations of femininities and masculinities are neither individuals' physical nor personality characteristics, nor demographic groups constituting majorities or minorities of women or men. Rather, they are those idealised (or stigmatised) qualities, characteristics and practices that are taken to symbolise what women and men should (and should not) be in relation to each other (Schippers, 2007). In our perspective, individuals do not constitute

or construct particular configurations of masculinities or femininities; rather, individuals perform or resist complex and sometimes conflicting aspects of different femininities and masculinities, within the constraints imposed by (and in turn influencing) multidimensional and multi-level hierarchies (Butler, 2011; Connell, 1987; Connell, 2005; Connell & Messerschmidt, 2005). Furthermore, as Paechter (2018) suggested, individuals who perform the qualities and characteristics of hegemonic femininities and masculinities are not necessarily powerful in themselves; rather, their performances form part of a multidimensional and multilevel web of influences reinforcing hierarchical configurations and unequal gender relations. Similarly, although some individuals who enact non-hegemonic femininities and masculinities may have some degree of personal power, others may socially stigmatise them for not performing hegemonic configurations. Moreover, although individuals may appear to perform qualities, characteristics or practices associated with hegemonic or non-hegemonic configurations, such individuals may not identify with that, or indeed any, configuration in the context of their lived and embodied experiences, performances and interactions.

In this respect, we agree with Schippers (2007) that, in the symbolic realm, the maintenance of unequal (implied and compulsorily cisgender, gender-binary and sex-binary) gender relations requires the symbolic tethering of birth-assigned female enactments to femininities and birth-assigned male enactments to masculinities, in order to reject the validity of and suppress transgender, intersex and non-binary enactments and identities. We argue this not to invalidate the identities and lived and embodied experiences of transgender, intersex and non-binary individuals, but to make explicit their oppression and suppression. Thus, enactments of masculinities by transgender men, who were birth-assigned females but identify as men, are symbolically configured as femininities: female enactments that "deviate" from hegemonic femininities by enacting or identifying as, but being unable to symbolically constitute, masculinities. Similarly, enactments of femininities by transgender women who were birth-assigned males but identify as women, are symbolically configured as masculinities: male enactments that "deviate" from hegemonic masculinities by enacting or identifying as, but being unable to symbolically constitute, femininities. Similarly, enactments by non-binary birth-assigned females or males who identify as neither women nor men, are symbolically configured as enactments of femininities or masculinities according to their birth-assigned sex. We also tentatively suggest enactments by individuals born with intersex characteristics are symbolically configured as femininities or masculinities according to whether they were assigned (or enforced, through "normalising" medical or surgical interventions (Carpenter, 2016, 2018) female or male at birth, regardless of whether they identify with their assigned/enforced sex; but may be configured as having less validity

than femininities performed by biologically female bodies, or masculinities performed by biologically male bodies (Carpenter, 2016).

To be clear, we agree with Schippers (2007), Paechter (2018) and Messerschmidt (2018) that the symbolic binding of birth-assigned sex to femininities and masculinities does not prevent individual birth-assigned females from enacting the qualities, characteristics and practices of masculinities or identifying as men, individual birth-assigned males from enacting femininities or identifying as women, or individuals from identifying with neither femininities nor masculinities. However, regardless of individuals' lived and embodied performances and identities, others may view them through the lens of hierarchical femininities and masculinities associated with their birth-assigned sex, and reward or penalise them accordingly. As noted by Connell and Messerschmidt (2005), individuals' performances are constrained by embodiment, and the costs of non-conformant performances and identities can be "extremely high" (843).

In accordance with Demetriou (2001), we also foreground internal hierarchies within femininities and masculinities, and external hierarchies between femininities and masculinities across the gender order, all of which contribute to maintaining unequal gender relations. In this respect, internal and external ordering and "labelling" of femininities and masculinities may vary, and internal or external hierarchies may be more or less salient in particular contexts and from particular perspectives.

Finally, we define femininities and masculinities in the context of prevailing unequal (heteronormative) gender relations in Australian society, and their intersections with sometimes complementary, and sometimes conflicting, power relations. However, hierarchical configurations of femininities and masculinities are dynamic, changing over time and in different contexts. Accordingly, the definitions of hegemonic and non-hegemonic femininities and masculinities, and the very concepts of femininities and masculinities, may not be appropriate in (perhaps utopian) contexts in which patriarchal gender relations, and their heterosexual, cisgender and gender/sex-binary requisites, do not exist. Furthermore, labels and definitions such as "hegemonic," "subordinated," "marginalised," and "pariah" may not be relevant in all contexts, and other configurations may exist. Accordingly, our contribution should be taken as rough guidance for understanding contextual configurations of and relations between symbolic femininities and masculinities, rather than a definitive list.

3.1. A rough guide to understanding hierarchical configurations of femininities and masculinities

Against these perspectives and caveats, we integrate Connell and Messerschmidt (2005) and Schippers' (2007) theories to suggest an overall concep-

tualisation of hierarchical femininities and masculinities as symbols: contextually and intersectionally *configured* at interacting global, regional and local levels, and multidimensionally through interacting symbols, discourses and ideologies, exercises of power, divisions of labour, human relations and performances; *consisting of* dynamic and contextual internally (within femininities and within masculinities) and externally (across the gender order) "ordered" configurations of idealised (and subordinated) qualities, characteristics and practices that represent what women and men should (and should not) be and do in relation to their hierarchical and complementary relationships with each other; and *serving the symbolic purpose* of maintaining, justifying and naturalising hierarchical and complementary gender relations in the context of intersections with other power relations. We use the term "configurations" because masculinities and femininities can be configured around combinations or groupings of symbolically idealised or stigmatised qualities, characteristics and practices, which by themselves, or combined with different qualities, characteristics or practices, may be inconsistently idealised (or stigmatised).

3.1.1. Nuanced configurations of femininities and masculinities

Within the context of this broad definition and prevailing unequal gender relations, we slightly revise Connell and Messerschmidt (2005) and Schippers' (2007) definitions to describe hegemonic masculinities as those contextual and intersectional configurations of symbolically idealised masculinities that are positioned as having social and moral value and ascendancy over all other masculinities internally, and all femininities externally, because they constitute the current configurations which best maintain and naturalise hierarchical and complementary gender relations in the context of intersections between patriarchal and other, sometimes complementary, and sometimes conflicting, power relations. Similarly, internally hegemonic and externally emphasised femininities (the symbolic "complements" of hegemonic masculinities), are those contextual and intersectional configurations of symbolically idealised femininities that are positioned as having social and moral value and ascendancy over all other femininities internally, and/or emphasised over other femininities (but subordinated at least to hegemonic masculinities) externally, because they constitute the current configurations that best maintain hierarchical, complementary gender relations, in the context of intersections between patriarchal and other power relations.

We integrate Connell (1987), Poynting et al. (1999), Connell and Messerschmidt (2005), Schippers (2007) and Paechter's (2018) arguments, to suggest maintaining hegemonic femininities and masculinities requires complex internal relations within femininities and masculinities, and complex external relations between femininities and masculinities across the gender order.

Broadly, non-hegemonic femininities and masculinities consist of contextually nuanced and heterogenous configurations that are positioned as socially and morally inferior to hegemonic configurations, because they challenge, or do not adequately uphold, hierarchical and complementary gender relations. These could include "complicit" femininities and masculinities (Connell, 1987), which do not strictly adhere to hegemonic configurations, but consent to hegemonic configurations internally and unequal gender relations externally, in order to benefit from the patriarchal dividend indirectly (by femininities), or directly (by masculinities). For example, internally hegemonic femininities may be configured as externally complicit with the gender order if they benefit from the patriarchal dividend (Paechter, 2018), albeit indirectly (through men), dependently (upon men) and conditionally (upon compliance with men).

Nuanced configurations of subordinated femininities and masculinities are also likely to exist. Rather than linking them to static definitions of hegemonic femininities and masculinities, we suggest an adaptive description of subordinated femininities and masculinities as those that do not conform to current configurations of hegemonic femininities or masculinities, in ways that go beyond the minor shortcomings of "complicit" configurations, to the extent that they challenge or do not adequately uphold hierarchical, complementary, intersectional gender relations. Furthermore, we emphasise the existence of heterogenous configurations that are subject to nuanced subordination and stigmatisation based on the nature and degree of their deviance from hegemonic configurations internally, and the threats they pose to hierarchical and complementary gender relations externally, in the context of intersections with other power relations. These could include existing suggestions for non-hegemonic femininities (Connell, 1987), such as "compliant" femininities and masculinities, which, despite their subordination for failing to achieve hegemonic configurations, acquiesce and pose no challenge to their respective hegemonic configurations (internally) and complementary and hierarchical gender relations (externally); "non-compliant" femininities and masculinities, whose deviance from qualities or characteristics of their respective hegemonic configurations is of a nature or degree that represents a passive, indirect, or insubstantial, challenge to hegemonic configurations (internally) and complementary and hierarchical gender relations (externally); and a slight variation on Schippers' (2007) incisively defined "pariah" femininities (and masculinities), as configurations that warrant particular suppression and stigmatisation as socially and morally inferior and "other," because their deliberate or culpable "deviance" from their respective hegemonic configurations, is of a nature or degree that represents an active rejection of, or direct and substantial threat to, hegemonic configurations (internally) and hierarchical and complementary gender relations (externally).

We initially concurred with Schippers' (2007) argument that lesbian femininities are subordinated as pariah femininities, because they reject and threaten heterosexual patriarchal gender relations. On reflection, we contend they and some other femininities and masculinities are uniquely subordinated as "precluded" femininities and masculinities. While it is again essential to emphasise heterogeneity, we argue gay, lesbian, bisexual, pansexual, asexual, transgender, non-binary and intersex femininities and masculinities, as well as single (and even partnered but unmarried) femininities and masculinities, are automatically precluded from hegemony, regardless of their conformance or otherwise to currently *explicit* features of hegemonic configurations (such as parenting and working), because they "deviate," from within the gender order, from implied and compulsory married, heterosexual, cisgender, gender-binary and sex-binary features of hegemonic configurations, and threaten complementary and hierarchical patriarchal gender relations. Unlike pariah femininities and masculinities, which are subject to pariah status because they reject currently hegemonic qualities, characteristics and practices, precluded femininities and masculinities are judged against a different set of standards, by which they may be excluded from, or stigmatised for, conforming to practices configured as hegemonic (such as parenting).

Moreover, we account for intersecting power relations by recognising that in (for example) hegemonically neoliberal, middle-classed, white, abled, working-aged contexts, nuanced configurations of Connell's (1987) "marginalised" masculinities (and femininities) are likely to exist. In such contexts, intersecting power relations configure as "marginalised" femininities and masculinities, the qualities, characteristics and practices of non-hegemonic classes, races, cultures, abilities, ages and other hierarchically configured constructs, automatically excluding them from hegemony regardless of whether they conform to its current configurations. There may also be nuanced marginalised configurations, such as "protest" femininities and masculinities configured (and accordingly stigmatised) in protest against intersecting neoliberal, middle-classed, white, abled, working-aged configurations (Connell, 1987). Furthermore, complex interactions between marginalisation, preclusion and subordination are likely to amplify stigmatisation. However, as Schippers (2007) argued, marginalisation within hegemonically middle-classed, white, abled, working-aged contexts does not prevent locally contextual configurations of non-white, working-classed, disabled, younger and older hegemonic femininities and masculinities that contribute to maintaining hierarchical and complementary gender relations.

The labels and definitions we have suggested are not restrictive: there may be other configurations with contextual and intersectional relationships to hegemonic configurations internally, and the patriarchal gender order externally. Importantly, the labels should not be used to rigidly define, over-

simplify or homogenise nuanced configurations of femininities and masculinities, within which greater heterogeneity is likely to exist. Rather, they serve as descriptors that foreground heterogeneity and facilitate an understanding of the nature and extent of, and threat represented by, their non-conformance to hegemonic configurations, and in turn how, why and to what extent they are subordinated, relative to other femininities and masculinities internally and externally.

3.1.2. Hierarchies of femininities and masculinities

To understand hierarchical gender relations, it is necessary to understand not only internal hierarchies of qualities, characteristics and practices attached to femininities and masculinities, but also relations between heterogenous femininities and masculinities in the external gender order. In the foregoing discussion we attempted to "label" nuanced configurations of femininities and masculinities such that they are intelligible internally and externally, and can and should be responsive to evidence of how masculinities and femininities are configured in unique circumstances. The suggested "hierarchies" within femininities and masculinities, in roughly descending order from hegemonic, complicit, compliant, non-compliant and pariah, intersect with precluded, marginalised and protest configurations to magnify stigmatisation, and are subject to including as yet undefined configurations, and reordering based on unique contexts and intersections. However, these internal "orderings" do not reveal where nuanced configurations of femininities and non-hegemonic masculinities are positioned in relation to each other. This is a deliberate omission. With the exception of hegemonic masculinities (which are socially ascendant over all other configurations of masculinities and all configurations of femininities) and complicit masculinities, which in most patriarchal contexts are likely to be positioned as externally socially ascendant over all configurations of femininities, we are reluctant to suggest where other configurations of masculinities and femininities are positioned in relation to each other. Much like femininities and masculinities, the internal and external hierarchies they form are contextual and dynamic. In particular, we leave open the possibility that not all femininities are always subordinated to all masculinities. In the context of sometimes conflicting and sometimes complementary intersecting power relations, where class, race, religion, age, ability or another power relation may be more salient than gender, specific configurations of femininities, such as emphasised and complicit femininities, may sometimes be positioned above particularly stigmatised, precluded or marginalised masculinities.

The remainder of this paper applies our integrated perspective to extant multidimensional evidence at the regional level in Australia, to explore regionally hierarchical femininities and masculinities based on parenting and

employment. In reviewing the multidimensional evidence at the regional level, we include, as suggested by Connell and Messerschmidt (2005), existing discursive, political and demographic research, but also research on human relations and interactions (in the shape of aspirations, attitudes and experiences) and individual performances, as they form part of the multi-dimensional web of evidence that facilitates an understanding of regional-level hierarchies of masculinities and femininities. Our discussion focuses on intersecting patriarchal-capitalist power relations, but includes intersectional examples demonstrating marginalisation in Australia's hegemonically white, English-speaking, middle-classed, abled, working-aged context.

4. Extant Evidence of Regional-Level Configurations of Adult Femininities and Masculinities in Australia

Gendered and classed configurations of femininities and masculinities in Australia hark back at least to incipient capitalism. The introduction in 1907 of the "family wage" institutionalised the assumption of a male breadwinner supporting a wife and children (Acker, 1988; Baird & Cutcher, 2005; Broomhill & Sharp, 2005). Capitalism was thus predicated on: men's full-time paid productive labour; women's unpaid reproductive labour of caring for husbands/workers and reproducing and nurturing children/future workers (Acker, 1988; Glenn, 1999); and, as women entered the workforce, devaluing women's productive labour, which increased capitalist profit (Connell, 1987). Simultaneously, patriarchy benefited by enabling men to monopolise the rewards of productive labour and maintaining women's dependence on men (Bradley, 2012; Glenn, 1999). Accordingly, patriarchal-capitalist power relations historically idealised and institutionalised masculinities configured around breadwinning and femininities around mothering and caring. However, existing multidimensional research reveals evolving configurations.

4.1. Discourses and ideologies: Citizen-worker, pronatalism and maternalism

Configurations of normative adulthood encompassing full-time paid employment and heterosexual marriage with children constitute a powerful ideal in Australia (Blatterer, 2007). Such configurations are influenced by citizen-worker, pronatalist and maternalist discourses. Neoliberal restructuring of capitalist economies has resulted in a "universal adult worker" model obliging all adults to work (Lewis & Giullari, 2005; Manne, 2005; Runswick-Cole et al., 2016), reinforced by discourses constructing self-reliant, individually responsible and full-time paid "citizen workers," who achieve full citizenship, social worth, self-actualisation and identity through dedication to paid work

(Archer, 2009; Blaxland, 2010; Engels, 2006; Marston, 2008). In Australia, political, media and popular discourses idealise "ordinary Australian" taxpayers, "lifters," "battlers," and "hardworking families" as worthy and moral contributors to society; and stigmatise "dole bludgers," "leaners," "welfare cheats," and "welfare dependents" as undeserving, dishonest, immoral, lazy, inferior, irresponsible, blameworthy, parasitic burdens on society (Archer, 2009; Blaxland, 2010; Engels, 2006; Fronek & Chester, 2016; Holdsworth, 2017; Manne, 2005; Marston, 2008; Runswick-Cole et al., 2016; Soldatic & Meekosha, 2012; Wilcock, 2014). Thus, such discourses have constructed a "deserving" class of full-time employed "lifters," and an "undeserving" underclass of unemployed and underemployed "leaners" conflated with, for example, single mothering, young mothering, Aboriginality, disability, working-classed unemployment, and new migrant, refugee and asylum seeker status (Bielefeld, 2018; Bullen & Kenway, 2004; Hibbins, 2005; Macoun, 2011; Ramsay, 2016; Soldatic & Meekosha, 2012; Wilson & Turnbull, 2001).

Citizen-worker discourses are gendered and intersectional, producing inequitable conditions for achieving adulthood and citizenship (Blaxland, 2010; Butler, 2011; Lewis & Giullari, 2005; Soldatic & Meekosha, 2012). In this respect, citizen-worker discourses interact with pronatalism, which promotes fertility by conflating adulthood and parenthood (Gillespie, 2001; Hird & Abshoff, 2000; Veevers, 1980). However, pronatalism is also gendered: it applies to women and men in nuanced ways, configuring "mothering" and "fathering" around different but complementary qualities, characteristics and practices.

Pronatalism is particularly salient for women, combining with maternalist discourses idealising and naturalising motherhood, to construct mothering as women's primary and natural identity; essential to women's maturity, adulthood, completeness and fulfilment; and integral to the wellbeing of individuals, children, families, societies and economies (Bown, Sumsion, & Press, 2011; Gillespie, 2000; Graham & Rich, 2012; Hird & Abshoff, 2000; Peterson, 2014). In Australia, analyses of political and media rhetoric have revealed discourses idealising female fertility as a precious resource, and mothering as feminine, natural and patriotic (Ainsworth & Cutcher, 2008; Bown et al., 2011; Dever, 2005; Dever & Curtin, 2007; Heard, 2006; Sawer, 2013). However, pronatalist discourses are increasingly subject to neoliberal restructuring. Although mothering remains essential to configurations of femininities (Gillespie, 2000, 2003; Letherby, 2002), some argue paid work is increasingly crucial (Chesterman & Ross-Smith, 2010; Lupton & Schmied, 2002; Parris & Vickers, 2010). Thus, there exist multiple femininities configured around idealised or stigmatised qualities, characteristics and practices relating to whether, to what extent, and how, they mother and/or work.

Within femininities configured around mothering, pervasive media, political and popular discourses produce hierarchies of qualities, characteristics and practices idealised as "good mothering" or stigmatised as "bad mothering" (Goodwin & Huppatz, 2010). In Australia, "good" mothering has been discursively configured as "intensive" mothering: "sacrificing" work, prioritising children and devoting substantial time, energy, emotion and money to selfless nurturing in order to maximise children's opportunities (as future workers and consumers) (Blaxland, 2010; de Souza, 2013; Goodwin & Huppatz, 2010; Liamputtong, 2006; Lupton, 2011; Maher & Saugeres, 2007; Stevenson, 2015). However, neoliberal revisions are increasingly idealising femininities configured around intensive mothering *and* part-time working, as simultaneously: reproducing and nurturing future workers; contributing economically through paid labour and consumption; providing financially and emotionally for children; seeking self-actualisation, fulfilment, independence and identity through work; and being positive neoliberal role models and better mothers for their children (Blaxland, 2010; Hird & Abshoff, 2000; Lupton & Schmeid, 2002; Manne, 2005; Stevenson, 2015). Contributing to such configurations are discourses of employed "supermums" who "have it all" (McDonald et al., 2005), and feminist and scientific discourses of "non-traditional" mothers who model educated, emancipated working mothering and gender equality (Manne, 2005; Stevenson, 2015).

While pronatalism configures all adults as parents (Veevers, 1980), some argue parenthood is not as integral to masculinities as it is to femininities (Miller, 2010; Peterson, 2014): although biological reproduction is equated to virile and potent masculinities in Western societies (Gannon et al., 2004; Hinton & Miller, 2013), masculinities can be configured around numerous characteristics, such as sporting, career and economic success (Hibbins, 2005; Hird & Abshoff, 2000; Peterson, 2014). However, others argue media, political and academic discourses configure fathering as vital to adult masculinities (Hinton & Miller, 2013; Marshall et al., 2014). Australian research reflects these conflicts. Ainsworth and Cutcher (2008) found fathers were absent, repressed and invisible in Australian print media discussions of fertility. In contrast, Tincknell and Chambers (2002) argued the 1994 film *Priscilla, Queen of the Desert* reasserted the value of masculinities and patriarchal power by framing fathering as crucial to masculinities and children's wellbeing.

If fathering is increasingly idealised, the qualities, characteristics and practices associated with "good" fathering are more equivocal. Traditionally, masculinities configured around breadwinning fathering were idealised (Friedman, 2015; Hunter et al., 2017). Such discourses, which maintain men's economic power over women, incorporate essentialist assumptions men are biological or natural breadwinners (Hunter et al., 2017; Miller,

2010). Accordingly, Australian political and media discourses have excluded involved fathering from configurations of masculinities, by representing men as having no instinctive nurturing capacity (Blaxland, 2010; Cannold, 2005; Johnson, 2014).

However, masculinities are undergoing gradual neoliberal reconfigurations (Schmitz, 2016). Much like intensive mothering discourses, academic, scientific and media discourses are framing "involved" fathering as essential to men's adult identities, life satisfaction and wellbeing; necessary for children's wellbeing; and benefiting mothers and society (Craig et al., 2014; Hunter et al., 2017; Lupton & Schmied, 2002; Miller, 2010; Schmitz, 2016; Tincknell & Chambers, 2002). Analyses of Australian political debates and entertainment and news media have revealed idealised masculinities configured around the qualities and practices of caring, active, responsive, responsible "involved" fathering (enacted through "masculine" practices such as sport and outdoor activities), but which remain naturally career-focused and inept helpers to caregiving mothers (Lupton & Barclay, 1997; Dempsey, 2006; Pini & Conway, 2017; Stevens, 2015). Thus, involved fathering discourses continue to prioritise and essentialise primary breadwinning, which complements the prioritisation and essentialisation of primary caregiving in discourses idealising intensive mothering and part-time working in femininities.

In order to maintain idealised configurations, neoliberal pronatalism and maternalism also suppress femininities and masculinities that inadequately uphold, or challenge, Australia's complex power relations. Within femininities, media and political discourses stigmatise femininities configured around "bad mothering" qualities, characteristics and practices, such as selfish career-orientation (interfering with intensive mothering) (Raith, 2008) and full-time "just" mothering (failing to contribute economically) (Pocock, 2003). However, some of the most stigmatised characteristics and practices are being involuntarily childless (wishing to have children but being unable to achieve a viable pregnancy because of their own infertility), circumstantially childless (wishing, but unable, to have children due to external circumstances), and childfree (freely choosing not to have children) (Cannold, 2005; Daniluk, 2001; Veevers, 1979). In Australia, political and media discourses stigmatise women's childlessness as irresponsible, selfish, immature, career-focused, blameworthy and discrediting (Dever, 2005; Graham & Rich, 2012a, 2012b; Heard, 2006; Sawer, 2013). These configurations reveal the limited practices available to adult femininities: in the absence of mothering, neoliberalism configures femininities around the qualities and practices of dedicated, competitive, self-sufficient, ambitious, unencumbered working (Wager, 2000). While such qualities are idealised in masculinities, they are configured as selfish, irresponsible and unnatural in femininities (Graham & Rich, 2012a).

Furthermore, linking involuntary childlessness with desperation and victimhood; and childfreeness with selfishness, immaturity and failing to contribute to society (Dever, 2005; Graham & Rich, 2012a), suggests femininities configured around childlessness are subordinated in different ways according whether their non-conformance is "guilty" (childfreeness), "innocent" (involuntary childlessness) or both (circumstantial childlessness, which, despite "innocent" intentions, can be configured as culpable for the circumstances of their childlessness) (Turnbull et al., 2016).

There is limited Australian research on regional-level discursive configurations of masculinities outside the practices of traditional or involved breadwinning fathering. Primary caregiving fathering (including full-time fathering or part-time working fathering) has been stigmatised as immature, abnormal, lazy, incompetent and emasculating (Grbich, 1997; Lee & Owens, 2002; Parris & Vickers, 2010), while being childfree has been subordinated as immature, selfish and incomplete (Blatterer, 2007). Indeed, the lack of representation in Australian media, policy and popular discourses of masculinities configured around other qualities, characteristics and practices related to employment and parenting, may be a mechanism of silencing and invalidating such masculinities.

Furthermore, nuances arise within gender relations and from intersections with other power relations, such that pronatalist and maternalist discourses are applied inconsistently. Within gender relations, "good" mothering and fathering are configured around the implied and compulsory practices of being married, heterosexual, gender-binary and cisgender, in order to maintain complementary and hierarchical gender relations. As exemplified by conservative parliamentary, religious and media rhetoric against same-sex marriage and access to assisted reproductive technologies (ART) and surrogacy by single people, unmarried couples, lesbians and, in particular, gay men, femininities and masculinities configured around being single, lesbian and gay have been stigmatised as non-parents or inherently "bad" parents: unnatural, immoral, deviant, aberrant, indecent, inadequate, depriving children of idealised heterosexual married biological parents upon which to model sexualities and gender identities, and antithetical to children's welfare (Bullen & Kenway, 2004; Collins, 2014; de Souza, 2013; Matthews & Augoustinos, 2012; Poulos, 2020; Tuazon-McCheyne, 2010; Wolfinger, 2014). Even unmarried coupled parenting is configured as fragile, unstable and risky (Webb et al., 2019). Moreover, by their discursive and cultural invisibility (Charter et al., 2018; von Doussa et al., 2015), mothering and fathering by transgender women and men are rendered symbolically non-existent.

In Australia's intersectional context, neoliberal-pronatalist-maternalist discourses idealise parenting configured around being white, English-speaking,

Australian-born, middle-classed, independent, non-disabled and working-aged, and exclude from "good" parenting non-white, non-English speaking, migrant, working-classed, communal, disabled and "too old" or "too young" parenting, and in particular mothering (de Souza, 2013; Liamputtong, 2006; Meekosha, 2006). In Australia, the procreation imperative has been selectively imposed upon particular socially constructed categories of women in support of patriarchy, capitalism, nationalism, eugenics and ethnocentrism (Ainsworth & Cutcher, 2008; de Souza, 2013; Dever & Curtin, 2007). For example, pronatalist political and media rhetoric has explicitly exhorted (middle and upper-classed) university educated, high-earning women and white women to procreate, and implicitly excluded working-classed and under-classed welfare-dependent single women and non-white women (Ainsworth & Cutcher, 2008; Wolfinger, 2014).

In turn, femininities and masculinities configured around, for example, non-white, working-classed or disabled parenting are discursively excluded from "good" parenting. There is a long and continuing history of racist and ethnocentric political and media discourses accompanying interventionist, discriminatory and genocidal government policies, which stigmatise and homogenise Australia's First Nations peoples' parenting (and in particular, fathering) around the characteristics and practices of alcoholism, neglect, violence, irresponsibility, promiscuity and non-monogamy (Kean, 2019; Macoun, 2011). Similarly, gendered, classed and aged discourses exclude working-classed and underclassed mothering from "good" mothering and "good" neoliberal citizenship (Bullen & Kenway, 2004). Australian political, media and popular discourses identify working-classed "boganette" women as mothers and ignore working-classed "bogan" fathering (Pini & Previte, 2013); and automatically associate working-classed mothering with: the economically irresponsible and inadequately neoliberal characteristics of being single, too young, uneducated, unemployed and welfare dependent; and "bad" mothering practices such as substance abuse, prolific childbearing, and excessive screen time (Bullen & Kenway, 2004; Pini & Previte, 2013; Wolfinger, 2014).

The privileging of parenting and working configured around "ability" is also apparent in Australia. Masculinities configured around disabilities have been discursively stigmatised as weak and welfare dependent, excluding them from conforming to neoliberal-patriarchal configurations of masculinities around dominance, independence and breadwinning (Barrett, 2014; Meekosha, 2006; Pini & Conway, 2017). Furthermore, disabled femininities and masculinities have been configured as asexual or non-gendered (Meekosha, 2006), excluding them altogether from idealised characteristics and practices such as gender, heterosexuality and parenting.

Overall, the existing Australian evidence of regional-level discourses, suggests interacting neoliberal, pronatalist and maternalist discourses idealise femininities configured around the qualities, characteristics and practices of intensive mothering and part-time working; and masculinities configured around breadwinning and involved fathering. Such configurations maintain an uneasy compromise between patriarchy (perpetuating women's roles as heterosexual wives and mothers, who are subordinated to and financially dependent upon men) and capitalism (exploiting women's reproductive labour and men's productive labour, and devaluing women's productive labour) (Bown et al., 2011; Riggs & Bartholomaeus, 2018). In turn, intersectional discourses subordinate, stigmatise, preclude and marginalise other qualities, characteristics and practices such as childlessness (which threatens women's dependence on men and the reproduction of future workers); single, gay and lesbian parenting (which deprives children of heterosexual, gendered role models); and parenting and working qualities and practices that fall afoul of intersecting power relations such as class, race, age and ability.

4.2. Direct exercises of power: Working mothering, breadwinning fathering, childless workers and penalised non-compliance

In Australia, direct exercises of power have institutionalised citizen-worker discourses by introducing neoliberal employment and welfare regimes that require citizens to be financially self-sufficient, and penalise non-workers with: stricter eligibility requirements for income support (shifting, for example, "non-severely" disabled people, and single parents of older children, from higher-paying entitlements to lower-paying unemployment benefits despite structural barriers to gaining employment); cashless welfare cards depriving recipients of control over where they can spend money (which, by targeting Aboriginal and Torres Strait Islander recipients, configure them as irresponsible and culpable substance abusers and gamblers (Bielefeld, 2018)); and "workfare" programs requiring people receiving unemployment benefits (including new migrants, unemployed young people, single mothers and "non-severely" disabled people) to undergo training, increase employability and find paid work (Engels, 2006; Grahame & Marston, 2012; Holdsworth, 2017; Lantz & Marston, 2012; Soldatic & Meekosha, 2012; Van Acker, 2005; Wilson & Turnbull, 2001; Wolfinger, 2014). In concert, these policies enforce economic citizenship. For example, women's citizenship has been redefined from caring to economic citizenship, pressuring working-classed women into paid work by eliminating income support for life-long caregivers, reducing income support and introducing workfare programs for single parents (most of whom are women) and low-income families, and withdrawing subsidised childcare from parents not engaged in adequate hours of work, training or study (Beutler & Fenech, 2018; Blaxland, 2010;

Graham et al., 2018; Holdsworth, 2017; Manne, 2005; Stevenson, 2015; Van Acker, 2005; Wolfinger, 2014). Such policies are gendered, classed and raced. They penalise and coerce into employment working classed and "under-classed" single mothers, while married, middle-classed mothers who can afford to be independent of public funding remain free to "choose" between full-time mothering and working, but are increasingly "supported" to contribute reproductively and productively (Cannold, 2005; Manne, 2005; Probert, 2002; Wolfinger, 2014). Furthermore, such policies institutionalise impediments to practising "good" neoliberal part-time working mothering, for many refugee and migrant women, whose first language is not English, and who therefore face difficulties accessing employment services and barriers to obtaining employment (Benza & Liamputtong, 2017; Liamputtong, 2006; Ramsay, 2016).

Despite coercing women into paid employment, Australian policy and taxation regimes institutionalise masculinities configured around breadwinning and fathering, and femininities configured around intensive mothering and part-time working, by financially rewarding conformance to a "modified breadwinner" model of heterosexual, two-parent families with children, in which fathers work full-time, and mothers work part-time and perform most caring and household work (Broomhill & Sharp, 2005; Charlesworth et al., 2011; Van Acker, 2005). There is ample evidence of Australian policy promoting intensive mothering by assuming women are responsible for fertility and nurturing children, and breadwinning fathering by assuming men are responsible for financially supporting families (Baird & Cutcher, 2005; Broomhill & Sharp, 2005; Graham et al., 2018). Analyses of Australian government policies since the early 2000s have revealed a gendered, classed and raced pronatalist agenda that promotes fertility by rewarding or removing obstacles to white, middle-classed mothering, but largely ignores fathering (Baird & Cutcher, 2005; Broomhill & Sharp, 2005; Graham et al., 2018).

Exemplifying policies rewarding procreation were the federal government's introduction in 2004 of a lump sum payment to mothers on the birth of each child regardless of employment status, and family tax benefits payable to parents of dependent children (Baird & Cutcher, 2005; Dever, 2005; Heard, 2006). While the former is now defunct, the latter continue to exist, subject to increasingly strict eligibility conditions (Graham et al., 2018). In Australia, policies simultaneously removing obstacles to mothering and promoting or coercing employment, include employment protection for employees on parental leave, government paid parental leave (18 weeks for primary carers and two weeks for secondary carers), paid carers' leave, employed parents' and carers' entitlement to request flexible work, and childcare subsidies for parents engaged in adequate hours of work, study or training (Beutler & Fenech, 2018; Dever, 2005; Graham et al., 2018). These

policies reveal intertwining neoliberal capitalist, patriarchal and pronatalist agendas, simultaneously promoting and coercing: economic productivity, by exploiting women's productive labour (Lewis & Giullari, 2005) and withholding financial support such as childcare subsidies from those (including full-time parents) who are not sufficiently economically productive (Beutler & Fenech, 2018); fertility, by reducing impediments to women combining procreation, caregiving and working (Dever & Curtin, 2007; Heitlinger, 1991); and complementary and hierarchical patriarchal-capitalist gender relations, by promoting part-time working and primary caregiving mothering, and full-time breadwinning fathering (Baird & Cutcher, 2005; McCurdy, 2014; Pocock et al., 2013), with belated but limited support for involved fathering through two weeks' paid "dad and partner" leave (Baird & Whitehouse, 2012; Graham et al., 2016).

Unsurprisingly, government policies (and policy omissions) also institutionalise the stigmatisation and exclusion of, for example, single, queer, working-classed, non-white and disabled parenting. For example, Australian governments' continuing failure to address the lack of high quality and affordable childcare, means the ability to make the "correct" choice to combine intensive mothering and part-time employment is affordable and available only to women from the middle classes and above, while working-classed and single mothers can often afford to enact only "bad" full-time mothering or full-time working (Stevenson, 2015; Wolfinger, 2014).

Other policies embed configurations of white, individualised, independent parenting, and penalise non-conformance. Australia's child welfare regime, for example, constructs non-white, non-individualised, and disabled parenting as bad parenting, with implications for the removal of children from parents' (and in particular mothers') custody (Ramsay, 2016). Non-white, communal mothering practices have been stigmatised "inadequately attached" and "bad" mothering (Ramsay, 2016), while historical and contemporary forced removal of children has penalised Aboriginal mothering practices as "bad" mothering (Ussher et al., 2016). Parents with disabilities are also disproportionately likely to have children removed from care, based on constructions and automatic assumptions of inadequate disabled parenting (Elliott, 2017).

Furthermore, in stark contrast to pronatalist policies promoting childbearing, is the continuing legality of forced sterilisation of people with disabilities (disproportionately imposed upon girls and women), who are constructed as economic burdens on society automatically incapable of "good" parenting, and thus excluded from parenting altogether (Elliott, 2017). Similarly, only recently have most Australian jurisdictions removed most (but not all) legal barriers to single people, lesbians and gay men having children (including access to fostering, adoption, ART and altruistic surrogacy, and legal recognition of non-biological parents) (Hayman & Wilkes, 2017;

Pennington & Knight, 2011). Such barriers configure lesbian femininities and gay masculinities around being non-familial, non-parental, bad for children and non-legitimate parents and families (Hayman & Wilkes, 2017; Zanghellini, 2007); and continue to stigmatise single, lesbian and, in particular, gay parenting, through the ongoing illegality in Western Australia of ART for surrogates of male couples and altruistic surrogacy for same-sex couples and single people; the illegality in all states of commercial surrogacy; financial barriers to accessing ART resulting from subsidies being limited to infertility diagnoses; and non-automatic legal recognition at birth of gay fathers in some states (Pennington & Knight, 2011; Tuazon-McCheyne, 2010; Webb et al., 2017).

There is limited research on Australian policy configurations of childlessness. Arguably, the policy absence of childlessness promotes femininities and masculinities configured around parenting (Graham et al., 2018), and leaves open only the qualities, characteristics and practices of "citizen-workers" for femininities and masculinities configured around childlessness. For example, in Australia, the entitlement to request flexible working arrangements is limited to parents or carers of school-aged or younger children, and other limited categories of people (Fair Work Ombudsman, 2015). Such policies support pronatalist-neoliberal-capitalist agendas of halting declining birth-rates, ensuring women reproduce future workers, and increasing mothers' workforce participation (Bridgman & Davis, 2004; Eikhof et al., 2007). Accordingly, flexible work policies are targeted at mothers, not fathers or childless women and men (Chesterman & Ross-Smith, 2010; Miller, 2010; Stevenson, 2015), based on assumptions only mothers have responsibilities outside work, and fathers (who contribute solely as breadwinners) and childless people (who contribute solely as citizen-workers) have no external responsibilities that impinge upon their economic citizenship (Eikhof et al., 2007; Friedman, 2015; Wager, 2000).

Overall, Australian policies complement discursively configured hierarchies by institutionalising femininities configured around intensive mothering and part-time working, and masculinities configured around breadwinning and involved fathering (which does not impinge upon breadwinning); and penalising, excluding or ignoring femininities and masculinities configured around non-conformance to idealised parenting and working practices within patriarchal-capitalist power relations; implied and compulsory heteronormative coupled parenting within gender relations; or white, English-speaking, middle-classed, abled, working-aged parenting. These policy configurations reflect an intersectional patriarchal-neoliberal compromise maximising complementarily and hierarchically gendered reproduction and production by: encouraging, enabling and coercing women to mother (primarily) and work (secondarily); assuming men work (primarily) and father (secondarily);

imposing career-orientation on women and men with no children; and policing or preventing automatically "bad" (single, same-sex, non-white, non-English speaking, communal, working-classed, underclassed, disabled, too young or too old) parenting practices and characteristics, which place at risk the reproduction of adequately gendered, individualised, self-reliant, neoliberal future-workers.

4.3. Divisions of labour: Reflections of idealised femininities and masculinities

Although majorities of men and women, and what majorities of men and women do, do not constitute hegemonic masculinities or femininities, demographic data on childbearing and participation in paid and unpaid labour contribute to the multidimensional web of evidence by reflecting discursive and policy configurations. Most Australian women (85.1%) (Australian Bureau of Statistics [ABS], 2017a) and men (87.2%) (Parr, 2010) have biological children by the end of their reproductive years. In contrast, minorities of Australian lesbian women (33%), gay men (11%) (Leonard et al., 2012), transgender men (17.4%) and transgender women (30.7%) (Riggs et al., 2016) have children, excluding them from conforming to the idealised practice of parenting.

Table 1 shows most Australian women and men also enact economic citizenship by engaging in paid work, including large majorities of Australian men with dependent children, and smaller majorities of women with dependent children. In contrast, minorities of people identifying as Aboriginal and/or Torres Strait Islander are in paid work, excluding the majority from idealised economic citizenship.

Table 1 Australian adults in paid work

	In paid work (%)	
	Males	Females
With dependent children aged 6–14 years	92.0	77.4
With dependent children aged 0–5 years	93.7	59.7
Aged 20–59 years regardless of parent-status	97.5	95.7
Aboriginal and Torres Strait Islanders aged 15 years and over	44.0	41.0

Sources: ABS (2016, 2017b, 2019).

Most Australian heterosexual couples with children conform to the "modified breadwinner" model in which fathers work full-time and mothers work part-time (Baxter, 2007, 2013; Charlesworth et al., 2011). Table 2 shows most employed Australian men with dependent children work full-time, while minorities of employed Australian women with dependent children work full-time (as opposed to part-time).

Table 2 Employed Australian parents in full-time work

	In full-time work (%)	
	Employed males	Employed females
With dependent children aged 6–14 years	91.6	46.4
With dependent children aged 0–5 years	92.3	37.8

Sources: ABS (2016, 2017b).

Femininities configured around intensive mothering and part-time working, and masculinities configured around breadwinning and involved fathering, are also reflected in statistics on unpaid labour participation. From 1992 to 2006, Australian mothers' time engaged in childcare remained stable, despite women's increased participation in paid employment; while Australian fathers' time engaged in childcare increased, simultaneously with increasing working hours (Craig & Mullan, 2012; Craig et al., 2014). However, Australian women spend substantially more time than men undertaking unpaid caring and domestic labour (Argyrous et al., 2017; Pocock et al., 2013). Likewise, higher percentages of women than men identifying as Aboriginal and/or Torres Strait Islander undertake unpaid childcare and domestic work (ABS, 2019). In contrast, compared with heterosexual couples, same-sex parents divide household labour more equally, and lesbian parents share parenting tasks more equally (Perlesz et al., 2010).

Finally, the "nuclear" norm is also the dominant family model: 45.5 per cent of families are couples with children, 38.4 per cent are couples with no children (including future parents), and 16.1 per cent are single parent families (ABS, 2017a). While a similarly high 41 per cent of Aboriginal and Torres Strait Islander one-family households are constituted by couples with children, only 22 per cent are couple families with no children, and a substantially higher 34 per cent are single parent families (85 per cent of whom are female) (ABS, 2019). This excludes a large minority of single Aboriginal and Torres Strait Islander mothers from conforming to discursively idealised configurations of femininities around married mothering.

Overall, demographic data suggest most heterosexual Australian women and men attempt to enact economic citizenship and discursively idealised and legally institutionalised married mothering and fathering practices. However, Aboriginal and Torres Strait Islander peoples, and lesbian, gay and transgender adults, are less likely to enact these idealised practices, exposing them to the stigmatisation of non-conformance, amplified by the automatic exclusion resulting from preclusion and marginalisation.

4.4. Human relations: Hierarchical femininities and masculinities as "truth" in Australian society

Existing research suggests regional-level policy and discursive configurations of femininities and masculinities constitute "truth" in Australian society.

Research on beliefs and aspirations regarding mothering and working reflect idealised and subordinated configurations of femininities. Johnstone and Lee (2009) found between 86.2 and 88.2 per cent of women aged 18 to 30 years aspire to having at least one child, being in a stable relationship and being in paid work at age 35 years. Interestingly, of women aged 25 to 30 years, similar percentages aspire to having children and working full-time (25.6%) and part-time (24.1%), while under three per cent aspire to full-time motherhood, by 35 years of age (possibly reflecting assumptions children will be in school at that age, making it possible to perform intensive mothering outside full-time working hours). Qualitative research with female Australian undergraduate students reveals the classed nature of such aspirations: most participants aspire to be part-time working mothers for whom work will be optional, due to middle-classed assumptions they will have breadwinning husbands (Arthur & Lee, 2008).

Idealised "intensive" mothering practices and qualities are also reflected in qualitative studies' findings that many women wish or expect to combine children and careers (for financial reasons or personal fulfilment), but nonetheless perceive mothering as pivotal to women's identities, and believe "good" mothers are selfless, giving, patient, and prioritise caregiving over paid work (Probert, 2002; Stevenson, 2015). However, the subordination of other mothering practices is reflected in mothers' experiences of being judged against different aspects of idealised configurations depending on the nature of their non-conformance. Some working mothers, despite enacting economic citizenship, feel judged against the gendered ideal of intensive mothering, as selfish, materialistic, bad mothers; while some full-time caregivers, including "underclassed" single mothers and disabled, working-classed mothers receiving welfare payments, feel judged against the neoliberal ideal of economic citizenship, as idle, incompetent, inferior, untrustworthy, immoral, undeserving and financially irresponsible second-class citizens, despite enacting intensive mothering (Grahame & Marston, 2012; Holdsworth, 2017; Lupton, 2011; Pocock, 2003; Soldatic & Meekosha, 2012).

There is also evidence of aspirations and attitudes reflecting regional-level idealisation of masculinities configured around breadwinning and involved fathering, and subordination of other fathering practices. Ninety-five per cent of Australian men aged 18 to 51 years want to have at least one child (Holton et al., 2016), while 91 per cent of first-year male university students aged 18 to 25 years aspire to work full-time by the age of 40 years (Weier & Lee, 2016). Qualitative studies with male university students (Thompson & Lee, 2011; Thompson et al., 2013) found most participants felt having children would be fulfilling and essential to future happiness; and perceived good fathering as combining breadwinning with emotional support, nurturing, love, sacrifices, dedication and selflessness. Although recent

research is scarce, attitudes reflecting the subordination of other fathering practices are revealed in the pity expressed by some men practising involved fathering, for fathers whose work overshadows relationships with children (Grbich, 1997; Stevens, 2015); and primary caregiving fathers' experiences of being judged against breadwinning ideals, as deviant, freakish, suspicious, inferior, bludgers, and "not real men" (Grbich, 1997; Smith, 1998).

Australian research also reveals aspirations, attitudes and experiences reflecting automatic exclusion from achieving idealised femininities and masculinities by regional-level configurations implying and mandating married, heteronormative parenting practices within gender relations; and marginalising non-white, communal, working-classed, disabled, too old and too young parenting practices. Within gender relations, the automatic subordination of queer parenting is revealed in Australian research on heterosexual adults' attitudes towards same-sex parenting, finding there is less support for same-sex parenting than heterosexual parenting (Webb et al., 2019); there is more support for female than male same-sex parenting (Webb et al., 2017); and some believe same-sex parenting is abnormal, promiscuous and a bad example to children, deprives children of opposite-gendered role models, and makes children gay (Pennington & Knight, 2011). Similarly, research with queer women and men has revealed, while there are some supportive experiences, some lesbian non-birth mothers experience exclusion by others from being "real" mothers (Hayman & Wilkes, 2017); some lesbian mothers feel negatively judged by their parents; some gay fathers experience public abuse, or think others believe they are unfit parents, insufficiently nurturing or paedophiles (McNair & Dempsey, 2018; Tuazon-McCheyne, 2010); some transgender women who identify as mothers or grandmothers have not been acknowledged on mothers' day; and some transgender men's families have invalidated their gender identities by conflating their desire to have children with being women (von Doussa et al., 2015). Furthermore, in comparison to the majorities of cisgender women and men aspiring to have children, minorities of childless Australian transgender men (29.7%), transgender women (12.7%), and gender diverse adults (13.6%) want to have children in the future, while 32.4 per cent of transgender men, 25.5 per cent of transgender women, and 31. 8 per cent of gender diverse adults, remain uncertain (Riggs et al., 2016). These findings may reflect the structural barriers to, and discursive silencing and invalidation of, queer parenting; illustrate some queer parents' automatic exclusion from achieving "good" parenting; and supports our argument transgender enactments of parenting are discursively configured, and perceived and judged by others, according to birth-assigned sex rather than individuals' gender identities.

Regional-level configurations also interact with intersectional local-level configurations to produce contradictory and inequitable conditions for per-

forming idealised configurations. For example, research with Zimbabwean-born Australian mothers (Liamputtong & Benza, 2019) has revealed community expectations that women have and care for children while husbands work, in order to achieve adulthood, emotional fulfilment, social status and economic security. However, conforming to locally hegemonic configurations of full-time mothering and traditional breadwinning fathering conflicts with regional-level hierarchies. In another example, along with regional-level stigmatisation of "too young" mothering, migrant teenaged mothers from sub-Saharan Africa experience disapproval of teenaged mothering from their African communities, and thus feel unsupported, excluded and rejected from traditionally interdependent communities (Watts et al., 2015).

Australian research also reveals attitudes devaluing and stigmatising childless women and men, who do not perform the idealised practices of mothering and fathering. Qualitative research has found some adults perceive childless people as "other": abnormal, odd, selfish, not living life fully, and lacking purpose (Imeson & McMurray, 1996; Riggs & Bartholomaeus, 2018; Thompson et al., 2013). Furthermore, some childless and childfree women believe others perceive them as inadequate, deficient, defective, unfulfilled, incomplete and failed women; and feel pressured to have children (Doyle et al., 2013; Rich et al., 2011; Turnbull et al., 2016a). Heterogenous regional-level configurations are also reflected in nuanced attitudes towards childless women and men according to the nature of their "deviance" from idealised configurations. Some discursively "innocent" involuntarily childless women and men believe others perceive them as pitiable, unhappy, shameful and desperate, and their infertility as embarrassing (Imeson & McMurray, 1996; Turnbull et al., 2016; 2017). "Guilty" childfree women (Turnbull et al., 2016) have been rated as less loving, nurturing, fulfilled and feminine than women who want children (Rowlands & Lee, 2006), and childfree couples have been described as self-interested, individualistic, and choosing careers or lifestyles over having children (Carmichael & Whittaker, 2007). Reflecting arguments pronatalism configures parenting as more essential to femininities than masculinities, and that economic citizenship is the only available practice in the absence of mothering, Australian studies have found childfree women feel pathologised, invalidated and pressured to have children, and believe others perceive them as ignorant about and disliking children, immature, selfish, materialistic, career-driven, non-nurturing, unwomanly, abnormal, unnatural, emotionally lacking and blameworthy (Maher & Saugeres, 2007; Dever & Saugeres, 2004; Doyle et al., 2013; Turnbull et al., 2016; 2017). In contrast, while some Australian childfree men are aware of societal expectations and feel pressured to have children by partners, parents, friends or society; others experience little pressure or do not care about the pressure (Smith et al., 2020). Similarly, Australian parents have described

circumstantially childless women, but not men, as being too selective about partners or prioritising careers (Carmichael & Whittaker, 2007), and circumstantially childless women have experienced such judgements from others (Turnbull et al., 2016; 2017).

Existing studies also suggest judgements and experiences of childlessness vary according to conformance to implied and compulsory married and heteronormative characteristics within gender relations. Australian university students have rated lesbian women who do not want children as less mature and happy than lesbian women who want children (Rowlands & Lee, 2006), suggesting the stigmatisation of childfreeness applies even to lesbian women, despite other research revealing heterosexist and homophobic attitudes towards same-sex parenting (Pennington & Knight, 2011). In that vein, gendered, heteronormative, classed, raced, aged and abled manifestations of pronatalism at the regional level are reflected in qualitative research findings that single, disabled, younger and older women, and single gay men and transgender women, who have been automatically excluded from "ideal" parenting, feel pressured by society, parents and services not to have children (Charter et al., 2018; McNair & Dempsey, 2018; Rich et al., 2011; Turnbull et al., 2017), subjecting them to different standards which nevertheless render them "incomplete" women and men.

Furthermore, research suggests local-level intersections between, for example, gender, race and culture, can exacerbate ostracism and exclusion for childless women in particular. Studies with Zimbabwean-born women (Liamputtong & Benza, 2019) and migrant women from Middle-Eastern, African and Asian backgrounds (Hawkey et al., 2018) have found that, in the context of local-level socio-cultural motherhood compulsions, childless women (rather than men) are blamed for infertility, seen as broken and pitiable, judged as failing their husbands, parents and communities, often divorced, publicly discriminated against, stigmatised and outcast from society, and have no other identities made available to them as women.

Despite the research gaps, particularly in relation to men with and without children, the evidence suggests Australian adults' attitudes, aspirations and experiences tend to reflect regional configurations, including idealising femininities configured around intensive mothering and part-time working, and masculinities configured around breadwinning and involved fathering; devaluing femininities configured around full-time working and mothering, full-time mothering, childlessness or childfreeness, and masculinities configured around non-involved fathering, non-breadwinning, childlessness or childfreeness; and automatically excluding from "good" parenting performances of, for example, queer, too-young and non-white parenting practices, which are in turn complicated by conflicting local-level configurations.

4.5. Individual performances within the constraints of hierarchical configurations of femininities and masculinities

This section outlines Australian qualitative research on how individuals enact and resist regionally idealised and stigmatised qualities, characteristics and practices. Some individual mothers' performances reflect pronatalist discourses by enacting mothering as central to being a woman, and align with idealised, natural, self-sacrificing and fulfilled "intensive" mothering discourses (Lupton, 2011; Maher & Saugeres, 2007; Pocock, 2003; Raith, 2008). Some women, who feel unable to perform intensive mothering or experience mothering as challenging, nevertheless internalise intensive mothering discourses by apologising and identifying as bad mothers (Lupton, 2011; Pocock, 2003; Raith, 2008). Other mothers perform neoliberal independent mothering, seeking to regain agentic pre-motherhood identities through paid work, personal fulfilment and equal parenting (Maher, 2005; Maher & Dever, 2004; Pocock, 2003; Raith, 2008). Moreover, some women feel, although mothering is personally fulfilling, it is not respected or valued in society, where respect, self-worth and identity are acquired through paid work (Holdsworth, 2017; Maher & Dever, 2004; Maher & Saugeres, 2007; Pocock, 2003; Raith, 2008). This reflects the increasing influence of citizen-worker discourses and the material and social value applied to paid employment, as opposed to the rhetorical value applied to mothering. It also supports our suggestion that, while femininities and masculinities configured around certain qualities, characteristics and practices may be symbolically idealised, individuals who perform them may neither identify with, nor possess the social ascendancy allocated to, those configurations.

Research with Australian fathers similarly reveals diverse performances. Some strive to perform breadwinning involved fathering, by attempting to combine long working hours and quality time with children in evenings and on weekends (Hamilton & De Jonge, 2010). Akin to some mothers, some men experience fathering as difficult and frustrating (Lupton & Barclay, 1997). However, unlike mothers, such performances were unaccompanied by guilt or apologies. Few Australian men perform primary caregiving fathering (Stevens, 2015). Some who do, internalise discourses idealising and naturalising gendered parenting practices by feeling that abandoning breadwinning challenges their masculine identities, judging themselves as failed and inadequate men, and believing their performances of "mothering" are illegitimate and unnatural; while others reject breadwinning, and perform nurturing fathering by identifying with "feminine" traits or rejecting sex differences (Grbich, 1997; Parris & Vickers, 2010; Smith, 1998; Stevens, 2015). Regardless of how men perform fathering, some feel fathering is natural, normal, inevitable and essential to masculine identities, and endows them with status,

acceptance and recognition in broader society (Lupton & Barclay, 1997; White, 1994).

Nuanced identities and performances of mothering and fathering are also evident in research with, for example, lesbian and gay parents, young Aboriginal mothers, migrant and refugee women and men from Middle-Eastern, African, and Asian countries, and working-classed fathers with disabilities (Benza & Liamputtong, 2017; Hamano, 2014; Hawkey et al., 2018; Hayman & Wilkes, 2017; McNair & Dempsey, 2018; Tuazon-McCheyne, 2010; Ussher et al., 2016; Watts et al., 2015). Such individuals perform contextually nuanced mothering and fathering practices complicated by conflicting local and regional-level configurations, which reveal the challenges, exclusion and policing experienced by such individuals; but also, that individuals can identify as contextually "good" mothers and fathers, despite being excluded from conforming to regionally idealised configurations. For example, intersections between age, race, colonisation and dispossession are evident in the experiences of some young Aboriginal mothers, who perform traumatised yet resilient mothering by making necessary changes and overcoming difficulties, despite the trauma that influenced their lives; and thus identified as "good" mothers, despite being policed and stigmatised as "bad" mothers for being young and Aboriginal (Ussher et al., 2016). However, some single mothers receiving welfare payments internalise citizen-worker and neoliberal mothering discourses by feeling guilty for full-time mothering, and recognising they are unable to constitute full citizens while receiving welfare (Grahame & Marston, 2012). Some middle-classed Chinese-Australian migrant men perform a culturally nuanced practice of traditional breadwinning fathering, which prioritises sole financial provision for and protection of families, and renders unemployment (and by implication primary caregiving) disastrous to masculine identities (Hibbins, 2005). Similarly, Pini and Conway's (2017) research with working-classed, rural, white fathers with acquired disabilities reveals challenges to performing breadwinning and involved fathering: some such fathers internalise breadwinning discourses, and consequently continue working in unfulfilling roles, emphasise pre-disability performances of breadwinning, or feel disappointed they are no longer breadwinners; while others can no longer perform masculinised involved fathering practices through physical, sporting and outdoor activities, and as a result perform reformulated involved fathering practices, by providing affective rather than physical support for such activities, or engaging in "feminine" activities such as school and community events and caregiving. Regardless of these reformulations, they are conscious of the visibility of their "different" performances of fathering.

Gay and lesbian parents' performances reveal some similarities and some gendered nuances. In the context of heteronormative and homophobic chal-

lenges to their families' legitimacy and exclusion from being "good" parents, some lesbian mothers and gay fathers perform resilient parenting, while some perform vigilant parenting, a nuanced aspect of ensuring their children's wellbeing in the context of protecting them from, and building their resilience to, homophobic attitudes towards their parents (Hayman & Wilkes, 2017; McNair & Dempsey, 2018). Some gay fathers perform exemplary fathering in an attempt to place themselves beyond reproach (Tuazon-McCheyne, 2010), but others internalise essentialist natural, instinctive mothering discourses, by perceiving themselves as inadequate carers (McNair & Dempsey, 2018). Some gay and lesbian parents' performances of breadwinning and caring are flexible, intentional and based on preference and circumstance rather than gender expectations, with some gay men performing primary caregiving fathering, and some lesbian women describing equitable arrangements that cater to both women's aspirations (Hayman & Wilkes, 2017; McNair & Dempsey, 2018; Tuazon-McCheyne, 2010).

The experiences of transgender parents are also complex and nuanced, and exemplify embodied performances of femininities and masculinities. For example, some transgender men find the embodied experiences of inhabiting pregnant female bodies and chestfeeding to be highly challenging to their masculine identities (Charter et al., 2018). Furthermore, some transgender women do not want to use their own semen to have children due to the incongruence of being a mother and a biological father; while other transgender women do not feel able to claim to be "mother" or "grandmother" (von Doussa et al., 2015), revealing the detrimental implications for individuals, of hegemonic projects' symbolic tethering of performances by birth-assigned male and female bodies to masculinities and femininities respectively.

Finally, Australian research also reveals childless women and men's nuanced performances. Some involuntarily and circumstantially childless women and men are deeply cognisant of and internalise pronatalist discourses of mothering and fathering as the meaning of life and crucial to women's and men's identities, and experience themselves as failures, inadequate, incomplete, defective and abnormal; experience life as meaningless; and avoid stigmatising experiences by concealing their infertility, or avoiding people, activities, groups, events and spaces dominated by people with children (Imeson & McMurray, 1996; Turnbull et al., 2016; 2017). Involuntary childlessness also exemplifies intersectional and embodied performances of femininities and masculinities. For example, some women from non-Western migrant backgrounds, for whom mothering is culturally compelled and whose bodies are blamed for infertility, experience their bodies as "faulty" (Hawkey et al., 2018). However, some involuntarily and circumstantially childless women perform qualities, characteristics and practices distinct from

their inability to procreate, by foregrounding other aspects of their lives (Turnbull et al., 2016; 2017).

Research with childfree women and men has found childfree similarities and gendered nuances. Many childfree women and men are aware of pronatalist discourses, with some men internalising pronatalism by identifying themselves as selfish, lifestyle-oriented, or unconventional; some women and men proactively performing qualities, characteristics and practices aligned with neoliberal discourses, which foster freedom, choices, opportunities, independence and the capacity for self-actualisation; and other women and men performing socially and environmentally responsible qualities and characteristics, by contributing to society in other meaningful and fulfilling ways (Carmichael & Whittaker, 2007; Doyle et al., 2013; Maher & Saugeres, 2007; Smith et al., 2020; Turnbull et al., 2016; 2017). In contrast, some childfree men reinforce regionally idealised masculinities by emphasising their ability, if they wished, to have biological children and perform "good" breadwinning involved fathering (Smith et al., 2020). However, regardless of their positive childfree performances, some men feel guilty for not producing grandchildren, and some women feel stigmatised, resulting in avoidance of interactions with people with children, identity substitution as involuntarily childless in order to elicit pity rather than judgement, or passing as future mothers in order to avoid judgement (Turnbull et al., 2016; 2017). Furthermore, positive childfree performances and identities are not available to some women from migrant backgrounds, for whom mothering is a sociocultural compulsion (Hawkey et al., 2018; Liamputtong & Benza, 2019).

Overall, the existing evidence of nuanced embodied performances suggests that, while individual enactments can be constrained and complicated by interactions between regional and local configurations of femininities and masculinities, some individuals may neither identify with, nor experience themselves as enacting, idealised or stigmatised configurations, while others may internalise such configurations and judge themselves accordingly. Furthermore, others may reward or penalise them against the standards of symbolically idealised or stigmatised configurations attached to their birth-assigned sex.

5. Integrating the Theory and Evidence

The multidimensional evidence presented in section four reveals multiple, dynamic, conflicting, hierarchical configurations of femininities and masculinities at the regional level in Australia. In this section we integrate the theory and evidence to describe configurations of femininities and masculinities in Australia, and how these configurations relate to each other in internal and external hierarchies.

5.1. Regional-level configurations of femininities and masculinities

The extant multidimensional and intersectional evidence we have reviewed (including discursive and policy configurations; their reflections in demographic research on divisions of labour and attitudes and aspirations towards working and parenting; and implications for individual experiences and performances) suggests that, at Australia's regional level, interacting intersectional neoliberal, pronatalist and maternalist discourses and policies, idealise, institutionalise and symbolically configure externally emphasised and internally hegemonic femininities around the qualities, characteristics and practices of (married, heteronormative, middle-classed, white, English-speaking, working-aged, abled) intensive mothering and part-time working; and internally and externally hegemonic masculinities around (married, heteronormative, middle-classed, white, English-speaking, working-aged, abled) breadwinning and involved fathering. That is, they constitute those idealised configurations of femininities and masculinities that maintain, justify and naturalise hierarchical and complementary gender relations in the prevailing intersectional capitalist-patriarchal structure. Indeed, femininities configured around intensive mothering and part-time working and masculinities configured around full-time breadwinning and involved fathering seem ideally complementarily and hierarchically matched to maximise the productive and reproductive output of women and men in Australia's capitalist-patriarchal society (Bown et al., 2011; Riggs & Bartholomaeus, 2018). Indeed, idealising femininities configured around intensive mothering and part-time working renders such configurations, and individual women who attempt to perform them, incomplete citizens in a society requiring full-time paid work to achieve economic citizenship, and ensures their subordination to hegemonic masculinities.

Corresponding to the need for complex internal and external relations within and between multiple femininities and masculinities in order to maintain hegemonic configurations and patriarchal-capitalist gender relations, non-hegemonic femininities and masculinities are subordinated in nuanced ways according to nature of their non-conformance to hegemonic configurations and challenge to the capitalist-patriarchal order, and precluded or marginalised if they fall afoul of heteronormative gender relations and intersecting power relations. Given the gendered significance of parenting and working for women and men, the extent and standard to which their associated qualities, characteristics and practices are achieved unsurprisingly produce disparate configurations of femininities and masculinities.

There is little evidence of regional-level configurations of complicit femininities and masculinities. Extrapolating from Connell's (1987) definition, they are constituted by femininities configured around practices that fall slightly short of intensive mothering and part-time working, and masculinities

configured around practices that fall slightly short of breadwinning and involved fathering; but consent to hegemonic configurations internally, and the patriarchal gender order externally, in order to indirectly or directly benefit from the patriarchal dividend. The absence of explicit regional-level configurations of complicit femininities and masculinities is explicable in the context of their emulation of and consent to hegemonic configurations, and the consequential lack of any need to symbolically subjugate them in order to maintain the gender order. However, in light of our argument that hierarchical configurations of femininities and masculinities serve a symbolic purpose, the existence of *symbolic* configurations of complicit femininities and masculinities may require rethinking if they remain invisible across different levels. If such is the case, complicity may exist purely in individuals' performances consenting to, internalising, emulating and benefiting from, but not quite achieving, the qualities, characteristics and practices of hegemonic configurations. Here is the means by which hegemonic configurations serve their symbolic purpose of maintaining power relations (and perhaps render symbolically complicit configurations unnecessary): influencing individuals' thoughts, values, beliefs and enactments towards conformance to or complicity with hegemonic configurations, even if most individuals cannot strictly perform them. However, we do not yet strike complicit femininities and masculinities from the symbolic realm, which would require more evidence, on a wider range of characteristics than parenting and employment, at local, regional and global levels.

In an example of complicit configurations' invisibility, masculinities configured around traditional breadwinning fathering, while once hegemonic, are decreasingly visible in discourses and policies. Despite its relegation, there is little evidence traditional breadwinning is yet subordinated as "bad" fathering. By their very invisibility, masculinities configured around traditional breadwinning fathering are arguably implicitly configured as complicit: their breadwinning conforms to an entrenched practice of hegemonic masculinities; their non-involved fathering constitutes a minor shortcoming from an emerging practice of hegemonic masculinities; they consent to hegemony in order to benefit from the patriarchal dividend; but their non-conformance is of such a minor nature that it does not warrant explicit subordination to maintain capitalist-patriarchal gender relations (being ignored is enough). However, if involved fathering's idealisation intensifies, masculinities configured around traditional breadwinning fathering may re-emerge from discursive and policy obscurity to be subordinated as compliant masculinities configured around "bad" fathering practices, which fail to adequately uphold, but pose no threat to, hegemonic masculinities or complementary and hierarchical capitalist-patriarchal gender relations.

While evidence of discursive and policy configurations of masculinities around childlessness is also limited, we argue they are subordinated as non-compliant masculinities. In the absence of children, masculinities are configured as incomplete and immature (Blatterer, 2007). However, as one of many available qualities or practices of hegemonic masculinities, the absence of fathering does not warrant pariah status. Furthermore, masculinities configured around childlessness tend to be conflated with full-time working and career-orientation (Friedman, 2015; Wager, 2000), core elements of hegemonic masculinities. However, we argue childlessness in masculinities is configured as "non-compliant" rather than "compliant," because it poses an indirect threat to complementary and hierarchical capitalist-patriarchal gender relations: it implies and enables (but does not necessitate) the existence of its symbolic "complement," childlessness in femininities and its threat to unequal gender relations (by reducing women's financial dependence upon men) and neoliberal capitalism (threatening the reproduction of future workers and consumers).

We pause to exemplify our caveat that heterogeneity exists within subcategories of femininities and masculinities, such as non-compliant masculinities. For example, the limited evidence indicates that, within "non-compliant" masculinities configured around childlessness, the subordination of involuntary childlessness is different in nature and degree to that of circumstantial childlessness and childfreeness. While masculinities configured around circumstantial childlessness and childfreeness "deviate" by circumstance or choice from fathering, an emerging practice of hegemonic masculinity, the "deviance" constituted by involuntarily childlessness is compounded: it relates to not only fathering, but also fertility and virility, which are arguably core to hegemonic masculinities (Hird & Abshoff, 2000; Peterson, 2014). Accordingly, masculinities configured around involuntary childlessness are derided as impotent, emasculated and failed masculinities (Gannon et al., 2004).

Although research about masculinities configured around primary caregiving fathering is also lacking, we contend they are configured as pariah masculinities. While primary caregiving fathering achieves "involved fathering," an emerging practice within hegemonic masculinities, it deviates from breadwinning, a core and entrenched practice. Fathers who practise primary caregiving have consequently felt stigmatised, and judged themselves, as emasculated, failures, freakish, bludging and inferior (Grbich, 1997; Parris & Vickers, 2010; Smith, 1998). We argue the discursive and policy invisibility of primary caregiving fathering amounts to not ignoring them as non-threatening complicit masculinities, but suppressing and silencing them as pariah masculinities. The flagrant non-conformance of primary caregiving fathering warrants particular suppression because it constitutes failures on

two fronts: to contribute as citizen-workers, and to practice breadwinning fathering. Moreover, primary caregiving fathering represents a direct threat to hegemonic masculinities internally and complementary and hierarchical capitalist-patriarchal gender relations externally, because, in the absence of stigmatisation, it could present to individual men an appealing and fulfilling alternative to breadwinning that actively and directly subverts complementary and hierarchical gender relations. Furthermore, pariah masculinities configured around primary caregiving fathering are the symbolic "complements" to (we will argue) pariah femininities configured around full-time working mothering: they enable each other and the threats they pose to hierarchical gender relations.

Turning to subordinated femininities, femininities configured around full-time (married, heteronormative, middle-classed, white, working-aged, abled) mothering were (like their symbolic "complement," masculinities configured around traditional breadwinning fathering) once hegemonic. However, unlike traditional breadwinning fathering, full-time mothering is not now configured within femininities as complicit, but explicitly subordinated as compliant. While femininities configured around full-time mothering are configured as acquiescing to traditional complementary and hierarchical gender relations, neoliberal reconfigurations take them beyond the minor shortcomings of complicit femininities, such that they are subordinated as "just" mothers who are idle, not contributing economically to society, and poor neoliberal role models for children (Pocock, 2003). Nevertheless, non-conformance to part-time working, an emerging and contested practice of hegemonic femininities resulting from intersections with capitalist power relations, does not render full-time mothering practices "non-compliant" or "pariah" femininities, as they do not represent a challenge to hegemonic femininities internally or capitalist-patriarchal gender relations externally. Indeed, femininities configured around full-time mothering, and their "complements," masculinities configured around traditional breadwinning fathering, take up each other's working and caregiving slack, and maintain traditional gender relations, despite not strictly upholding the neoliberal-patriarchal compromise.

Femininities configured around involuntary and circumstantial childlessness appear to be further subordinated as non-compliant: desperate, pitiable, incomplete and unintentionally failing to conform to mothering, the core feature of hegemonic femininities; and thus, failing to achieve the pronatalist purpose of complementary, hierarchical, heterosexual relationships. However, they also passively challenge complementary and hierarchical gender relations through their default configuration, in the absence of children, around career-orientation and full-time working (Graham & Rich, 2012a; Wager, 2000). Like masculinities, nuances exist within femininities configured around childlessness. While femininities configured around involuntary and circumstantial

childlessness may, due to their unintentional non-conformance to mothering, be less subordinated than (we will argue) pariah femininities configured around childfreeness, circumstantial childlessness may be more stigmatised in femininities than involuntarily childlessness and verge on pariah status, as a consequence of being configured as contributing to and thus culpable for the circumstances in which they have no children, such as being "too choosy" about partners or "prioritising careers" (Cannold, 2005; Turnbull et al., 2016; 2017).

The evidence suggests femininities configured around the practices of breadwinning (full-time working) mothering and childfreeness are stigmatised as pariah femininities, whose brazen and culpable internal deviation from the qualities and practices of hegemonic femininities, is of a nature that represents an active, direct and substantial threat to the capitalist-patriarchal gender order externally. Despite conforming to mothering, femininities configured around breadwinning are stigmatised as selfish "bad mothers" who prioritise careers, independence, personal fulfilment and financial rewards (in short, themselves) over intensively nurturing children (Raith, 2008). Due to their refusal to have children, the core element of hegemonic femininities, femininities configured around childfreeness are stigmatised as unnatural, selfish, greedy and career-oriented (Gillespie, 2000; Graham & Rich, 2012a). The similarities are obvious: femininities configured around breadwinning mothering and childfreeness are stigmatised as selfish career-women. The differences are nuanced: breadwinning mothering deviates from maternalist ideologies mandating intensive mothering (Goodwin & Huppatz, 2010), while childfreeness deviates from pronatalist ideologies positioning women as mothers and childfree women as not women at all (Gillespie, 2000). In these ways, femininities configured around breadwinning mothering and childfreeness reject hegemonic femininities and actively threaten hierarchical capitalist-patriarchal gender relations by refusing to appropriately nurture or reproduce future workers or remain subordinated to and financially dependent upon men.

Furthermore, the extant evidence reflects our argument that, because they "deviate" from implied and compulsorily married and heteronormative characteristics of hegemonic femininities and masculinities, and threaten complementary and hierarchical gender relations (both in their own right, and also by threatening the reproduction of children who perform adequately heteronormative, complementary and hierarchical femininities and masculinities), femininities and masculinities configured around being unmarried, single or queer, are automatically "precluded" from achieving hegemonic configurations, regardless of their conformance or otherwise to the current qualities, characteristics and practices of hegemonic femininities and masculinities, and are judged against a conflicting set of standards. For example,

rather than being expected to conform to the procreation imperative and in turn judged against femininities configurated around intensive mothering and part-time working and masculinities configured around breadwinning and involved fathering, femininities and masculinities configured around single, lesbian, gay and transgender mothering and fathering (the last of which are symbolically attached to birth-assigned female and male bodies respectively in order silence and to suppress the validity of transgender performances and identities) are judged against a different set of standards, including the interdiction on having children, and being stigmatised as harmful to children's wellbeing and depriving them of "natural" heteronormative parents and role models for future sexual and gender identities and relationships (Charter et al., 2018; de Souza, 2013; Poulos, 2020; Rich et al., 2011; von Doussa et al., 2015; Wolfinger, 2014). Again, there is heterogeneity among precluded configurations. For example, femininities and masculinities configured around lesbian and gay parenting, tend to be more stigmatised than those configured around unmarried or single parenting, while femininities and masculinities configured around transgender parenting are silenced and suppressed.

Finally, the extant evidence confirms gender, class, race, ability and age intersect with each other at Australia's regional-level (hegemonically middle-classed, individualised, white, English-speaking, abled and working-aged), to configure marginalised femininities and masculinities around being working-classed, communal, non-white, non-English speaking, disabled, "too young" or "too old", which are automatically excluded from hegemonic configurations regardless of their conformance or otherwise to the currently idealised practices of part-time working and intensive mothering, and breadwinning involved fathering. Interestingly, while arising from different power relations that produce symbolic hierarchies of socially constructed qualities, characteristics and practices within themselves, these marginalised characteristics share similar subordination as failing to conform to neoliberal configurations of self-reliant, independent, individualised citizen-workers; and threatening the reproduction of individualised, self-reliant, future workers. Moreover, subordination, preclusion and marginalisation interact in complex and nuanced ways, augmenting stigmatisation. For example, femininities configured around working-classed and single mothering are automatically excluded from hegemony due to marginalisation by intersecting class relations as working-classed, and preclusion within gender relations as single. At the regional level, such femininities are configured against different and more stringent expectations compared to married and middle-classed mothering femininities, regardless of their conformance or otherwise to intensive mothering and part-time working. Because single mothering removes them from complementary and hierarchal gender relations in the domestic sphere, and working-classed mothering removes the working and mothering "choices" available to middle-

classed mothers (Cannold, 2005), femininities configured around working-classed and single mothering are judged and configured against neoliberal-capitalist rather than patriarchal standards: all value is stripped from their "mothering" practices, and they are coerced into economically supporting themselves and their children in order to avoid being penalised as under-serving, lazy, morally corrupt welfare cheats (Blaxland, 2010; Graham, McKenzie, & Lamaro, 2018; Holdsworth, 2017; Van Acker, 2005). Finally, sometimes conflicting and sometimes complementary regional and local-level configurations (for example, regionally hegemonic femininities configured around part-time working mothering conflicting with locally hegemonic femininities in some communities configured around full-time mothering; regionally subordinated or pariah femininities configured around childlessness or childfreeness exacerbated by more extreme stigmatisation of femininities configured around childlessness in some communities (Hawkey et al., 2018; Liamputtong & Benza, 2019); or locally hegemonic configurations of full-time, dedicated, unencumbered workers in some organisations complementing regionally hegemonic breadwinning in masculinities, but conflicting with part-time working and intensive mothering in femininities (Turnbull et al., 2018) complicate individual performances of femininities and masculinities, producing complex, challenging and inequitable conditions for individuals' performances of incompatible or complementary locally and regionally idealised practices, and placing them at risk of stigmatisation within communities or broader societies.

5.2. Internal and External Hierarchies

In the foregoing discussion, we explored relations between femininities and masculinities by discussing "complementary" configurations. These provide some idea of internally and externally hierarchical relations within and between femininities and masculinities. Within masculinities we suggest a tentative hierarchy, in roughly descending order, of hegemonic masculinities configured around breadwinning and involved fathering, complicit masculinities configured around traditional breadwinning fathering, non-compliant masculinities configured around childlessness (where involuntarily childlessness is more subordinated than childfreeness and circumstantial childlessness), pariah masculinities configured around primary caregiving fathering, and precluded and marginalised masculinities, whose stigmatisation may be exacerbated by intersections between precluded, marginalised and subordinated qualities, characteristics and practices. Within femininities are, in descending order, hegemonic femininities configured around intensive mothering and part-time working, compliant femininities configured around full-time mothering, non-compliant femininities configured around involuntary and circumstantial childlessness (the latter verging on pariah status due to "cul-

pability"), pariah femininities configured around breadwinning mothering and childfreeness, and precluded and marginalised femininities, whose stigmatisation may be amplified or complicated by intersections between precluded, marginalised and subordinated qualities, characteristics and practices.

By taking the body of evidence as a whole, we also tentatively suggest an external symbolic hierarchy across the gender order of (married, heteronormative, middle-classed, white, abled, working-aged) femininities and masculinities. In descending order, this loosely consists of masculinities configured around hegemonic breadwinning and involved fathering; then complicit traditional breadwinning. At this point, masculinities configured around "non-compliant" childlessness deviate from an emerging feature of hegemonic masculinity, and passively threaten the gender order by enabling childlessness within femininities. However, with the exception of perhaps "emasculated" masculinities configured around involuntarily childlessness, the evidence does not suggest they are relegated below externally emphasised femininities configured around intensive mothering and part-time working, which, simply by *being* femininities, as well as inadequate economic citizens, are subordinated to all but the most stigmatised masculinities. Below emphasised femininities in the external hierarchy are compliant femininities configured around full-time mothering and non-compliant femininities configured around involuntary then circumstantial childlessness. Next, we suggest pariah masculinities configured around full-time caregiving fathering, despite *being* masculinities, are relegated to the depths of the external gender hierarchy, because their deviation from hegemonic masculinities directly threatens and subverts the capitalist-patriarchal gender order. However, in light of their invisibility and suppression rather than overt stigmatisation, they appear to be less stigmatised than "pariah" femininities configured around full-time working mothering and childfreeness, which represent direct and brazen threats to Australia's capitalist-patriarchal gender order.

While precluded and marginalised configurations are too complex and heterogenous to position within this tentative external regional-level hierarchy, femininities and masculinities configured around precluded (including queer, single and unmarried) and marginalised (including working classed, non-white, non-English speaking, disabled, too young and too old) qualities, characteristics and practices, are judged against conflicting standards that result in: stigmatisation that would not exist for non-precluded and non-marginalised femininities and masculinities with otherwise similar characteristics; deeper stigmatisation when subordinated, precluded and marginalised qualities and practices intersect; and potential subordination of some configurations of precluded or marginalised masculinities, such as gay fathering masculinities, to some configurations of non-precluded, non-marginalised femininities.

6. Conclusions, Limitations and Implications

In order to demonstrate our integrated theory, we have presented existing multidimensional, regional-level evidence on employment and parenting, to explore regional-level hierarchies of and relations between femininities and masculinities in Australia. Discursive and policy configurations do not exist in a vacuum: evidence of gendered divisions of labour and attitudes and aspirations regarding paid work and parenting reveal the majority of heterosexual, cisgender, white, abled, middle-classed, working-aged Australian adults aspire to, or attempt to enact, the characteristics, qualities and practices of hegemonic femininities and masculinities, and perceive and judge themselves and others against symbolically hierarchical configurations of hegemonic, compliant, non-compliant, pariah, precluded and marginalised femininities and masculinities.

While this paper focuses on regional-level hierarchies, it also confirms regional-level configurations influence, but are not necessarily replicated by, local-level configurations, which are influenced by nuanced, intersectional local contexts (Connell & Messerschmidt, 2005). Thus, despite regionally hierarchical femininities and masculinities configured around diverse parenting and employment practices, the evidence of sometimes conflicting and sometimes complementary regional and local hierarchies suggests unique and intersectional local-level hierarchies can be influenced by the contextual salience of pronatalist, maternalist, citizen-worker and other intersectional discourses.

Furthermore, although individual enactments are influenced, constrained and complicated by sometimes conflicting and sometimes complementary interactions between regional and local hierarchies of femininities and masculinities, individuals who perform qualities, characteristics and practices of hegemonic or non-hegemonic configurations do not themselves constitute hegemonic or non-hegemonic femininities or masculinities, and may not necessarily identify with, or experience themselves as enacting, idealised or stigmatised configurations. Conversely, individuals can internalise such configurations and judge themselves accordingly. They may also be rewarded or penalised by others against the standards of hierarchical configurations, with ineluctably embodied performances by transgender, intersex and non-binary individuals in particular being judged against the idealised qualities, characteristics and attributes attached to their birth-assigned sex, rather than individuals' gender identities.

We must also point out some limitations. The hierarchies we have discussed are based on an incomplete body of evidence which includes older and grey literature where more recent peer reviewed literature is limited. Additional research is required on interactions between: regional-level con-

figurations, particularly those currently "invisible" configurations, whether through lack of research, lack of discursive or policy representation, or both; intersectional local-level configurations; and individual performances and experiences in the context of regionally and locally hierarchical configurations. Furthermore, a fully intersectional perspective might require doing away with hierarchies of femininities and masculinities, in favour of hierarchical configurations of intersectional qualities, characteristics and practices.

Given the constraints imposed by symbolic hierarchies of femininities and masculinities on individual experiences and performances, and the stigmatisation of performances of subordinated, precluded and marginalised qualities, characteristics and practices, it is essential to promote non-hierarchical reconfigurations: by which none of the many combinations of parenting or non-parenting and working or non-working, is configured as more or less valuable than another; and which empower individuals to live and contribute to society according to their diverse preferences and strengths rather than imposed ideals.

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Emotional and Psychological Distress Related to COVID-19 Isolation, Quarantine, and Physical Distancing: Evidence of Gender-based Differences

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ABSTRACT. Despite the relevance of emotional and psychological distress related to COVID-19 isolation, quarantine, and physical distancing, only limited research has been conducted on this topic. Using and replicating data from Chapman University, Harvard Medical School, Holmes et al. (2020), Ipsos MORI, MQ, Nursing Times, Rek et al. (2020), Rethink Mental Illness, UNC School of Medicine, and VMIAC, I performed analyses and made estimates regarding exposure to COVID-19 pandemic stress, depression, and anxiety. The results of a study based on data collected from 5,400 respondents provide support for my research model. Using the structural equation modeling, I gathered and analyzed data through a self-administrated questionnaire.

Keywords: COVID-19; emotion; psychological distress; isolation; quarantine; gender

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1. Introduction

COVID-19 has aggravated and consolidated stress-related disorders for numerous individuals extensively. (Horesh and Brown, 2020) The most common COVID-19-related mental disorders are irascibility, anxiety, low mood, inadequate sleep, emotional exhaustion, annoyance, depression, and posttraumatic stress symptoms. (Acharya et al., 2020) Psychological and social drivers indicate stronger connections with anxiety in relation to COVID-19 than experiences with such a contagious virus. (Petzold et al., 2020)

2. Conceptual Framework and Literature Review

The COVID-19 pandemic has brought about a significant physical health burden and profound psychosocial stressors, (e.g., relational, job-related, and financial tensions), unusually escalating the rates of anxiety and depression. (Kujawa et al., 2020) Family members experiencing intricate social and psychological circumstances may spend the mandatory COVID-19 lockdown while being exposed to growing levels of stress and panic, and being frequently endangered by terrifying, intense, and continuous degradations derived from increasing micro-traumas. (Mazza et al., 2020) Confronting COVID-19-related anxiety, stress, and trauma may influence individuals' mental health outcomes. (Cardel et al., 2020) The mental health of women, of emerging adults, of persons having socially underprivileged backgrounds, and of individuals having prior mental health issues has been considerably damaged during the COVID-19 pandemic. (O'Connor et al., 2020) Women undergo more severe COVID-19-related stress and anxiety symptoms, and men display better resilience to stress. (Hou et al., 2020) There is no relevant dissimilarity between the frequency of sleep disturbances, anxiety, and depression in COVID-19 male and female patients. (Deng et al., 2020)

3. Methodology and Empirical Analysis

Using and replicating data from Chapman University, Harvard Medical School, Holmes et al. (2020), Ipsos MORI, MQ, Nursing Times, Rek et al. (2020), Rethink Mental Illness, UNC School of Medicine, and VMIAC, I performed analyses and made estimates regarding exposure to COVID-19 pandemic stress, depression, and anxiety. The results of a study based on data collected from 5,400 respondents provide support for my research model. Using the structural equation modeling, I gathered and analyzed data through a self-administrated questionnaire.

4. Results and Discussion

Social support is considerably related to escalated risk for depression and unsatisfactory sleep quality during the COVID-19 pandemic (Grey et al., 2020) that has negatively impacted numerous persons to a large extent, but resilience is instrumental in the reactions of affected people under pressure, assisting them in handling stress more adequately while experiencing such a contagious virus. (Zhang et al., 2020) Women tend to perceive COVID-19 as being a grave health issue, and to accept and act in accordance with coercive public policy measures, such as isolation, quarantine, and physical distancing. (Galasso et al., 2020) (Tables 1–7)

Table 1 How staying at home is affecting participants during COVID-19 pandemic (%) (men/women)

	Disagree	Neutral	Agree
Being home so much is making me tense or stressed.	12/10	26/23	62/67
My living space feels very crowded and cramped.	11/9	32/29	57/62
I feel trapped at home.	10/8	45/43	45/49
Most days, I spend (almost) all my time at home.	9/8	8/8	83/84
I avoid going out of my house as much as possible right now.	10/8	13/12	77/80
I am spending much more time at home now than I did before the COVID-19 pandemic.	9/8	15/14	76/78

Sources: Chapman University; my survey among 5,400 individuals conducted April 2020.

Table 2 How would you rate your overall mental health and wellbeing right now? (%) (men/women)

Very good.	5/4
Good.	19/17
Neither good nor bad.	41/40
Bad.	27/26
Very bad.	8/13

Sources: Nursing Times; my survey among 5,400 individuals conducted April 2020.

Table 3 Mental health experiences during COVID-19. Select all that apply. (%) (men/women)

Anxiety and/or panic	76/79
Depression, low mood, and/or mood fluctuation	74/78
Loneliness, lack of physical support, and/or disconnection from others	69/72
Isolation induced emotional challenges	66/69
Lacking motivation, tired and/or fatigue related	63/65
Not much has changed and/or found positives from COVID-19	7/6
Stress	71/74
Anger, frustration and/or agitation	67/69
Self-harm and/or suicide	3/4
Hopelessness and/or despair	9/11
An increase in alcohol consumption	8/5
Low concentration and restlessness	44/47
Less functional and a loss of direction or focus	39/42
Too much work	57/61
Fear and shock	15/18
Triggering of previous traumas	8/12
Uncertainty	62/66
Struggles with helping others	37/43
Boredom	44/47

Sources: VMIAC; my survey among 5,400 individuals conducted April 2020.

Table 4 "Over the past 14 days I have been able to distance myself well from the stress/burden due to…" Select all that apply. (%) (men/women)

worries about my health.	32/35
worries of not being able to get medical care.	29/32
worries about being sick with COVID-19 when I noticed first signs of symptoms such as fever, dry cough, breathing problems, sore throat, loss of smell/taste, headache or diarrhea etc.	22/25
increased conflicts with people close to me.	39/41
childcare.	34/39
financial worries.	23/28
uncertainties regarding my job, training place, studies or school.	25/28
concerns for my own personal integrity	24/26
concerns for the integrity of family members or friends	26/29
fears of what the future will bring, or that I will not be able to cope with everything.	21/24
thoughts that it would be better to be dead.	14/16

Sources: Rek et al. (2020); my survey among 5,400 individuals conducted April 2020.

Table 5 % of respondents rating each COVID-19 pandemic-related emotional effect at least moderate in intensity (men/women)

More difficulty sleeping	49/52
More worried about the health and safety of family members or friends	68/72
Being less productive	44/47
More worried about your personal health or safety	63/66
More anxious or ill at ease	58/62
Feeling more down or depressed	49/53
More frustrated about not being able to do what you usually enjoy doing	61/63

Sources: UNC School of Medicine; Harvard Medical School; my survey among 5,400 individuals conducted April 2020.

The COVID-19 epidemic has resulted in massive psychological pressure to affected people, frontline healthcare workers, and individuals with suspected symptoms. (Shao et al., 2020) Numerous patients are in a COVID-19-related anxiety or depressed state as a result of psychosocial factors and isolation, lockdown, or quarantine. (De Sousa et al., 2020) The psychological framework of the COVID-19 pandemic may aggravate current psychiatric conditions and impact the indication of their symptomatology. (Fischer et al., 2020) Heightened alcohol consumption in both women and men is related to severe symptoms of anxiety and depression (Tran et al., 2020), and life-style associated risk determinants (e.g., smoking, excessive weight, and inactivity) develop medical conditions, resulting in an escalated mortality and morbidity amongst psychiatric patients. (Kavoor, 2020) Enhancing the degree of resilience for COVID-19 patients has favorable consequences for the prevention of anxiety and depression. (Zhang et al., 2020)

Table 6 Priority concerns about the impact of the COVID-19 pandemic on mental health. Select all that apply. (%) (men/women)

Concerns about the impact on mental health about access to support and services (including medication) for both mental health and physical health issues.	88/90
Concerns about the mental health and wellbeing of vulnerable people, and the support available to them, including people with learning disabilities, people in psychiatric care, homeless people and pregnant women.	89/91
Concerns about the mental health and wellbeing of healthcare professionals, and the support available to them.	85/87
Concerns about the mental health impacts on autistic adults and children.	86/88
Concerns about the mental health and wellbeing of informal (and family) carers.	84/86
Concerns about the mental health impacts of dealing with the practical challenges of the pandemic, including food and shopping, finances and economic issues, employment, staying safe, access to outside space and being able to plan for the future.	77/81
Concerns about being anxious, becoming anxious, the effects of anxiety, feeling overwhelmed and out of control (hopelessness) and facing uncertainty.	82/84
The mental health impacts of being concerned about becoming ill with COVID-19, dying and infecting others. Also includes concerns about testing, treatment and vaccines, as well as concerns about others not complying with social distancing guidelines.	86/88
Concerns about the mental health impacts of media reporting on the pandemic, of repeated accessing of news and social commentary, and the intensity of commentary about the pandemic on social media.	75/78
Concerns about how access to and quality of information might impact on people's mental health during the pandemic, including concerns about the government's response, guidance and communication.	77/79
Concerns about the mental health impacts caused by people and employers perceived not to be behaving responsibility or complying with government guidelines.	68/69
Concerns relating to becoming mentally ill as a result of the stress of the pandemic, including the exacerbation of existing mental illness and the impact on mental wellbeing at a societal level.	75/78
Concerns pertaining to a specific mental health issue, including agoraphobia, bipolar, depression, eating disorders, schizophrenia, OCD, psychosis, social phobia, paranoia, stress and panic attacks	72/77
Concerns about the impact of the pandemic on people's resilience, including their ability to cope and to adjust to normal life after it is over.	67/70
Concerns about suicide ideation and the suicide rate during and after the pandemic.	43/45
Concerns about the impact of the pandemic on personal motivation and its subsequent impact on mental health.	48/49

Concerns about people turning to drink and drugs to cope with the uncertainty and distress caused by the pandemic.	24/26
Concerns about people self-harming in response to the pandemic.	21/23
Concerns about the mental wellbeing of family members during the pandemic and of the impact of bereavement. Also includes concerns about the impact of social isolation and lockdown on family relationships, as well as issues such as domestic abuse.	34/37
Concerns about the mental health and wellbeing of children and young people, including the impact of social isolation and missing school and exams.	38/40
Concerns relating to the potential mental health impacts of the pandemic on older people.	48/51
Concerns about the impact of isolation on people's mental health and wellbeing, including the impact of loneliness and issues faced by people with existing mental and physical health problems.	43/45
Concerns about the impact of lack of exercise on mental health and wellbeing.	31/33

Sources: MQ; Holmes et al. (2020); Ipsos MORI; my survey among 5,400 individuals conducted April 2020.

Table 7 Mental health services for people living with severe mental illness (%, relevance) (men/women)

People who are severely affected by mental illnesses such as schizophrenia or bipolar disorder, or live with severe anxiety or depression, have been hard hit by both the changes to formal mental health services and the wider implications of the lockdown, such as sharp, sudden changes to routine and the removal of coping mechanisms such as seeing friends or peer support groups.	89/91
Their mental health had worsened during COVID-19 as a result of receiving less support from mental health services.	86/88
Being unable to access the medication needed for their mental health has made their mental health worse.	85/87

Sources: Rethink Mental Illness; my survey among 5,400 individuals conducted April 2020.

Acute psychological stress factors may enable the emergence of COVID-related mental illness. (Zhu et al., 2020) Employing cutting-edge mobile health advancements in schizophrenia to assist patients during the COVID-19 outbreak represents both a matter of access and one of awareness and putting into practice. (Torous and Keshavan, 2020) Intensive psychiatric care settings and hospitals have difficulties in handling and giving medical care to severe psychiatric crises in emergency wards, while ensuring safety and care continuity for inpatients during the COVID-19 pandemic. (Choi et al., 2020) Individuals who lost their jobs, are worried about contracting COVID-19, or undergo tough restrictions affecting their daily routine tend to experience mild to moderate symptoms of anxiety or depression. (Fisher et al., 2020)

5. Conclusions and Implications

Anxiety and depressive symptoms are related to the apprehensions and worries of contracting COVID-19. (Zhai and Du, 2020) Women are more likely than men to conform to the clinical cutoff for depression and anxiety during the COVID-19 pandemic. (Rudenstine et al., 2020) Persons having diminished social and economic resources, and more significant exposure to stressors, experience an increased burden of depression symptoms. (Ettman et al., 2020) Individuals in danger of contracting COVID-19 and being subjected to certain vitally important containment measures are likely to be psychologically stressed, configuring the extensiveness of and risk factors related to mental health symptoms particularly in vulnerable populations. (Shi et al., 2020) The COVID-19 pandemic does not impact adherence to medication but shapes psychological well-being massively. (Trindade and Ferreira, 2020) As limitations, this article focuses only on emotional and psychological distress related to COVID-19 isolation, quarantine, and physical distancing. Further research should consider gender differences in behavior and attitudes toward COVID-19.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

Compliance with ethical standards

Ethical approval
All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent
An informed e-consent was obtained from individual participants. Study participants were informed clearly about their freedom to opt out of the study at any point of time without providing justification for doing so.

Animal studies statement verification
This article does not require animal studies verification.

Identifiable images and data statement verification
This article does not require identifiable images and data statement verification.

Data and materials availability
All research mentioned has been published and data is available from respective outlets.

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The author confirms being the sole contributor of this work and approved it for publication.

Conflict of interest statement
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Detection done by plagiarism software
This manuscript has an acceptable level of textual overlap with published articles.

Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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Gender-based Emotional Responses to Perceived Seriousness and Fear of Infection Associated with COVID-19

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ABSTRACT. This paper analyzes the outcomes of an exploratory review of the current research on gender-based emotional responses to perceived seriousness and fear of infection associated with COVID-19. The data used for this study was obtained and replicated from previous research conducted by ARI, Commonwealth Fund, ICFJ, Pew Research Center, Rek et al. (2020), TCDJ/Columbia University, and UGMH. I performed analyses and made estimates regarding COVID-19-related behaviors and psychological outcomes. Data collected from 4,900 respondents are tested against the research model by using structural equation modeling.

Keywords: gender; emotion; COVID-19; perceived seriousness; fear of infection

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1. Introduction

Individuals experiencing extensive home- and community-based quarantine are an easy target for mental health disorders throughout the COVID-19 pandemic. (Guo et al., 2020) Being female and having colleagues infected with COVID-19 constitute risk factors for anxiety, while having family members with COVID-19 represents a risk factor for depression. (Zhang et al., 2020) Residential settings for psychiatric patients and psychiatric inpatient units may be significantly exposed during the COVID-19 outbreak. (Kavoor, 2020)

2. Conceptual Framework and Literature Review

Perpetuating a beneficial way of living and social contacts, conformity with anxiety and adverse emotions, furthering self-efficacy, and information regarding where to obtain medical treatment are instrumental, while substance abuse and containment of anxiety and adverse emotions are related to increased psychological burden. (Petzold et al., 2020) The subjective degree of information as to such a highly contagious virus is positively related to escalated COVID-19-related fear. (Bäuerle et al., 2020) Straitened circumstances, unsatisfactory mental health, and insecurity are considerably intensified by COVID-19-related physical distancing measures. (Marsden et al., 2020) Perceived social support is pivotal in persons undergoing COVID-19 antipandemic measures. (Grey et al., 2020) Gender dissimilarities in attitudes and behavior result in heterogeneous physical and mental health outcomes and emotional responses to perceived seriousness and fear of infection associated with COVID-19, being somewhat mitigated for persons having direct exposure to the virus. (Galasso et al., 2020; Hou et al., 2020) Women are more likely to display anxiety, depression, or posttraumatic stress disorder symptomatology associated with COVID-19. (Cardel et al., 2020)

3. Methodology and Empirical Analysis

The data used for this study was obtained and replicated from previous research conducted by ARI, Commonwealth Fund, ICFJ, Pew Research Center, Rek et al. (2020), TCDJ/Columbia University, and UGMH. I performed analyses and made estimates regarding COVID-19-related behaviors and psychological outcomes. Data collected from 4,900 respondents are tested against the research model by using structural equation modeling.

4. Results and Discussion

Resilient patients having mild COVID-19 symptoms may experience decreased levels of anxiety and depression, as protective factors may put an end to adverse emotions. (Zhang et al., 2020) In contrast to later adulthood, the physical health consequences of COVID-19 on young individuals are not so severe, but the latter tend to experience heterogeneous psychosocial stressors, as such a highly contagious virus plays havoc with educational and occupational prospects. (Kujawa et al., 2020) There are positive connections between the acuteness of anxiety symptoms and elevated alcohol consumption, as COVID-19 restrictions are more overwhelming in the mid-aged groups than in the teenager or senior ones. (Tran et al., 2020) (Tables 1–7)

Table 1 The impact of COVID-19 on mental health and psychosocial well-being (%, relevance) (men/women)

The impact of the COVID-19 pandemic on mental health is complex, diverse and wide ranging, affecting all parts of societies and populations.	88/89
Those with existing poor mental health are facing a number of risks including increased rates of mental ill health and disruption to treatment, medications and the lifeline of support services.	87/88
COVID-19 has had a huge impact on mental health services and caused disruption to care and treatment.	86/89
Demand for face-to-face mental health services has reportedly significantly decreased due to fear of infection, especially among older people.	84/86
Playing a crucial role in fighting the outbreak and saving lives, frontline workers are under exceptional stress and while deaths of health workers are rising, the mental ill health rates are rising faster still.	87/88
Frontline healthcare workers are at particularly high risk of mental ill health, including suicide attempts, the risk of burnout and stigmatization.	85/87
Dedicated teams providing mental health support for health workers should include the introduction of personal screening for stress and mental health illness involving an assessment of occupational exposure to COVID-19, prior history of stress and mental health conditions, new personal and family stressors arising since the pandemic onset, and current presenting problems including increased use of alcohol or drugs.	83/85
People who test positive for COVID-19 have to cope with fear, anxiety and uncertainty about their condition, as well as physical discomfort and separation from loved ones.	86/88
For those who have loved ones affected by COVID-19 they face worry and separation. People who experience the death of a family member often do not have the opportunity to be present in their last moments, or to hold funerals which can have a profound effect on grieving and impact mental health.	85/87
Some COVID-19 patients may experience stigma, discrimination and intimidation, possibly leading to them to hide the illness to avoid such discrimination, preventing them from seeking health care, and discouraging them from adopting healthy behaviors, all of which undermining efforts to control the pandemic while increasing levels of fear and depression for those patients and their families.	86/88
The elderly are at high risk of mental ill health due to the anticipated long periods of social distancing and the accompanying isolation and loneliness.	87/88
There may be a worsening of cognitive decline in older populations, who may be one of the last groups for whom lockdown measures are lifted.	85/87
Social isolation, reduced physical activity and reduced cognitive stimulation all increase the risk of cognitive decline and dementia, and for some there is an inability to understand and follow public health advice.	81/84
In humanitarian settings affected by conflict and natural disaster,	77/81

the mental health challenges are huge but often overlooked.	
The current pandemic is adding an extraordinary level of stress to already vulnerable populations due to insecurity of housing and food, combined with feelings of helplessness and despair.	81/83
COVID-19 may further exacerbate existing mental health conditions, trigger new conditions, and limit the access of those with pre-existing conditions to the already scarce mental health services they had.	85/87
Fear, loneliness, sadness and anxiety are common as people are afraid of infection, dying, losing family members, losing their income or livelihoods, being socially isolated and separated from loved ones.	84/86
For those in psychiatric institutions and care homes the necessary infection prevention and control measures must be provided to stop the spread of COVID-19 while giving care for those affected by COVID-19, without discrimination.	85/87
Emergency mental health and psychosocial support should be scaled up especially for those most at risk of mental ill health during the pandemic including health care workers.	86/88
Mental health services and support needs to be incorporated in all aspects of the response including conducting national public health campaigns that promote mental health and psychosocial wellbeing, that explain COVID-19 and signpost mental health services, while address misinformation, stigma and discrimination for all citizens.	84/87

Sources: UGMH; my survey among 4,900 individuals conducted April 2020.

Table 2 % struggling to cope with the mental, physical, and personal impacts of the crisis. Select all that apply. (men/women)

The psychological and emotional impacts of dealing with the COVID-19 crisis	87/89
The intense workload	84/86
Social isolation	81/84
The physical risk of contracting the virus or passing it on to others	77/80
Balancing work and home-schooling/child care responsibilities	74/79

Sources: ICFJ; TCDJ/Columbia University; my survey among 4,900 individuals conducted April 2020.

As the COVID-19 pandemic extends, seclusion is a problem for older adults and for individuals from socially underprivileged backgrounds. (O'Connor et al., 2020) Patients with impaired mental functions do not have adequate cognitive abilities to identify the risk of contracting COVID-19 by circumventing associated activities. (Shao et al., 2020) Appropriate measures fostering public mental health may mitigate the acute stress reactions of affected people, and decrease the prevalence of psychological distress or posttraumatic stress disorder. (Zhu et al., 2020) Digital tools used in psychiatric clinical trials reduce direct contact with COVID-19 at-risk groups, without damaging treatment or methodological accuracy. (Nicol et al., 2020)

Table 3 % who say the COVID-19 outbreak is a … threat to their personal health

	Major	Minor	Not a threat
Men	54	30	16
Women	59	30	11
White	52	30	18
Black	57	29	14
Hispanic	55	29	16
18–29	49	33	18
30–49	52	32	16
50–64	56	32	12
65+	62	29	9
Postgrad	51	41	8
College grad	54	45	11
Some college	56	30	14
High school or less	58	23	19
Urban	59	34	7
Suburban	56	30	14
Rural	47	33	20

Sources: Pew Research Center; my survey among 4,900 individuals conducted April 2020.

Table 4 What were the most commonly reported negative emotional/psychological reactions to the COVID-19 pandemic? Select all that apply. (%) (men/women)

Increased anxiety	77/80
Exhaustion and burnout	73/76
More difficulty sleeping	69/73
A sense of helplessness	64/68
Dark and negative thoughts	22/25
Vicarious trauma from online exposure to human suffering	69/73
Feelings of grief and loss	67/71
Being more tearful than normal	61/66
Experiencing increased depression	46/50
Being affected by direct exposure to human suffering	61/66
Experiencing anxiety for the first time	19/22
Experiencing depression for the first time	17/19

Sources: ICFJ; TCDJ/Columbia University; my survey among 4,900 individuals conducted April 2020.

Table 5 Getting needed mental healthcare during COVID-19. (men/women)

Among those who needed and wanted to get care, % able to get help from a professional	37/41
% who reported experiencing stress, anxiety, and/or great sadness that was difficult to cope with alone	56/60

Sources: Commonwealth Fund; my survey among 4,900 individuals conducted April 2020.

Table 6 "Over the past 14 days I have been able to distance myself well from the stress/burden due to…" Select all that apply. (%) (men/women)

worries about my health.	21/25
worries of not being able to get medical care.	19/24
worries about being sick with COVID-19 when I noticed first signs of symptoms such as fever, dry cough, breathing problems, sore throat, loss of smell/taste, headache or diarrhea etc.	17/22
increased conflicts with people close to me.	16/20
childcare.	15/22
financial worries.	24/28
uncertainties regarding my job, training place, studies or school.	23/27
concerns for my own personal integrity	21/25
concerns for the integrity of family members or friends	20/26
fears of what the future will bring, or that I will not be able to cope with everything.	23/26
thoughts that it would be better to be dead.	4/5

Sources: Rek et al. (2020); my survey among 4,900 individuals conducted April 2020

Table 7 Thinking about the last couple of weeks of your own life, which of the following words best describe what you have been feeling the most? Up to three selected. (%) (men/women)

Worried	78/81
Anxious	66/69
Grateful	22/26
Optimistic	12/11
Depressed	28/30
Untroubled	2/1
Numb	3/2
Pessimistic	29/32

Sources: ARI; my survey among 4,900 individuals conducted April 2020.

The COVID-19 pandemic constitutes an important psychological stressor that considerably shapes the functioning of affected persons and organizations. (Troyer et al., 2020) Wellbeing is instrumental in supporting and enabling mental health during the COVID-19 outbreak. (Mesa Vieira et al., 2020) Numerous subclinical and lesser in relevance anxieties and depressions may require medical attention without necessitating a psychiatric diagnosis. (De Sousa et al., 2020) Psychotherapy is a significant treatment measure for individuals showing symptoms of infectious diseases leading to serious social harm. (Liu et al., 2020) Psychotherapy services are being tremendously reduced as personnel are reorganized to address COVID-19 emergency care. (Fineberg et al., 2020) Contact with COVID-19-related stressors is associated with a significant incidence of clinically appropriate levels of anxiety and depression symptoms. (Rudenstine et al., 2020)

5. Conclusions and Implications

There is a significant burden of depression symptoms related to the COVID-19 outbreak, causing distress immoderately to vulnerable persons. (Ettman et al., 2020) Psychological reactions to COVID-19 may intensify the link between experiencing such a contagious virus and functional impairment. (Gallagher et al., 2020) During the COVID-19 pandemic, mental health symptoms are persistent particularly among infected persons, individuals suspected to have contracted the virus, and people who possibly were in contact with positive patients. (Shi et al., 2020) Relevant anxiety as regards contracting COVID-19 is prevalent among unemployed individuals, performing unremunerative work by looking after children or dependent relatives, or pensioned off rather than among hired ones, and in persons who do not identify as man or woman. (Fisher et al., 2020) As limitations, this article focuses only on gender-based emotional responses to perceived seriousness and fear of infection associated with COVID-19. Further research should consider COVID-19 gender-based health worries, depressive symptoms, and extreme anxiety.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

Compliance with ethical standards

Ethical approval
All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent
An informed e-consent was obtained from individual participants. Study participants were informed clearly about their freedom to opt out of the study at any point of time without providing justification for doing so.

Animal studies statement verification
This article does not require animal studies verification.

Identifiable images and data statement verification
This article does not require identifiable images and data statement verification.

Data and materials availability
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Detection done by plagiarism software
This manuscript has an acceptable level of textual overlap with published articles.

Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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Gender-related Depression, Anxiety, and Psychological Stress Experienced during the COVID-19 Pandemic

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ABSTRACT. Empirical evidence on gender-related depression, anxiety, and psychological stress experienced during the COVID-19 pandemic has been scarcely documented in the literature. Using and replicating data from ACHA, ARI, GWI, Harvard Medical School, HMN, ICF, LAC/DMH, Pew Research Center, Rek et al. (2020), Statista, and UNC School of Medicine, I performed analyses and made estimates regarding mental health and well-being during the COVID-19 pandemic. Data were analyzed using structural equation modeling.

Keywords: gender; depression; anxiety; psychological stress; COVID-19

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1. Introduction

Psychological disorders and associated risk factors for mental health symptoms are common among individuals experiencing extensive COVID-19-related home- and community-based quarantine. (Guo et al., 2020) The risk perception and fear of getting infected with COVID-19 might lead to developing a high level of anxiety concerning such a highly contagious virus, resulting in relevant burden in ordinary life. (Petzold et al., 2020) Women tend to perceive the COVID-19 outbreak as a severe health issue and to accept and conform to restraining measures. (Galasso et al., 2020) Mobile medical tools enable mental health self-monitoring. (Sasangohar et al., 2020)

2. Conceptual Framework and Literature Review

Gender dissimilarities are identifiable in the acuteness of anxiety symptoms, self-assessed restlessness, and the capacity of resilience to COVID-19-related stress: women undergo more acute stress and anxiety symptoms, while men display superior resilience to stress. (Hou et al., 2020) Enhancing the degree of resilience for COVID-19 patients is instrumental in the control of psychological stress, leading to the optimization of mental healthcare, mainly as regards anxiety and depression. (Zhang et al., 2020) Generalized anxiety and depression symptoms, psychological distress, and contagious fear have escalated during the COVID-19 pandemic. (Bäuerle et al., 2020) Heightened COVID-19 perceived threat may result in intensified mental health symptoms, especially among persons having negative mental health symptomatology as a result of such a contagious virus. (Cardel et al., 2020) Decreased degrees of perceived social support are related to an elevated risk of COVID-19-related anxiety and depressive symptoms, in addition to unsatisfactory sleep quality. (Grey et al., 2020)

3. Methodology and Empirical Analysis

Using and replicating data from ACHA, ARI, GWI, Harvard Medical School, HMN, ICF, LAC/DMH, Pew Research Center, Rek et al. (2020), Statista, and UNC School of Medicine, I performed analyses and made estimates regarding mental health and well-being during the COVID-19 pandemic. Data were analyzed using structural equation modeling.

4. Results and Discussion

Resilience can protect individuals having COVID-19 mild symptoms against anxiety and depression. (Zhang et al., 2020) Psychosocial stressors of young people throughout the COVID-19 outbreak comprise life disruption (e.g., inconvenience in obtaining essential supplies and discontinuations in travel plans and public events), while financial and interpersonal stressors encompass separation from the loved ones, financial strain, and job loss. (Kujawa et al., 2020) Old age constitutes a major risk for COVID-19 complications, while being negatively associated with anxiety and depression. (Palgi et al., 2020) COVID-19-related anxiety, overburdened fear of passing away and of losing colleagues, family members, and friends, loss of social integration and of job, and homelessness constitute main social stressors that possibly bring about serious mental illnesses in previously healthy individuals and shape the mentally ill condition. (Kavoor, 2020) (Tables 1–12)

Table 1 The emotional and mental impact of the COVID-19 pandemic on well-being: How individuals are responding to the stressors of isolation and quarantine. (men/women)

88%/90%	are frustrated with not being able to do what they normally enjoy doing
86%/88%	are worried about their own health
82%/85%	are worried about the health of loved ones
78%/82%	feel that the anxiety and depression related to the emotional impact of the COVID-19 pandemic push them into the clinical category of what is diagnosable as a mental health condition

Sources: UNC School of Medicine; Harvard Medical School; my survey among 5,200 individuals conducted April 2020

Table 2 "Over the past 14 days I..." Select all that apply. (%) (men/women)

have consumed substantially more alcohol than usual.	14/9
have smoked considerably more cigarettes than usual.	12/10
have consumed considerably more drugs (e.g. tranquilizers, sleeping pills or stimulants) than usual.	9/5
have felt a strong desire to consume addictive substances (alcohol, cigarettes, drugs).	13/10
have not been able to control my use of addictive substances (alcohol, cigarettes, drugs).	12/9
have had the excessive urge to wash and/or disinfect my hands again and again so that I do not become ill from germs or contamination.	11/13
have had the excessive urge to wash and/or disinfect my hands again and again so that I do not pass on germs or contamination to other people.	9/12
have visited my GP more often.	7/8
have avoided visits to my GP.	27/24

Sources: Rek et al. (2020); my survey among 5,200 individuals conducted April 2020.

Table 3 Individuals who say their mental health has been affected to the following extent during the outbreak. (%) (men/women)

Greatly worsened	50/52
Slightly worsened	40/41
Not been affected	8/6
Slightly improved	2/1
Greatly improved	0/0

Sources: GWI; my survey among 5,200 individuals conducted April 2020.

Table 4 How has your access to mental healthcare been affected by the COVID-19 pandemic? (%) (men/women)

Much more difficult	62/62
Somewhat more difficult	25/27
No significant change in access	10/9
Less difficult	3/2

Sources: HMN; ACHA; my survey among 5,200 individuals conducted April 2020.

Table 5 % saying that, as a result of the COVID-19 outbreak, their personal life has …

	Changed in a major way	Changed, but only a little bit	Stayed about the same
Men	57	35	8
Women	62	26	12
White	54	32	14
Black	67	24	9
Hispanic	63	26	11
18–29	64	29	7
30–49	62	29	9
50–64	58	30	12
65+	55	31	14
Postgrad	57	32	11
Bachelor's degree	61	29	10
Some college	63	28	9
High school or less	66	26	8
Upper income	54	34	12
Middle income	61	29	10
Lower income	66	27	7

Sources: Pew Research Center; my survey among 5,200 individuals conducted April 2020

Table 6 The need for stronger mental health recovery infrastructure. (%, relevance) (men/women)

Trying to get tested for or being diagnosed with COVID-19, having greater concern for family, and higher perceived likelihood of getting sick are all significantly related to bad mental health.	87/89
Due to financial and health strains caused by the COVID-19, poorer mental health is reported, associated with increases in smoking and drinking behaviors.	75/73

Sources: ICF; my survey among 5,200 individuals conducted April 2020.

The likelihood that COVID-19 may lead to critical illness and death constitutes the mainstay of public anxiety. (Murthy et al., 2020) People with psychiatric disorders are significantly affected by the COVID-19 lockdown. (De Sousa et al., 2020) Psychiatric patients may not comprehend, consider truthful, and act in accordance with COVID-19-related self-isolation and self-protection measures. (Moesmann Madsen et al., 2020) Psychiatrists grapple with the mental health consequences of suppression endeavors, economic hardship, and insufficient access to essential supplies during the COVID-19 pandemic. (Nicol et al., 2020) Older individuals have a stronger positive correlation between the acuteness of depressive symptoms and elevated alcohol consumption throughout the COVID-19 outbreak. (Tran et al., 2020)

Table 7 % who fall into each category of psychological distress

	High distress	Medium distress	Low distress
Men	24	66	10
Women	30	55	15
White	24	67	9
Black	31	55	14
Hispanic	28	60	12
18–29	22	64	14
30–49	25	59	16
50–64	28	60	12
65+	31	60	9
Bachelor's+	23	61	16
Some college	26	61	13
High school or less	29	60	11
Upper income	19	72	9
Middle income	25	61	14
Lower income	32	52	16

Sources: Pew Research Center; my survey among 5,200 individuals conducted April 2020.

Table 8 Understanding the mental health and emotional aspects of COVID-19. (%, yes) (men/women)

You find increased concerns, anxieties and fears surround your health and safety, and that of family and friends.	87/89
You find that isolation, job insecurities and more remain pervasive in daily life.	69/72
Adjusting to the current conditions can bring about many stressful challenges, which require periods of adjustment.	73/75
Emotional stress and fear related to COVID-19 can be just as debilitating as any physical symptom.	78/80
Your emotional health can have a direct impact on your physical health.	75/78
Excessive worrying can affect your sleep, appetite and desire for activity, negatively affecting your physical health and ability to fight infection.	77/79
When you find yourself having severe depressive thoughts due to fear and/or isolation, you are afraid you might, intentionally or unintentionally, harm yourself or someone else.	14/17

Sources: LAC/DMH; my survey among 5,200 individuals conducted April 2020.

Table 9 Are you wondering whether you are infected with COVID-19? (%) (men/women)

I'm wondering about this a lot.	58/62
I'm wondering about this a little.	21/24
I'm mostly not wondering about this.	14/10
I'm not wondering about this at all.	7/4

Sources: Statista; my survey among 5,200 individuals conducted April 2020.

Table 10 Symptoms of mental health conditions and levels of psychological well-being (%, yes) (men/women)

Depression	62/65
Suicidal ideation	7/9
Anxiety	74/77
Flourishing	4/2
Serious psychological distress	24/28
Loneliness	39/43
Resilience	11/13

Sources: HMN; ACHA; my survey among 5,200 individuals conducted April 2020.

Table 11 Mental health and physical well-being since COVID-19 shutdown. (%) (men/women)

A lot/A little better than six weeks ago.	2/2
No change.	10/6
A little/A lot worse than six weeks ago.	88/92

Sources: ARI; my survey among 5,200 individuals conducted April 2020.

Table 12 Common experienced reactions related to COVID-19. Select all that apply. (%) (men/women)

General apprehension, anxiety and fear of the unknown.	84/86
Fears around your health and the health of loved ones.	82/85
Sadness, loss of interest, hopelessness and apathy.	76/79
Financial and economic concerns.	73/76
Stress and irritation towards those around you.	67/70
Feelings of grief, detachment and tendency to distance from people and activities.	64/69
Confusion and indecision surrounding decision-making and lifestyle adjustments.	62/65
Existential stress, self-doubt or thoughts and feelings related to decreased sense of self-worth.	49/52

Sources: GWI; my survey among 5,200 individuals conducted April 2020.

Patients feeling responsible for COVID-19 transmission need prompt and adequate psychological counseling. (Liu et al., 2020) Keeping individuals free from negative emotions and decreasing the risk of depression by harnessing supportive techniques is instrumental in healthcare. (Fineberg et al., 2020) Fear of contracting COVID-19 and skepticism as regards the future accelerate anxiety- and stress-related disorders. (Troyer et al., 2020) Experiencing an adverse impact associated with COVID-19 restrictions is more plausibly for urban dwellers, for lonely individuals, for students, for jobless, for those performing unremunerative work by looking after children or dependent relatives, and for women than men. (Fisher et al., 2020) Policies concerning physical distancing can aggravate the symptoms of individuals with psychiatric disorders during the COVID-19 pandemic. (Mesa Vieira et al., 2020)

5. Conclusions and Implications

Policies adopted to prevent the spread of COVID-19 have resulted in new life stressors and disorganized ordinary activities, possibly leading to physical, emotional, and psychological harm. (Ettman et al., 2020) Quarantine measures and impediments in resuming work are related to psychological distress in affected persons and groups, configuring likely prolonged COVID-19-related mental health outcomes. (Shi et al., 2020) Losing job as a result of the COVID pandemic is related to heightened depressive symptomatology severity, while being quarantined or in isolation is associated with less anxiety. (Trindade and Ferreira, 2020) Mental health may be affected dissimilarly by COVID-19 experience, comprising probable, confirmed, or knowing someone with diagnosis, and coming into contact with a person who died from such a contagious virus. (Gallagher et al., 2020) As limitations, this article focuses only on gender-related depression, anxiety, and psychological stress experienced during the COVID-19 pandemic. Further research should consider gender-related irritability, confusion, anger, and frustration associated with COVID-19 infection and mortality.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

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Animal studies statement verification
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Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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Gender Differences in COVID-19 Sentiments, Attitudes, Habits, and Behaviors: An Empirical Research

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ABSTRACT. I draw on a substantial body of theoretical and empirical research on gender differences in COVID-19 sentiments, attitudes, habits, and behaviors, and to explore this, I inspected, used, and replicated survey data from AMS, KFF, Ginger, GWI, Harvard Medical School, MQ, ONS, PHQ-9, UNC School of Medicine, and UPMC, performing analyses and making estimates regarding the impact of the COVID-19 pandemic on subjective mental well-being. Structural equation modeling was used to analyze the data and test the proposed conceptual model.

Keywords: gender; COVID-19; sentiment; attitude; habit; behavior

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1. Introduction

COVID-19-related personalized methods are appropriate for affected persons and groups at significant risk of elevated psychological distress and associated mental health issues. (Guo et al., 2020) Self-efficacy presents key important adverse correlations with COVID-19 anxiety. (Petzold et al., 2020) Women display more symptoms of depression, anxiety, and post-traumatic stress disorder, and more susceptibilities of seclusion and decreased spiritual well-being, in opposition to men. (Ausín et al., 2020) Increased generalized anxiety and depression symptoms, together with psychological distress, are more expected to occur in women during the COVID-19 pandemic. (Bäuerle et al., 2020)

2. Conceptual Framework and Literature Review

Women are more preoccupied about the health effects of the COVID-19 pandemic and more appreciative as regards activity-restraining public policy steps. (Galasso et al., 2020) Supplying required social support to patients having COVID-19 mild symptoms and optimizing their freedom from doubt concerning recovery that attempts to further resilience may be adequate and assist in making their negative psychological status less severe. (Zhang et al., 2020) The COVID-19 pandemic negatively influences the health of infected individuals, of quarantined or isolated persons, of hospitalized patients and their loved ones, and of the bereaved of people who passed away of such a contagious virus. (van der Velden et al., 2020) Psychosocial situations of life disorganization and financial and interpersonal tensions are thoroughly related to internalizing symptoms during the COVID-19 outbreak. (Kujawa et al., 2020) Preventative measures (e.g., washing hands, physical distancing, and wearing masks) are associated with decreased degrees of psychological distress, anxiety, and depression. (Cortés-Álvarez et al., 2020) Unparalleled rates of job loss and COVID-19-related infections and deaths are spiraling upwards. (Lee et al., 2020)

3. Methodology and Empirical Analysis

I inspected, used, and replicated survey data from AMS, KFF, Ginger, GWI, Harvard Medical School, MQ, ONS, PHQ-9, UNC School of Medicine, and UPMC, performing analyses and making estimates regarding the impact of the COVID-19 pandemic on subjective mental well-being. Structural equation modeling was used to analyze the data and test the proposed conceptual model.

4. Results and Discussion

Underlying health conditions may make affected persons susceptible to an acute course of illness and more significant risk for COVID-19. (Cardel et al., 2020) Developing chronic medical conditions associated with elevated risk of death or contact with COVID-19 cases may lead to heightened risk for anxiety and depressive symptoms. (Palgi et al., 2020) Growing alcohol consumption is related to anxiety and depression, possibly alleviating and handling negative emotional states. (Tran et al., 2020) There is an escalating straining between enhancing psychiatric care and decreasing the COVID-19 health-related consequences. (Moesmann Madsen et al., 2020) Individuals having anxiety disorders display increased COVID-related stress. (Asmundson et al., 2020) (Tables 1–7)

Table 1 How much has your wellbeing and functioning been different in the following ways in the past 4 weeks, compared to the way it was before the beginning of the COVID-19 pandemic? (%) (men/women)

	Not at all	A little bit	Moderately	A lot	Extremely
More worried about your finances	6/4	10/8	16/15	23/25	45/48
More anxious or ill at ease	5/4	11/9	18/16	27/28	39/43
Having more difficulty concentrating	5/3	10/8	18/16	28/29	39/44
Being less productive	9/8	12/10	19/18	28/30	32/34
More worried about your personal health or safety	6/5	11/9	22/16	26/28	35/42
Being more bored	7/6	11/9	19/17	26/27	37/41
More difficulty sleeping	4/3	8/6	19/17	25/27	44/47
Feeling more lonely or isolated	2/2	8/7	17/14	24/26	49/51
Feeling more down or depressed	3/2	10/7	16/14	26/28	45/49
More worried about getting necessities like groceries or medications	3/2	11/8	19/17	28/30	39/43
More worried about the health and safety of family members or friends	3/2	10/8	19/17	26/28	42/45
More frustrated about not being able to do what you usually enjoy doing	3/3	9/7	21/19	27/30	40/41
More worried about possible breakdown of society	2/2	11/9	16/13	24/27	47/49
Feeling more angry or irritated	3/2	9/7	17/14	26/28	45/49
Feeling that the future seems darker or scarier than before	4/3	10/7	19/16	27/31	40/43
Feeling more grief or sense of loss	4/2	11/8	20/18	26/29	39/43

Sources: UNC School of Medicine; Harvard Medical School; my survey among 4,700 individuals conducted April 2020.

Table 2 The COVID-19 pandemic will likely have negative psychosocial effects at both individual & societal levels. Select all that apply. (%) (men/women)

Acute	
Fear and panic about acquiring or having the illness which can significantly impact human behavior and socialization, sometimes towards maladaptive and risky activities such as excessive drinking or using substances	87/89
Frustration and boredom from isolation and quarantine, limited physical contact with loved ones, and loss of usual daily routine	82/85
Stress related to inadequate supplies (i.e. food, medications, personal protective equipment and access to routine medical care as evidenced by panic shopping and hoarding of essential items)	76/79
Unclear, insufficient and constantly changing information about the pandemic from public health authorities which may increase fear/anxiety	73/76
Chronic	
Stigmatization, discrimination, marginalization, and avoidance of certain individuals out of fear and suspicion (i.e. "quarantined" individuals, elderly, healthcare workers, ethnic/religious groups, people with psychiatric illness and substance use disorder)	66/69
Coping with grief from losing loved ones to illness	68/71
Financial loss (i.e. healthcare costs, absence from work, economic burdens)	68/72
Reintegration to normal routines and societal functions	63/67

Sources: UPMC; my survey among 4,700 individuals conducted April 2020.

Table 3 % who have experienced each of the following due to worry or stress related to the COVID-19 outbreak. Select all that apply. (men/women)

Trouble falling or staying asleep, or sleeping too much	44/48
Poor appetite or overeating	39/42
Difficulty in controlling the temper	26/29
Frequent headaches or stomachaches	13/17
Increasing alcohol or drug use	11/7
Worsening chronic conditions like diabetes or high blood pressure	13/15

Sources: KFF; my survey among 4,700 individuals conducted April 2020.

Patients with a mental illness may be extremely at risk to both the adverse health consequences of COVID-19 and the mental health effects of public medical endeavors to contain its transmission. (Nicol et al., 2020) Personal psychoneuroimmunity prevention strategies (e.g., the persistent routine of washing hands and wearing face masks) and organizational ones (e.g., enhancement of workplace hygiene and sensitivities from the firm on physical health status) are related to decreased psychiatric symptoms in employees who return to work after COVID-19 pandemic quarantine and lockdown. (Tan et al., 2020) Domestic violence escalated throughout the COVID-19 outbreak, possibly resulting in anxiety and depressive symptoms. (Gunnell et al., 2020)

Table 4 What individuals are doing to support their mental wellbeing during the COVID-19 pandemic. Select all that apply. (%) (men/women)

Reading.	19/22
Doing things I enjoy (hobbies/fun activities).	28/26
Watching TV.	49/52
Listening to music.	35/33
Watching movies/Netflix/YouTube.	59/62
Surfing the Internet/computer.	61/63
Playing video games/PS4.	8/2
Playing games (board games/cards).	3/4
Learning new skills/an instrument.	3/2
Listening to the radio/podcasts.	6/4
Playing musical instruments.	2/2
Gardening.	6/4
Household chores (cooking/cleaning).	24/32
Social media/Keeping in touch online.	69/71
Talking on the phone/Video calls.	25/27
Texting.	19/22
Email.	57/59
Exercising/Fitness.	20/25
Walking.	22/24
Running.	5/7
Riding my bike.	5/6
Staying in the garden.	6/7
Going outside/Getting fresh air.	25/27
Watching the nature.	6/7
Mindfulness/Meditation.	2/3
Keeping myself distracted/Not thinking too much about it.	4/3
Relaxing.	13/15
Carrying on/Trying to act normally.	7/5
Varying my daily routine.	24/26
Walking the dog.	4/3
Not watching the news.	5/4
Being kept updated/Watching the news.	26/29
Staying away from social media.	4/3
Volunteering.	3/5
Sleeping.	8/9

Sources: AMS; MQ; my survey among 4,700 individuals conducted April 2020.

Table 5 What motivated you to use a technology-based emotional or mental health service such as online counseling or a mental health app? (%) (men/women)

I feel like I need to do something to deal with COVID-19 stress	68/70
My regular counselor moved to online sessions	32/30

Sources: Ginger; my survey among 4,700 individuals conducted April 2020

Table 6 Assessing the degree of an individual's depressive symptoms over the previous two weeks (%, yes) (men/women)

Have you been bothered by having little interest or pleasure in doing things?	77/80
Have you been bothered by feeling down, depressed or hopeless?	74/78
Have you been bothered by having trouble falling or staying asleep, or sleeping too much?	61/64
Have you been bothered by feeling tired or having little energy?	64/67
Have you been bothered by having a poor appetite or overeating?	60/64
Have you been bothered by feeling negative about yourself or that you are a failure or have let yourself or your family down?	61/64
Have you been bothered by having trouble concentrating on things, such as reading the newspaper or watching television?	55/58
Have you been bothered by moving or speaking so slowly that other people could have noticed; or being so fidgety or restless that you have been moving around a lot more than usual?	49/53
Have you had thoughts that you would be better off dead, or of hurting yourself in some way?	5/7

Sources: ONS; PHQ-9; my survey among 4,700 individuals conducted April 2020.

Table 7 Individuals who say they have experienced an increase in the following feelings since the beginning of the COVID-19 outbreak. Select all that apply. (%) (men/women)

Anxiety	75/79
Stress	79/82
Loneliness	21/24
Connection to others	16/18
Depression	20/23
Panic	25/28
Compassion	35/39
Gratitude	26/28
Relaxation	3/3

Sources: GWI; my survey among 4,700 individuals conducted April 2020.

Facilities to attend to psychosocial needs and provide specialized support services throughout direct patient encounters in emergency departments and critical care units are significantly curbed during the COVID-19 pandemic. (Pfefferbaum and North, 2020) Psychiatrists have to provide specialized care services for any individual, infected or not, who has COVID-19-related fear and apprehension. (De Sousa et al., 2020) Inpatient psychotherapeutic treatment may be needed for acute somatoform disorders typically with comorbid anxiety and depressive disorders. (Joos, 2020) The setting up and expansion of realistic mental health screening and treatment strategies for COVID-19 frontline medical staff are needed. (Troyer et al., 2020)

5. Conclusions and Implications

Mental health is sensitive to the COVID-19 pandemic, a mass traumatic event generating notable negative social and economic consequences. (Ettman et al., 2020) Leading-edge evidence-based interventions generally focus on distinct mental disorders, but heterogeneous psychological reactions and mental disorders are undergone by affected persons and groups struggling with the COVID-19 epidemic. (Yang et al., 2020) Grasping how COVID-19 experiences are dissimilarly associated with mental health impacts customizing treatment and prevention endeavors. (Gallagher et al., 2020) Being in isolation or quarantined is linked to decreased fear of contracting COVID-19 in addition to more compliance with specific medication. (Trindade and Ferreira, 2020) Household savings are related to a considerably heightened risk of anxiety during the COVID-19 outbreak. (Rudenstine et al., 2020) As limitations, this article focuses only on gender differences in COVID-19 sentiments, attitudes, habits, and behaviors. Further research should consider gender-based differences of contagious negative emotions, notable psychological distress, and mental health burden during the COVID-19 outbreak.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

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Data and materials availability
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Detection done by plagiarism software
This manuscript has an acceptable level of textual overlap with published articles.

Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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COVID-19 Gender-based Health Worries, Depressive Symptoms, and Extreme Anxiety

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ABSTRACT. Employing recent research results covering COVID-19 gender-based health worries, depressive symptoms, and extreme anxiety, and building my argument by drawing on data collected from ACHA, Ginger, GMU/CCCC, HMN, NHS, Pew Research Center, Statista, Strada Education Network, UPMC, and YPCCC, I performed analyses and made estimates regarding psychological effects and associated factors of COVID-19 perceived risk. Structural equation modeling was used to analyze the collected data.

Keywords: COVID-19; gender; health worry; depressive symptom; extreme anxiety

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1. Introduction

Social connectedness and mental support should be furthered and supplied to isolated and quarantined individuals during the COVID-19 pandemic. (Guo et al., 2020) The integration of nervous tension, adverse emotions, social backing, and treatment information are negatively related to various features of COVID-19 anxiety. (Petzold et al., 2020) COVID-19 has more significant psychological consequences on women than on men. (Ausín et al., 2020) Negative psychological outcomes considerably influence the acceptance of the COVID-19 pandemic-related behaviors. (Usher et al., 2020)

2. Conceptual Framework and Literature Review

Gender dissimilarities in psychological and behavioral components may clarify inconsistencies in perceptions and attitudes on COVID-19-related matters. (Galasso et al., 2020) Depression is considerably configured by having the loved ones infected with COVID-19 and psychological resilience levels. (Zhang et al., 2020a) The COVID-19 pandemic has given rise to questions as regards general public health and has resulted in various psychological and mental disorders. (Salari et al., 2020) Significant levels of COVID-19-related traumatic events and/or acuteness are experienced by young individuals, women, and Black teenagers. (Kujawa et al., 2020) Women undergo severe psychological distress of the COVID-19 crisis and important levels of stress, anxiety, and depression. (Cortés-Álvarez et al., 2020) Perceiving COVID-19 as a serious threat detrimentally impacts certain characteristics of mental health, especially in women. (Cardel et al., 2020) Seniors who are at more critical risk for COVID-19 complications present intense resilience to psychiatric disorders related to the current pandemic. (Palgi et al., 2020) Both mental health issues and increased alcohol consumption develop out of standard risk determinants (e.g., contingent stressors) throughout the COVID-19 outbreak. (Tran et al., 2020)

3. Methodology and Empirical Analysis

Building my argument by drawing on data collected from ACHA, Ginger, GMU/CCCC, HMN, NHS, Pew Research Center, Statista, Strada Education Network, UPMC, and YPCCC, I performed analyses and made estimates regarding psychological effects and associated factors of COVID-19 perceived risk. Structural equation modeling was used to analyze the collected data.

4. Results and Discussion

Immediately when COVID-19 permeates a community, its citizens may contract the highly contagious virus, burdening the healthcare system, generating fear, and ruining the economy, as numerous employees will be out of work. (Bauchner and Sharfstein, 2020; Douglas et al., 2020) Both COVID-19 infected patients and the general affected population may develop severe depressive symptoms. (Zhang et al., 2020b) Hospital admissions for severe psychiatric disorders in COVID-19 patients require an unshared area in the psychiatric ward or a critical care facility supported by psychiatric staff. (Percudani et al., 2020) Prolonged and severe COVID-19-related mental disturbances demand personal psychological support. (Joos, 2020) (Tables 1–8)

Table 1 The effects of COVID-19 can potentially exacerbate pre-existing mental illnesses. (%, relevance, yes) (men/women)

Mood disorders	
Since mood disorders are strongly reactive to stress, exacerbation of mood symptoms and relapses of manic and depressive episodes may occur.	82/85
Anxiety, stress and somatic disorders	
Unprecedented ongoing spread of virus, absence of definitive treatment, and recorded deaths can easily exacerbate anxious rumination (i.e. getting infected, loved ones falling ill).	86/88
Decreased perception of health and excessive worry even when minor COVID-19 related symptoms are present could have further somatic manifestations.	79/82
Triggering for individuals who have a history of other traumatic experiences.	83/86
Obsessive-compulsive disorder	
Tendency for biased information processing may increase sensitivity to panic related to pandemic threats and worsen negative behaviors.	84/86
Potential amplification of contamination obsessions and cleaning/washing compulsions with complications of functional impairments, dermatitis, and inhalation injuries from overuse of toxic cleaning supplies.	74/77
Psychosis	
Intensifying media coverage about the outbreak could worsen paranoia and shape delusional thinking (i.e. delusional parasitosis, medical/government mistrust, conspiracy theories related to infectious outbreak, misattribution of physical symptoms).	73/76
Substance use disorders	
Severe anxiety can precipitate relapse into alcohol and substance use in susceptible individuals trying to adapt to elevated stress levels.	67/69
Reduced access to alcohol due to business closures may lead to increased rates of acute withdrawal syndromes and presentation to hospitals for management of withdrawal (ambulatory or inpatient) or avoidance to reach out for help which could lead to serious withdrawal manifestations in vulnerable people.	64/67
Vaping/Smoking: Smoking suppresses immune function in the lungs and triggers inflammation. Both long-term smokers and e-cigarette users are at a heightened risk of developing chronic lung conditions, which have been associated with more severe cases of COVID-19.	63/66
Eating disorders	
Individuals may be at high risk of relapsing or worsening symptoms due to infection fears, the effect of isolation, and the shortage of adequate support through treatment.	66/67
Infection fears tend to increase the feeling of not being in control	65/68
People with eating disorders often manage a loss of control with a significant disruption of dietary or other extreme weight control behaviors such as restricting or binge-eating episodes.	62/65
The quarantine, creating the separation and restriction of movement, can contribute to the maintenance of the eating disorder psychopathology.	60/64

Sources: UPMC; my survey among 4,600 individuals conducted April 2020.

Table 2 The impact of the COVID-19 pandemic on collective mental health (%, relevance, yes) (men/women)

Vulnerable populations have been particularly hard-hit, as COVID-19 has worsened already-present health inequities for older adults, low-income families, and people in substandard or congregate living conditions.	87/89
Once physical distancing measures are lifted, many people will still approach social activity with vigilance.	84/87
Public transportation, office environments, and other public fora may still cause anxiety for large swaths of the population.	77/80
If anxiety is not addressed, it may lead to a diagnosable mental health disorder or endure for years to come.	79/82
Even when life does return to normal, perceived loss of control and sustained feelings of helplessness across social, economic, and health dimensions may persist.	76/79
COVID-related stress and anxiety are causing serious sleep disruptions. short-term consequences of sleep disruption include increased stress, emotional distress and mood disorders, and cognitive, memory, and performance deficits. Chronic sleep deprivation is associated with a number of physical and psychiatric problems, with men experiencing an increase in mortality.	75/78
Social isolation is creating barriers to recovery from substance use disorder.	67/69
Individual and collective grief from having lost loved ones and over having survived the pandemic when others didn't.	62/65

Sources: Ginger; my survey among 4,600 individuals conducted April 2020

Table 3 Over the past 2 weeks, have you been concerned with the following? Select all that apply. (%) (men/women)

How long the pandemic will last	84/86
How many more people will become infected	82/85
People you care about contracting COVID-19	86/88
Your personal sense of safety and security	86/87
Personally contracting COVID-19	86/88

Sources: HMN; ACHA; my survey among 4,600 individuals conducted April 2020.

Individuals with psychiatric disorders may have comorbid medical conditions (e.g., cardiovascular disease or diabetes), increasing the risk for COVID-19 severe complications. (Nicol et al., 2020) Complimentary mental health services through telepsychiatry can be provided throughout the COVID-19 pandemic. (De Sousa et al., 2020) Contiguous administration of psychiatric wards may elevate the risk of COVID-19 infection by the respiratory tract, proximate interaction, and nosocomial clustering. (Wenjing et al., 2020) Seniors are more unprotected against COVID-19 post-infectious neurocognitive complications. (Troyer et al., 2020) Financial savings can offer stability and safety for economically disrupted households. (Rudenstine et al., 2020)

Table 4 In the past two weeks, how often have you… (%) (men/women)

	Rarely or none of the time (less than 1 day)	Some or a little of the time (1–2 days)	Occasionally or a moderate amount of time (3–4 days)	Most or all of the time (5–7 days)
felt nervous, anxious, or on edge?	4/3	9/7	29/28	58/62
felt depressed?	3/3	10/8	31/28	56/61
felt lonely?	4/3	9/7	32/29	55/61
felt hopeful about the future?	3/3	8/7	30/28	59/62
had trouble sleeping?	4/3	10/8	31/29	55/60
had a physical reaction when thinking about the outbreak?	6/5	9/7	32/29	53/59

Sources: Pew Research Center; my survey among 4,600 individuals conducted April 2020.

Table 5 Please select the words below that best describe the way you feel right now about the COVID-19 outbreak. Please select all that apply. (%) (men/women)

Concerned	76/79
Cautious	67/71
Worried	69/73
Anxious	58/61
Hopeful	19/17
Afraid	33/36
Scared	29/32
Optimistic	16/14
Angry	9/12
Confused	18/22
Confident	13/11
Determined	10/8
Resigned	5/9
Surprised	8/9
Supported	6/5

Sources: Strada Education Network; my survey among 4,600 individuals conducted April 2020.

Table 6 How likely do you think it is for you to get infected by COVID-19? (%) (men/women)

Very likely	14/17
Fairly likely	24/26
Neither, nor	22/21
Fairly unlikely	24/22
Very unlikely	15/13
Have already been ill	1/1

Sources: Statista; my survey among 4,600 individuals conducted April 2020.

Table 7 Do you feel any of the following emotions when you think about COVID-19? (%, yes) (men/women)

Compassionate	76/79
Hopeful	19/17
Anxious	58/61
Afraid	33/31
Helpless	56/53
Overwhelmed	62/65
Bored	25/27
Angry	18/22
Disgusted	27/29
Depressed	52/55
Lonely	34/36
Panicked	36/39
Confused	18/22

Sources: YPCCC; GMU/CCCC; my survey among 4,600 individuals conducted April 2020.

Table 8 Short Warwick-Edinburgh Mental Wellbeing Scale statements (%, yes) (men/women)

I've been feeling optimistic about the future.	53/51
I've been feeling useful.	48/50
I've been feeling relaxed.	9/7
I've been dealing with problems well.	14/12
I've been thinking clearly.	12/10
I've been feeling close to other people.	68/70
I've been able to make up my own mind about things.	27/25

Sources: NHS; my survey among 4,600 individuals conducted April 2020.

The mental health effects of the COVID-19 pandemic, a large-scale distressing event, are not uniformly dispersed throughout populations. (Ettman et al., 2020) Since the COVID-19 outbreak, companies have confronted hardships and sacked their employees, educational institutions have been shut down for indefinite periods, compelling parents and caregivers to stop working temporarily, the stock market has undergone major downturns, affecting retirement funds, and thus cumulative perpetual economic stress is related to subsequent higher suicide rates. (Reger et al., 2020)

5. Conclusions and Implications

Fear of contracting COVID-19 influences depressive symptoms and anxiety severity. (Trindade and Ferreira, 2020) COVID-19-related perceived stress may be instrumental in escalating unsatisfactory mental health outcomes. (Gallagher et al., 2020) Men and unmarried individuals present a more significant risk for depression, inadequate sleep, and severe stress symptoms during the COVID-19 pandemic. (Shi et al., 2020) Persons for whom the COVID-19-related restrictions have generated adverse consequences on ordinary activities tend to display clinically relevant signs of anxiety and depression, self-injury ideation, and elevated irascibility. (Fisher et al., 2020) Women, jobless, families with low incomes, and people living in minority communities are extremely susceptible for exposure to COVID-19-related stressors, possibly experiencing depressive symptoms by having depleted resources. (Fitzpatrick et al., 2020) As limitations, this article focuses only on COVID-19 gender-based health worries, depressive symptoms, and extreme anxiety. Further research should consider gender-based emotional responses to perceived seriousness and fear of infection associated with COVID-19.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

Compliance with ethical standards

Ethical approval
All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent
An informed e-consent was obtained from individual participants. Study participants were informed clearly about their freedom to opt out of the study at any point of time without providing justification for doing so.

Animal studies statement verification
This article does not require animal studies verification.

Identifiable images and data statement verification
This article does not require identifiable images and data statement verification.

Data and materials availability
All research mentioned has been published and data is available from respective outlets.

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The author confirms being the sole contributor of this work and approved it for publication.

Conflict of interest statement
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Detection done by plagiarism software
This manuscript has an acceptable level of textual overlap with published articles.

Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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Gender Differences in Behavior and Attitudes toward COVID-19: Perceived Risk of Infection, Negative Cognitive Emotions, and Sleep Disturbances

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ABSTRACT. I develop a conceptual framework based on a systematic and comprehensive literature review on gender differences in behavior and attitudes toward COVID-19. Building my argument by drawing on data collected from AMS, Benenden Health, CDC, GWI, Harvard Medical School, ICF, MQ, Rek et al. (2020), Statista, and UNC School of Medicine, I performed analyses and made estimates regarding perceived risk of infection, negative cognitive emotions, and sleep disturbances. The data for this research were gathered via an online survey questionnaire and were analyzed through structural equation modeling on a sample of 4,800 respondents.

Keywords: gender; behavior; attitude; COVID-19; infection; sleep

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1. Introduction

The COVID-19 outbreak can influence mental health in affected individuals and heterogeneous communities (Salari et al., 2020): the elimination of adverse emotions may shape subsequent anxiety and depression symptoms. (Petzold et al., 2020) Information regarding COVID-19 and health promotion should be disseminated adequately by various channels to decrease household conflict and develop mental health. (Guo et al., 2020)

2. Conceptual Framework and Literature Review

Increased rates of anxiety, depression, restlessness, suicide ideation, and post-traumatic stress were identifiable in the early stages of the COVID-19 crisis. (O'Connor et al., 2020) COVID-19 psychological drivers may lead to anxiety as a result of isolation and apprehension, resulting in insufficiencies of basic supplies. (Usher et al., 2020) Isolation as a result of the COVID-19 physical distancing policy interventions constitutes the leading risk factor for anxiety and depression. (Palgi et al., 2020) The pervasiveness of anxiety and depression during the COVID-19 pandemic may be related to an escalation in internalizing symptoms. (Kujawa et al., 2020) By being more in consonance with washing hands, wearing face masks, and physical distancing, women are less expected to transmit COVID-19, if infected with such a contagious virus. (Galasso et al., 2020) COVID-19 patients may have decreased levels of resilience in contrast to ordinary adults throughout the treatment stage. (Zhang et al., 2020a) Elderly persons display greater stress and experience more significant COVID-19-related psychological distress. (Cortés-Álvarez et al., 2020)

3. Methodology and Empirical Analysis

Building my argument by drawing on data collected from AMS, Benenden Health, CDC, GWI, Harvard Medical School, ICF, MQ, Rek et al. (2020), Statista, and UNC School of Medicine, I performed analyses and made estimates regarding perceived risk of infection, negative cognitive emotions, and sleep disturbances. The data for this research were gathered via an online survey questionnaire and were analyzed through structural equation modeling on a sample of 4,800 respondents.

4. Results and Discussion

The COVID-19 pandemic has brought about dropping of economic forecasts, as numerous countries are undergoing a recession. (Douglas et al., 2020) COVID-19-related experiences result in anxiety, depression, psychological distress, and functional impairment. (Gallagher et al., 2020) The COVID-19 outbreak and related preventive procedures have more significant psychological consequences on women with elevated levels of depressive symptoms, anxiety, perceived loneliness, and posttraumatic stress, leading to perceived risk of infection, negative cognitive emotions, and sleep disturbances. (Ausín et al., 2020) Individuals with (pre-existing) acute anxiety or depressive symptoms tend to escalate their alcohol consumption throughout the COVID-19 restrictions. (Tran et al., 2020) (Tables 1–11)

Table 1 COVID-19 health concerns and experiences. (%) (men/women)

How worried are you that your local hospital(s) will not have the resources to treat all patients infected with COVID-19?	
Very worried	68/72
Somewhat worried	19/18
Not too worried	9/8
Not at all worried	4/2
Are you very concerned, concerned, or not very concerned about the spread of COVID-19 within your community?	
Very concerned	72/75
Concerned	21/20
Not very concerned	7/5
How worried are you that someone in your immediate family might catch COVID-19?	
Very worried	58/62
Somewhat worried	29/28
Not too worried	8/7
Not at all worried	5/3
How likely do you think it is that you, personally, will get sick with COVID-19?	
Very likely	48/53
Somewhat likely	28/27
Not too likely	14/12
Not at all likely	10/8

Sources: ICF; my survey among 4,800 individuals conducted April 2020.

Table 2 % of respondents rating each COVID-19 pandemic-related emotional effect at least moderate in intensity (men/women)

More difficulty sleeping	49/52
More worried about the health and safety of family members or friends	68/71
Being less productive	41/43
More worried about your personal health or safety	59/62
More anxious or ill at ease	53/56
Feeling more down or depressed	46/48
More frustrated about not being able to do what you usually enjoy doing	62/64

Sources: UNC School of Medicine; Harvard Medical School; my survey among 4,800 individuals conducted April 2020.

Table 3 How would you say that your mental health has been affected, if at all, during the COVID-19 crisis? (%) (men/women)

Greatly worsened	27/32
Slightly worsened	58/57
Not been affected	7/6
Slightly improved	6/4
Greatly improved	2/1

Sources: GWI; my survey among 4,800 individuals conducted April 2020.

Table 4 Main worries or concerns about the COVID-19.
Select all that apply. (%) (men/women)

My family's health	81/84
My country's economic stability	73/71
My physical health	75/76
My parent's/older friends health	78/80
My economic situation	75/77
Food shortages	41/44
My mental health	69/71
My country's political stability	53/51
My job security	67/69
Rioting or looting	21/24

Sources: Statista; my survey among 4,800 individuals conducted April 2020.

Table 5 Which of the following best describes how the COVID-19 pandemic has impacted your mental wellbeing, if at all? (%) (men/women)

It impacted me negatively, I have never suffered from poor mental wellbeing and now I do.	34/33
It impacted me negatively, I have suffered from poor mental wellbeing in the past and this has caused it to come back.	30/32
It impacted me negatively, I suffer from poor mental wellbeing day-to-day and this has exacerbated it.	18/20
It did not impact me, I suffer from poor mental wellbeing day-to-day and this has not made it any worse.	9/10
It impacted me positively, my mental wellbeing is much better than it usually is.	4/3
It impacted me positively, my mental wellbeing is slightly better than it usually is.	3/2
I have never suffered from poor mental wellbeing.	2/1

Sources: Benenden Health; my survey among 4,800 individuals conducted April 2020.

Table 6 Perceived risk of getting infected with COVID-19 (%) (men/women)

Perceived low to no risk	13/11
Perceived moderate to high risk	87/89

Sources: Statista; my survey among 4,800 individuals conducted April 2020.

COVID-19 infected patients and the general affected population are more expected to display depressed mood and somatic symptoms, in contrast to self-isolated and quarantined persons. (Zhang et al., 2020b) Persistent exposure to COVID-19-related fear and unpredictability has perpetual adverse consequences on mental health throughout the lifespan. (Nicol et al., 2020) The COVID-19 crisis impacts the psychological health of the senior citizens, leading to anxiety and depression. (Meng et al., 2020) COVID-19 patients developing severe mental disorders need specific care as regards clinical observation and drug administration. (Percudani et al., 2020)

Table 7 "Because of the COVID-19 pandemic, over the past 14 days I have felt stressed or burdened a lot by…" Select all that apply. (%) (men/women)

living in a small accommodation.	17/19
being in quarantine.	36/39
childcare.	62/66
taking over school lessons.	31/34
the curfew.	41/44
being in home office.	32/35
customer service.	36/38
worries about my health.	69/72
worries of not being able to get medical care.	77/79
worries about being sick with COVID-19 when I noticed first signs of symptoms such as fever, dry cough, breathing problems, sore throat, loss of smell/taste, headache or diarrhea.	79/81
increased conflicts with people close to me.	21/23
financial worries.	23/25
uncertainties regarding my job, training place, studies or school.	26/28
concerns for my own personal safety.	29/31
concerns for the integrity of family members or friends.	61/64
fears of what the future will bring, or that I won't be able to cope with everything.	59/63
thoughts that it would be better to be dead.	2/3

Sources: Rek et al. (2020); my survey among 4,800 individuals conducted April 2020.

Table 8 What are your biggest personal concerns in regard to the COVID-19 outbreak? Select all that apply. (%) (men/women)

Getting seriously sick from the virus	76/78
One of my family members getting seriously sick from the virus	72/75
Boredom/Isolation	61/64
The strain on my local healthcare services during this time	72/74
My mental health worsening	55/58

Sources: GWI; my survey among 4,800 individuals conducted April 2020.

Table 9 Adverse mental and behavioral health during the COVID-19 pandemic. Select all that apply. (men/women)

49%/52%	reported having at least one adverse mental or behavioral health condition.
38%/41%	reported symptoms of anxiety or depressive disorder.
31%/34%	reported symptoms of a trauma- and stressor-related disorder.
10%/8%	said that they started using substances or increased substance use to cope with stress or emotions.
5%/6%	reported having seriously considered suicide in the past month.

Sources: CDC; my survey among 4,800 individuals conducted April 2020.

Table 10 Thinking about the COVID-19 pandemic, what, if any, concerns do you have about the impact on your mental wellbeing? Select all that apply. (%) (men/women)

Anxiety	65/68
Depression	54/56
Stress/Feeling nervous	69/72
Becoming mentally unwell	55/58
Going crazy/mad	8/11
Unable to sleep	58/62
Contracting COVID-19	69/71
Worried about my family contracting COVID-19	72/75
Not being tested/Not knowing if you have it or not	51/53
I think I have COVID-19/my family member has been diagnosed with the virus	3/4
Mine and my family's health	46/49
I or family members/people around me might die	49/51
I might get sick	38/40
Lack of fresh air/sunlight	31/33
Low mood/morale / Pessimism	42/45
Losing motivation to work	35/37
Sadness	48/52
Feeling restless/agitated/trapped	42/45
Anger/Frustration	29/33
Fatigue/Tired/Draining	68/71
Fear/Scared	22/25
Concern/Worry	72/75
Panic	13/16

Sources: AMS; MQ; my survey among 4,800 individuals conducted April 2020.

Table 11 % who have select feelings as a result of the COVID-19 outbreak. Select all that apply. (men/women)

Feeling anxious about what is happening	78/80
Feeling lonely	64/67
Not wanting to watch news or read about COVID-19	61/64
Having a hard time falling asleep	38/42

Sources: Statista; my survey among 4,800 individuals conducted April 2020.

The quarantine measures have generated psychological consequences on affected groups and populations. (Wathelet et al., 2020) The COVID-19 outbreak causes suffering to mental disorder patients from all diagnostic groups, disorganizing their ordinary activities, restricting their social connections, and escalating their financial concerns. (Frank et al., 2020) Persons who have experienced intimate partner violence during the COVID-19 pandemic are at risk of developing mental and physical health conditions. (Mazza et al., 2020)

5. Conclusions and Implications

Ascertaining where mental health effects may take place will be pivotal in mitigating the temporary and prolonged psychological trauma brought about by the COVID-19 pandemic and is instrumental in developing population resilience. (Choi et al., 2020) Anxiety, depression, and trauma-related symptoms are related to COVID-19, but whether the risks are due to viral infections inherently or to the host immune reaction is still inconclusive. (Troyer et al., 2020) The psychological well-being of women during the COVID-19 crisis is impacted more negatively than that of men. (Sønderskov et al., 2020) Persons more exposed to COVID-19-related stressors are more likely to experience anxiety and depression symptoms. (Rudenstine et al., 2020) People having psychiatric diagnoses are easily affected by distress throughout the COVID-19 outbreak. (Liu et al., 2020) As limitations, this article focuses only on gender differences in behavior and attitudes toward COVID-19. Further research should consider emotional and psychological distress related to COVID-19 isolation, quarantine, and physical distancing.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

Compliance with ethical standards

Ethical approval
All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent
An informed e-consent was obtained from individual participants. Study participants were informed clearly about their freedom to opt out of the study at any point of time without providing justification for doing so.

Animal studies statement verification
This article does not require animal studies verification.

Identifiable images and data statement verification
This article does not require identifiable images and data statement verification.

Data and materials availability
All research mentioned has been published and data is available from respective outlets.

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Author contributions
The author confirms being the sole contributor of this work and approved it for publication.

Conflict of interest statement
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Detection done by plagiarism software
This manuscript has an acceptable level of textual overlap with published articles.

Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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Gender-based Differences of Contagious Negative Emotions, Notable Psychological Distress, and Mental Health Burden during the COVID-19 Outbreak

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ABSTRACT. The purpose of this study was to empirically examine gender-based differences of contagious negative emotions, notable psychological distress, and mental health burden during the COVID-19 outbreak. Building my argument by drawing on data collected from APA, Chapman University, Ginger, GMU/CCCC, HHD, ONS, Pew Research Center, Rek et al. (2020), Statista, the University of Melbourne, and YPCCC, I performed analyses and made estimates regarding prevalence of stress, anxiety, and depression during the COVID-19 pandemic. The structural equation modeling technique was used to test the research model.

Keywords: gender; COVID-19; negative emotion; psychological distress

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1. Introduction

There is a pressing demand for psychological backing and counseling for persons, groups, and populations at risk for mental health disorders (e.g., increased anxiety or depressive symptoms) throughout the COVID-19-related quarantine. (Guo et al., 2020) Women display elevated COVID-19 anxiety, increased time of dwelling on such a contagious virus daily, and more heightened depressive symptoms than men. (Petzold et al., 2020)

2. Conceptual Framework and Literature Review

COVID-19 patients may show symptoms of mental health and psychiatric disorders (e.g., anxiety, depression, and sleep disturbances). (Deng et al., 2020) Behavioral alterations and constraints in social participation (e.g., reduced community contact) are brought about by isolation, quarantine, and physical distancing related to COVID-19 psychological distress displayed in irritation, anxiety, and depression. (Usher et al., 2020) Modifications in community activities, limitation of lifestyle and social interactions, panic as regards COVID-19, the economic decline, and restricted food access may cause unsatisfactory mental health. (Flentje et al., 2020) Nurses interacting with COVID-19 patients incessantly, while supplying them with specialized care and disease-related knowledge, improve their informational and emotional backing, and confidence of recovery. (Zhang et al., 2020a) Throughout the deconfinement operation, conveying unequivocal messages concerning social behaviors as regards washing hands, wearing face masks, and physical distancing, and the requirements for frequenting public places, assists in decreasing doubt. (Glowacz and Schmits, 2020)

3. Methodology and Empirical Analysis

Building my argument by drawing on data collected from APA, Chapman University, Ginger, GMU/CCCC, HHD, ONS, Pew Research Center, Rek et al. (2020), Statista, the University of Melbourne, and YPCCC, I performed analyses and made estimates regarding prevalence of stress, anxiety, and depression during the COVID-19 pandemic. The structural equation modeling technique was used to test the research model.

4. Results and Discussion

COVID-19 pandemic-related stress may have transient consequences on the mental health of numerous individuals. (Kujawa et al., 2020) Persons displaying COVID-19 symptoms experience significant levels of psychological distress, panic, anxiety, and depression. (Cortés-Álvarez et al., 2020) Throughout the COVID-19 outbreak, men and women with symptoms of mental ill health experience comparable levels of suicidal ideation. (O'Connor et al., 2020) The links between anxiety and depressive symptoms and elevated alcohol consumption during the COVID-19 pandemic are persistent between women and men. (Tran et al., 2020) Increased exposure to COVID-19-related stressors is related to heightened anxiety and depressive symptoms. (Rudenstine et al., 2020) (Tables 1–13)

Table 1 Have you done any of the following when you have felt stress or anxiety related to COVID-19? Select all that apply. (%) (men/women)

Talked with a friend or family member about my stress or anxiety	72/76
Increased my time spent on social media	76/79
Looked up information about how to manage stress or anxiety online	63/66
Decreased my time spent reading/consuming news	61/58
Mental health session online or in-person (e.g. with a psychologist)	22/25
Decreased my time spent on social media	24/21

Sources: Course Hero; NASPA; College Pulse; our survey among 4,400 individuals conducted April 2020.

Table 2 How would you rate the change in stress you are experiencing at work compared to a week ago? (%) (men/women)

Decreased significantly.	3/2
Decreased slightly.	8/6
Stayed the same.	36/34
Increased slightly.	22/23
Increased significantly.	31/35

Sources: CHCF; my survey among 4,400 individuals conducted April 2020.

Table 3 % who say they are very/somewhat concerned that they… (men/women)

	Will get COVID-19 and require hospitalization	Might unknowingly spread COVID-19 to others
White	75/77	71/73
Black	78/79	74/76
Hispanic	76/78	73/75
18–29	68/70	63/65
30–49	71/73	67/69
50–64	72/75	72/75
65+	77/80	75/78
Upper income	73/74	65/67
Middle income	76/78	68/71
Lower income	79/82	74/77

Sources: Pew Research Center; my survey among 4,400 individuals conducted April 2020.

Table 4 How the stress and anxiety caused by the COVID-19 pandemic are having an effect on individuals' mental health. Select all that apply. (men/women)

62%/65%	are anxious about the possibility of getting COVID-19.
59%/62%	are anxious about becoming seriously ill or dying from COVID-19.
69%/71%	are anxious about the possibility of family and loved ones getting COVID-19.
48%/51%	COVID-19 is having a serious impact on their mental health.
61%/65%	have trouble sleeping (difficulty falling asleep, midnight awakening, and earlier awakening).

Sources: APA; my survey among 4,400 individuals conducted April 2020.

Table 5 "Because of the COVID-19 pandemic, over the past 14 days I..." (%, yes) (men/women)

have had upsetting dreams that replay part of the experience of the COVID-19 pandemic or are clearly related to it.	72/75
have had powerful images or memories that sometimes come into my mind in which I feel the experience of the COVID-19 pandemic is happening again in the here and now.	70/73
have avoided internal reminders of the experience of the COVID-19 pandemic (e.g. thoughts, feeling, or physical sensations).	66/68
have avoided external reminders of the experience of the COVID-19 pandemic (e.g. people, places, conversations, objects, activities, or situations).	61/63
have been "super-alert", watchful, or on guard.	56/55
have been feeling jumpy or easily startled.	37/39
have suffered from unforeseeable severe anxiety attacks (panic) with physical symptoms (e.g. palpitations, chest pain, dizziness).	37/40
have suffered from sleep problems, such as • difficulty falling asleep (< 30 minutes) • difficulty sleeping through the night • early morning awakening • fearful dreams or nightmares not about the COVID-19 pandemic • fearful dreams or nightmares about the COVID-19 pandemic	34/37
felt or behaved in a more irritable, rageful, angry	25/27

Sources: Rek et al. (2020); my survey among 4,400 individuals conducted April 2020.

Table 6 Are you worried about each of the following as a result of the spread of COVID-19? (%) (men/women)

You or someone in your family getting sick from COVID-19	82/85
The healthcare system becoming overwhelmed by COVID-19 patients	81/84
Being unable to access medical care	79/81

Sources: YPCCC; GMU/CCCC; my survey among 4,400 individuals conducted April 2020.

Table 7 % reporting high anxiety by marital status (men/women)

Single	23/23
Married or civil partnership	48/46
Separated/Divorced	27/28
Widowed	2/3

Sources: ONS; my survey among 4,400 individuals conducted April 2020.

The COVID-19-related knowledge and indicators of the links between the acuteness of anxiety or depressive symptoms and elevated alcohol consumption do not differ by gender. (Tran et al., 2020) Anxiety-like behavior (e.g. becoming readily anxious or irascible) is displayed predominantly in the affected population and in the COVID-19 infected patients. (Zhang et al., 2020b) Increased stressors harmonize with the heightened frequency of COVID-19 exposure and mortality rates. (Rudenstine et al., 2020)

Table 8 Have you experienced any of these thoughts, feelings, or reactions associated with the COVID-19 pandemic? Select all that apply. (%) (men/women)

Feeling stressed or overwhelmed	87/89
Anxiety, worry, or fear	85/87
Racing thoughts	79/80
Sadness, tearfulness, loss of interest in usual enjoyable activities	78/81
Physical symptoms, such as increased heart rate, stomach upset, fatigue, or other uncomfortable sensations	61/64
Frustration, irritability, or anger	59/62
Restlessness or agitation	57/61
Feeling helpless	54/58
Difficulty concentrating or sleeping	49/53
Feeling disconnected from others	37/39
Apprehension about going to public spaces	44/47
Trouble relaxing	37/40

Sources: The University of Melbourne; my survey among 4,400 individuals conducted April 2020.

Table 9 In the past 7 days, how often have you had physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart, when thinking about your experience with the COVID-19 outbreak? (%) (men/women)

Rarely or none of the time (less than 1 day)	13/10
Some or a little of the time (1–2 days)	17/14
Occasionally or a moderate amount of time (3–4 days)	27/28
Most or all of the time (5–7 days)	43/48

Sources: Pew Research Center; my survey among 4,400 individuals conducted April 2020.

Table 10 Over the last 2 weeks, how often have you been bothered by the following problems? (%) (men/women)

	Not at all	Several days	More than half the days	Nearly every day
Feeling nervous, anxious or on edge	1/1	14/12	33/32	52/55
Not being able to stop or control worrying	1/1	15/12	35/32	49/55
Little interest or pleasure in doing things	2/1	16/14	32/30	50/55
Feeling down, depressed, or hopeless	2/1	14/13	34/32	50/54

Sources: HHD; my survey among 4,400 individuals conducted April 2020.

Table 11 % at least somewhat concerned about unknowingly spreading COVID-19 to others? (men/women)

Very concerned	67/70
Somewhat concerned	33/30

Sources: Statista; my survey among 4,400 individuals conducted April 2020.

Table 12 The impact of the COVID-19 pandemic on collective mental health (%, yes, relevance) (men/women)

Vulnerable populations have been particularly hard-hit, as COVID-19 has worsened already-present health inequities for older adults, low-income families, and people in substandard or congregate living conditions.	87/89
Once physical distancing measures are lifted, many people will still approach social activity with vigilance.	79/82
Public transportation, office environments, and other public fora may still cause anxiety for large swaths of the population.	72/74
If anxiety isn't addressed, it may lead to a diagnosable mental health disorder or endure for years to come.	75/78
Even when life does return to normal, perceived loss of control and sustained feelings of helplessness across social, economic, and health dimensions may persist.	71/74
COVID-related stress and anxiety are causing serious sleep disruptions. short-term consequences of sleep disruption include increased stress, emotional distress and mood disorders, and cognitive, memory, and performance deficits. Chronic sleep deprivation is associated with a number of physical and psychiatric problems, with men experiencing an increase in mortality.	67/71
Social isolation is creating barriers to recovery from substance use disorder.	54/56
Individual and collective grief from having lost loved ones and over having survived the pandemic when others didn't.	57/60

Sources: Ginger; my survey among 4,400 individuals conducted April 2020.

Table 13 Adults' perceptions of how COVID-19 pandemic has influenced their mental health (%) (men/women)

	Less than normal	About the same as normal	More than normal
Feel down, depressed, or hopeless	16/12	31/30	53/58
Feel nervous, anxious, or on edge	12/10	20/18	68/72
Feel stressed	11/8	18/16	71/76

Sources: Chapman University; my survey among 4,400 individuals conducted April 2020.

Multiple stressors shape women's psychological and physical health throughout the COVID-19 epidemic as regards the need to provide family harmony and educate children while acting as the caretaker of the loved ones' negative emotions. (Tian et al., 2020) Senior citizens may not employ online communications, being at certain risk of prolonged isolation by physical distancing. (Douglas et al., 2020) Psychiatric wards can be set up with specific areas for COVID-19 positive patients having severe psychiatric disorders and without acute medical symptoms. (Percudani et al., 2020) As a result of annoyance and worry, COVID-19-related violence results with likely transgenerational transmission of psychological distress and brutality. (Mazza et al., 2020)

5. Conclusions and Implications

The rise in awareness and harnessing of digital health to satisfy the needs of COVID-19 quarantined patients with physical distancing constraints, and a deficiency in physical assistance have directed attention to anxiety and depression, somewhat disregarding individuals having severe mental illnesses (e.g., psychotic disorders). (Torous and Keshavan, 2020) The distressing features of participation in the COVID-19 pandemic bring about mental health risks for both healthcare workers and patients, possibly generating long-term psychological harm. (Choi et al., 2020) Monitoring neuropsychiatric symptoms and neuroimmune status of COVID-19 infected patients may configure the prolonged adverse effects of such virus on brain and behavior. (Troyer et al., 2020) Persons exposed to more COVID-19 stressors have increased chances of depression symptoms. (Ettman et al., 2020) As limitations, this article focuses only on gender-based differences of contagious negative emotions, notable psychological distress, and mental health burden during the COVID-19 outbreak. Further research should consider gender differences in COVID-19 sentiments, attitudes, habits, and behaviors.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

Compliance with ethical standards

Ethical approval
All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent
An informed e-consent was obtained from individual participants. Study participants were informed clearly about their freedom to opt out of the study at any point of time without providing justification for doing so.

Animal studies statement verification
This article does not require animal studies verification.

Identifiable images and data statement verification
This article does not require identifiable images and data statement verification.

Data and materials availability
All research mentioned has been published and data is available from respective outlets.

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Detection done by plagiarism software
This manuscript has an acceptable level of textual overlap with published articles.

Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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Gender-related Irritability, Confusion, Anger, and Frustration Associated with COVID-19 Infection and Mortality

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ABSTRACT. Based on an in-depth survey of the literature, the purpose of the paper is to explore gender-related irritability, confusion, anger, and frustration associated with COVID-19 infection and mortality. Using and replicating data from ACHA, CDC, Chapman University, GMU/CCCC, GWI, LendingTree, HMN, NCAA, Nursing Times, McKinsey, PHW, Qualtrics, Rek et al. (2020), Statista, ValuePenguin, Viamo, and YPCCC, I performed analyses and made estimates regarding mental health disorders and COVID-19-associated risk factors. Data were analyzed using structural equation modeling.

Keywords: gender; COVID-19; irritability; confusion; infection; mortality

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1. Introduction

Screening for COVID-19-related mental health issues and psychological services to at-risk populations are required. (Guo et al., 2020) There are robuster connections to psychological and social drivers and associated distress taking into consideration the COVID-19 pandemic in relation to personal experiences with such a contagious virus. (Petzold et al., 2020) More significant levels of social backing improve sleep quality and decrease the risk of depression throughout the COVID-19 quarantine. (Grey et al., 2020)

2. Conceptual Framework and Literature Review

COVID-19 infected patients may develop psychiatric disorders (e.g., depression, anxiety, and sleep disturbances), and thus specific screening and treatment are needed. (Deng et al., 2020) The level of personal, behavioral, and social alterations developing due to the COVID-19 outbreak has brought about significant distress among the affected individuals. (Usher et al., 2020) Because of the acuteness of lockdown, suicides will escalate after the COVID-19 crisis as a result of growing rates of substance consumption, job loss, anxiety, isolation, and emotional shocks. (Standish, 2020) Stressful events attributable to the COVID-19 pandemic tend to have intense consequences on mental health. (Kujawa et al., 2020) Being a woman and having COVID-19-infected colleagues constitute risk factors for anxiety, and having some of the loved ones confirmed with COVID-19 represents a risk factor for depression. (Zhang et al., 2020a) Numerous COVID-19 patients experienced psychological distress and evolving physical symptoms after clinical and virological recovery. (Tomasoni et al., 2020) Individuals having a prior mental health condition tend to experience higher levels of depressive symptoms, higher levels of defeat, and suicidal ideation. (O'Connor et al., 2020)

3. Methodology and Empirical Analysis

Using and replicating data from ACHA, CDC, Chapman University, GMU/CCCC, GWI, LendingTree, HMN, NCAA, Nursing Times, McKinsey, PHW, Qualtrics, Rek et al. (2020), Statista, ValuePenguin, Viamo, and YPCCC, I performed analyses and made estimates regarding mental health disorders and COVID-19-associated risk factors. Data were analyzed using structural equation modeling.

4. Results and Discussion

Fear and perceived risk of getting infected with COVID-19, financial and employment costs, and state-mandated constraints on movement and physical interaction have been instrumental in configuring the mental health status. (Tran et al., 2020) Prompt and appropriate diagnosis of psychological distress and accurate systematization of the mental health needs of affected individuals, groups, and populations enable advancement of rationally designed psychological interventions during the COVID-19 outbreak. (Zhang et al., 2020b) Rigorous measures concerning the COVID-19 infection confine access to mental health suppliers. (Torous and Keshavan, 2020) The COVID-19 crisis may generate many-sided distress caused by turmoil in the grieving process. (Gallagher et al., 2020) (Tables 1–14)

Table 1 How do you currently perceive the risk of the COVID-19 pandemic? "I am worried that…" (%, yes) (men/women)

I have no means of control over the COVID-19 pandemic.	68/71
I will infect myself with COVID-19.	57/60
people close to me are infected with COVID-19.	44/48
I will infect other people with COVID-19.	23/26
the consequences of the COVID-19 pandemic will greatly affect me personally.	67/69
in case of infection with COVID-19 the consequences for my health will be severe.	35/38
I will die of COVID-19.	23/26
people close to me will die of COVID-19.	29/33

Sources: Rek et al. (2020); my survey among 5,300 individuals conducted April 2020.

Table 2 Have you felt any of the following emotions over the last 30 days? Select all that apply. (%) (men/women)

Anxious	76/79
Lonely	21/23
Exhausted	72/75
Angry	19/22
Happy	7/5

Sources: ValuePenguin; LendingTree; my survey among 5,300 individuals conducted April 2020.

Table 3 Since the beginning of the COVID-19 outbreak, have you experienced an increase in any of the following feelings? Select all that apply. (%) (men/women)

Anxiety	79/82
Stress	83/86
Loneliness	52/55
Connection to others	71/70
Depression	54/56
Panic	59/61
Compassion	79/82
Gratitude	71/74
Relaxation	10/8

Sources: GWI; my survey among 5,300 individuals conducted April 2020.

Table 4 Changes in emotional and physical health attributable to COVID-19 (men/women)

14%/12%	report that they feel somewhat or very prepared to handle the virus.
75%/77%	report feeling more anxious or stressed than usual because of the virus.
62%/65%	report increased sadness or loneliness, and greater anger as a result of the virus.

Sources: Viamo; my survey among 5,300 individuals conducted April 2020.

Table 5 How participants report coping with the COVID-19 pandemic (%) (men/women)

	Never/Rarely	Sometimes	Often/ Very often
Gave up trying to deal with it.	64/60	19/18	17/22
Used alcohol or drugs to help me get through it.	72/79	15/14	13/7
Said things to let my unpleasant feelings escape.	42/39	29/30	29/31
Turned to activities to take my mind off things (e.g., work, TV, gardening, exercise).	10/8	26/25	64/67
Got advice or help from other people about what to do.	17/15	32/33	51/52
When I go out in public, I wear a face mask.	8/6	16/15	76/79
Got comfort and understanding from someone.	12/10	33/31	55/59
Trying to find comfort in my religion or spiritual beliefs.	21/24	26/25	53/51
Looked for something good in what is happening.	12/11	35/33	53/56
Took action to try to make the situation better.	13/11	44/43	43/46

Sources: Chapman University; my survey among 5,300 individuals conducted April 2020.

Table 6 Mental health symptoms since COVID-19 outbreak. Select all that apply. (%) (men/women)

More emotionally exhausted	59/62
Increased sadness in day-to-day life	52/54
More irritable	33/36
Feeling generally more confused	31/34
Increased insomnia	38/42
Increased anger	17/20
Increased feelings of guilt	13/15

Sources: Qualtrics; my survey among 5,300 individuals conducted April 2020.

COVID-19 physical distancing measures may bring about close presence among family members consistently, possibly leading to tensions and generating family violence. (Douglas et al., 2020) COVID-19 fear can result in searches and demand for untested remedies and harmful treatments. (Liu et al., 2020) The diminished awareness of suspected or positive COVID-19 psychiatric patients, especially in the acute phase, of the infection risk and the decreased compliance with precautionary measures may play an important part in the transmission of the disease. (Percudani et al., 2020)

Table 7 Please rate the level of anxiety you are experiencing now compared with before the start of the COVID-19 pandemic. (%) (men/women)

I feel a lot more anxious than usual.	52/56
I feel a little more anxious than usual.	37/35
I feel the same as usual.	8/6
I feel a little less anxious than usual.	2/2
I feel a lot less than anxious usual.	1/1

Sources: Nursing Times; my survey among 5,300 individuals conducted April 2020.

Table 8 % with adverse mental health symptoms, increased substance use, or suicidal ideation during the COVID-19 pandemic. Select all that apply. (men/women)

Started or increased substance use to cope with COVID-19 pandemic-related stressor emotions	19/14
Seriously considered suicide	2/3
One or more adverse mental or behavioral health symptom(s): anxiety/depression/trauma/stressor-related disorder	79/82

Sources: Statista; CDC; my survey among 5,300 individuals conducted April 2020.

Table 9 Do you feel any of the following emotions when you think about COVID-19? (%, yes) (men/women)

Compassionate	78/81
Hopeful	56/54
Anxious	74/76
Afraid	72/75
Helpless	67/70
Overwhelmed	73/76
Bored	28/27
Angry	39/42
Disgusted	25/27
Depressed	23/25
Lonely	21/23
Panicked	19/22
Confused	24/25

Sources: YPCCC; GMU/CCCC; my survey among 5,300 individuals conducted April 2020.

Table 10 Symptoms of mental health conditions and levels of psychological well-being. Select all that apply. (%) (men/women)

Depression	25/27
Suicidal ideation	3/5
Anxiety	42/45
Flourishing	5/4
Serious psychological distress	22/25
Loneliness	21/23
Resilience	13/12

Sources: HMN; ACHA; my survey among 5,300 individuals conducted April 2020.

Table 11 "In the last week…" Select all that apply. (%, yes) (men/women)

have you felt lonely?	19/21
have you felt isolated?	16/18
have you been worrying about your mental health and wellbeing?	78/81

Sources: PHW; my survey among 5,300 individuals conducted April 2020.

Table 12 Individuals reporting experiencing feeling anxious or depressed in past week. (%) (men/women)

Both anxious and depressed	42/47
Anxious but not depressed	29/31
Depressed but not anxious	7/8
Neither anxious nor depressed	22/14

Sources: McKinsey; my survey among 5,300 individuals conducted April 2020.

Table 13 Mental health concerns during COVID-19 pandemic (%, constantly)

	Men	Women
Felt overwhelmed by all you had to do	42	52
Experienced sleep difficulties	39	48
Felt mentally exhausted	35	46
Felt very lonely	22	31
Felt a sense of loss	21	33
Felt sad	28	38
Felt overwhelming anxiety	26	34
Felt overwhelming anger	23	28
Felt things were hopeless	25	29
Felt so depressed that it was difficult to function	16	25

Sources: NCAA; my survey among 5,300 individuals conducted April 2020.

Table 14 % at least somewhat concerned about unknowingly spreading COVID-19 to others? (men/women)

Very concerned	68/71
Somewhat concerned	32/29

Sources: Statista; my survey among 5,300 individuals conducted April 2020.

Telehealth evaluations and virtual care will enable optimized monitoring and treatment of COVID-19 patients while protecting healthcare suppliers. (Nicol et al., 2020) Throughout the COVID-19 quarantine, victims of domestic violence have to spend the time continuously with their partners and away from assistance, and habitual violence and cruelty can become the norm, with a likely increase in conjugal murders or homicides-suicides, or deviant behaviors in relation to children. (Mazza et al., 2020) In conjunction with psychological distress associated with COVID-19 hospitalizations, the swift incoming of patients seeking specific care may relocate mental health beds in wards and therapeutics capabilities in ambulatory settings. (Choi et al., 2020)

5. Conclusions and Implications

Individuals having acute anxiety and depression symptoms tend to elevate their alcohol consumption during the COVID-19 crisis. (Tran et al., 2020) The psychological effects of COVID-19 include distress reactions (e.g. anxiety, depression, and substance abuse) and behavioral alterations (e.g. unsatisfactory sleep and stress eating), leading to fears of infection and spread of such a contagious virus. (Zhai and Du, 2020) Negative affect and mental health are considerably impacted by the perceived risk of contracting COVID-19. (Feng et al., 2020) The level of exposure to COVID-19-related stressors constitutes a significant predictor of anxiety and depression symptoms. (Rudenstine et al., 2020) The persistent stress that persons having health anxiety may be enduring is associated with income losses, social involvement, mobility, physical health, and state of suspense. (Low et al., 2020) As limitations, this article focuses only on gender-related irritability, confusion, anger, and frustration associated with COVID-19 infection and mortality. Further research should consider gender-related depression, anxiety, and psychological stress experienced during the COVID-19 pandemic.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

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All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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The author confirms being the sole contributor of this work and approved it for publication.

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Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
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COVID-19 Gender Differences Related to Cognitive, Emotional, and Behavioral Disorders

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ABSTRACT. The aim of this paper is to synthesize and analyze existing evidence on COVID-19 gender differences related to cognitive, emotional, and behavioral disorders. Using and replicating data from ABC News, ACHA, Active Minds, BMA, CVN, ICF, Gallup, Ginger, GMU/CCCC, HMN, ICFJ, Pew Research Center, Statista, TCDJ/Columbia University, UNICEF, the University of Southern California, Washington Post, and YPCCC, I performed analyses and made estimates regarding psychological distress during the COVID-19 lockdown. Data were analyzed using structural equation modeling.

Keywords: COVID-19; gender; cognition; emotion; behavior; mental disorder

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1. Introduction

The COVID-19 outbreak puts forward various psychological stressors as a result of health-related, social, and economic effects, possibly resulting in psychological distress. (Petzold et al., 2020) The COVID-19 crisis may lead to psychological and mental health issues, with women being at greater risk. (Hou et al., 2020) Psychological health is instrumental in intensifying the COVID-19-positive patient recovery. (Deng et al., 2020) Young people are at significant risk for anxiety and depression associated with the psychosocial consequences of the COVID-19 pandemic. (Kujawa et al., 2020)

2. Conceptual Framework and Literature Review

The public health reactions to the COVID-19 crisis necessitate indispensable alterations in individual behavior (e.g., washing hands, wearing face masks, and physical distancing/isolation). (Galasso et al., 2020) Women with a history of mental illness and apparently maltreated throughout COVID-19 lockdown experience acute symptoms of anxiety, depression, and stress. (Sediri et al., 2020) Men are experiencing decreased levels of depressive symptoms, alienation, defeat, and entrapment than women during the COVID-19 pandemic. (O'Connor et al., 2020) Family members and colleagues of COVID-19-infected patients may intensify panic, aggravating the adverse emotions of the affected people. (Zhang et al., 2020) Persons experiencing quarantine and isolation during the COVID-19 pandemic have elevated rates of depression, irascibility, and sadness. (Grey et al., 2020) Large-scale emergencies such as the COVID-19 outbreak may result in psychological and physical health alterations as a result of the generated perceived threat and insecurity. (Cardel et al., 2020) COVID-19-related stress impacts the mental health of vulnerable individuals, groups, and populations. (Tran et al., 2020)

3. Methodology and Empirical Analysis

Using and replicating data from ABC News, ACHA, Active Minds, BMA, CVN, ICF, Gallup, Ginger, GMU/CCCC, HMN, ICFJ, Pew Research Center, Statista, TCDJ/Columbia University, UNICEF, the University of Southern California, Washington Post, and YPCCC, I performed analyses and made estimates regarding psychological distress during the COVID-19 lockdown. Data were analyzed using structural equation modeling.

4. Results and Discussion

COVID-19 has configured stressors to mental health (e.g., unhappiness developing out of social isolation or quarantine, fear of getting the virus, economic burden, and the subsequent unpredictability). (McGinty et al., 2020) Handling unsatisfactory sleep quality exemplarily during the COVID-19 home confinement may reduce stress and prevent discontinuation of social ties. (Altena et al., 2020) Individuals having low incomes are at high risk to be affected by the COVID-19 negative consequences that may lead to cognitive, emotional, and behavioral disorders. (Douglas et al., 2020) The provision of psychiatry care and mental health services for patients suffering from mental disorders is difficult, as most of the hospitals are attempting to decrease the chance of COVID-19 transmission. (Cui et al., 2020) (Tables 1–17)

Table 1 In the past two weeks, have you felt …
Select all that apply. (yes, %) (men/women)

that you were unable to control the important things in your life?	76/78
confident about your ability to handle personal problems?	14/17
that things were going your way?	9/8
difficulties were piling up so high that you could not overcome them?	62/65

Sources: The University of Southern California; my survey among 5,600 individuals conducted April 2020.

Table 2 Has a doctor, nurse, or other health professional ever told you that you have a depressive disorder (including depression, major depression, dysthymia, or minor depression)? (%, yes)

Gender	
Male	18
Female	27
Age	
18–24	17
25–34	21
35–49	23
50–64	24
65+	26
Race/Ethnicity	
White	21
Black	26
Hispanic	23
Education	
Less than HS	21
HS Grad	22
Some College	24
College Grad	27
Income	
Less than $25k	28
$25k–34,999	26
$35k–49,999	24
$50k–74,999	24
$75k–99,999	21
+$100,000	17

Sources: ICF; my survey among 5,600 individuals conducted April 2020.

Table 3 To what extent are you worried about getting infected with COVID-19? (%) (men/women)

Very concerned	34/39
Concerned	26/25
To some extent concerned	21/20
A little concerned	12/11
Very little concerned	7/5

Sources: Statista; my survey among 5,600 individuals conducted April 2020.

Table 4 % who say COVID-19 has negatively impacted their mental health (men/women)

Mental health has significantly worsened	23/26
It has caused stress or anxiety	94/95
It has brought disappointment or sadness	86/88
It has led to loneliness or isolation	67/70

Sources: Active Minds; my survey among 5,600 individuals conducted April 2020.

Table 5 The mental health of individuals during the COVID-19 pandemic (men/women)

66%/69%	are concerned about their mental health because of physical distancing.
86%/88%	worry that people who need mental health services won't be able to get help.
77%/80%	are feeling anxious, lonely, isolated, and having trouble sleeping.

Sources: CVN; my survey among 5,600 individuals conducted April 2020.

Table 6 Have you or a member of your household experienced any of the following because of the spread of COVID-19? (%, yes) (men/women)

Had trouble sleeping	64/67
Been unable to get adequate medical care	51/52
Been unable to visit family members who are at higher risk of infection	69/68

Sources: YPCCC; GMU/CCCC; my survey among 5,600 individuals conducted April 2020.

Table 7 How worried are you that you or someone in your family will be exposed to COVID-19? (%) (men/women)

Very worried.	51/55
Somewhat worried.	32/31
Not too worried.	14/12
Not worried at all.	3/2

Sources: Gallup; my survey among 5,600 individuals conducted April 2020.

Table 8 What motivated you to use a technology-based emotional or mental health service such as online counseling or a mental health app? (%) (men/women)

I feel like I need to do something to deal with COVID-19 stress	68/71
My regular counselor moved to online sessions	32/29

Sources: Ginger; my survey among 5,600 individuals conducted April 2020.

Individuals having acute mental disorders are at more significant risk of medical comorbidities possibly elevating the sorrowfulness associated with the COVID-19 infection. (Percudani et al., 2020) The COVID-19 crisis may lead to psychological stressors and behavioral matters, with persons easily affected by infectious agents not having the faintest about their risk until developing symptoms, thus making public health containment endeavors extremely difficult. (Moloney et al., 2020) Smartphones may assist in adopting telepsychiatry services in individuals with serious mental illnesses. (Torous and Keshavan, 2020) Psychiatric care for COVID-19 patients should clarify likely junction among certain disorders. (Low et al., 2020)

Table 9 % who reported select mental health symptoms since the COVID-19 outbreak. Select all that apply. (men/women)

More emotionally exhausted	63/66
Increased sadness in day-to-day life	29/31
More irritable	22/25
Feeling generally more confused	27/30
Increased insomnia	24/27
Increased anger	17/19
Increased feelings of guilt	28/30

Sources: Statista; my survey among 5,600 individuals conducted April 2020.

Table 10 Access to mental health services during the COVID-19 outbreak (%) (men/women)

	Mental health medications	Psychosocial support
Delay/Disruption to access	49/47	52/50
No delay/disruption.	37/38	29/30
I need this but never had access to it.	14/15	19/20

Sources: UNICEF; my survey among 5,600 individuals conducted April 2020.

Table 11 Disrupted lives, elevated stress and soaring worry as a result of the COVID-19 pandemic (%) (men/women)

Life disrupted somehow	22/19
Life disrupted a lot	78/81
Source of stress	93/95
Not a source of stress	7/5
Very/Somewhat worried	95/97
Not too/Not at all worried	5/3

Sources: ABC News; Washington Post; my survey among 5,600 individuals conducted April 2020.

Table 12 To what extent do you feel able to access the support for your wellbeing that you would like? (%) (men/women)

To a significant extent.	16/14
To some extent.	45/46
Not really/Not at all.	18/17
Have not needed to access support.	16/16
Prefer not to say.	5/7

Sources: BMA; my survey among 5,600 individuals conducted April 2020.

Table 13 % who say they are very/somewhat concerned that they… (men/women)

will get COVID-19 and require hospitalization.	85/87
might unknowingly spread COVID-19 to others.	81/84

Sources: Pew Research Center; my survey among 5,600 individuals conducted April 2020.

Table 14 % struggling to cope with the mental, physical, and personal impacts of the crisis. Select all that apply. (men/women)

The psychological and emotional impacts of dealing with the COVID-19 crisis	86/88
The intense workload	76/79
Social isolation	49/51
The physical risk of contracting the virus or passing it on to others	79/82
Balancing work and home-schooling/child care responsibilities	41/47

Sources: ICFJ; TCDJ/Columbia University; my survey among 5,600 individuals conducted April 2020.

Table 15 How has your access to mental healthcare been affected by the COVID-19 pandemic? (%) (men/women)

Much more difficult	51/55
Somewhat more difficult	37/36
No significant change in access	9/7
Less difficult	3/2

Sources: HMN; ACHA; my survey among 5,600 individuals conducted April 2020.

Table 16 % who reported select mental health challenges affecting their productivity since the COVID-19 outbreak. Select all that apply. (men/women)

Difficulty in concentrating	38/41
Taking longer to do a task	33/36
Difficulty in thinking, reasoning or deciding	29/31
Putting off challenging work	25/27
Difficulty in juggling tasks or responsibilities	21/24

Sources: Statista; my survey among 5,600 individuals conducted April 2020.

Table 17 Feelings about personal problems and control during the COVID-19 pandemic. Select all that apply. (%) (men/women)

Everything has been going my way.	10/8
I can't control important matters in my life.	34/36
Difficulties are piling up so high that I won't be able to deal with them.	32/35
I'm uncertain about my ability to deal with problems.	38/41

Sources: Statista; my survey among 5,600 individuals conducted April 2020.

Intimate partner violence is consistently experienced by women, and, throughout the COVID-19 quarantine, home risks may bring about victims of conjugal aggression. (Mazza et al., 2020) As hospitals are enlarging emergency, respiratory, and critical care units for COVID-19 patients, psychiatric ones may not access standard sources of specialized care. (Choi et al., 2020) The psychological symptoms of psychiatric patients who cannot access counseling services during the COVID-19 pandemic are aggravated, elevating their risk for suicide ideation and substance abuse, in addition to related cognitive, emotional, and behavioral disorders. (Zhai and Du, 2020)

5. Conclusions and Implications

COVID-19-specific stressors are associated with significant levels of financial impecuniousness and increased mortality rates, possibly leading to clinically relevant degrees of anxiety and depression. (Rudenstine et al., 2020) The synergic framework of the COVID-19 crisis and its economic effects has led to an escalation of mental illness. (Ettman et al., 2020) The COVID-19 pandemic may result in clinically relevant symptoms of depression, generalized anxiety disorder, suicide ideation, irascibility, and fear about contracting COVID-19. (Fisher et al., 2020) Perceived threat of COVID-19 adversely influences subjective mental-wellbeing. (Paredes et al., 2021) Individuals having preexistent mental health concerns experience more anguish and apprehension, in addition to increased unsatisfactory sleep and functioning (Liu et al., 2020), while stress and social isolation undermine immunity during the COVID-19 outbreak. (Nicol et al., 2020) As limitations, this article focuses only on COVID-19 gender differences related to cognitive, emotional, and behavioral disorders. Further research should consider psychological effects and associated factors of COVID-19 perceived risk by gender.

Survey method

The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) using the Census Bureau's American Community Survey to reflect reliably and accurately the demographic composition of the United States. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.5%. The break-off rate among individuals who logged onto the survey and completed at least one item is 0.2%. Sampling errors and test of statistical significance take into account the effect of weighting. Question wording and practical difficulties in conducting surveys can also introduce error or bias into the findings of opinion polls. The sample weighting was accomplished using an iterative proportional fitting process that simultaneously balanced the distributions of all variables. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. The design effect for the survey was 1.3. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. Confirmatory factor analysis was employed to test for the reliability and validity of measurement instruments. Descriptive statistical analysis and multivariate inferential tests were undertaken for the survey responses and for the purpose of variable reduction in regression modeling. Multivariate analyses, and not univariate associations with outcomes, are more likely to factor out confounding covariates and more precisely determine the relative significance of individual variables. Independent *t*-tests for continuous variables or chi-square tests for categorical variables were employed. An Internet-based survey software program was utilized for the delivery and collection of responses.

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This article does not require animal studies verification.

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Data and materials availability
All research mentioned has been published and data is available from respective outlets.

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Conflict of interest statement
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Detection done by plagiarism software
This manuscript has an acceptable level of textual overlap with published articles.

Evaluation criteria
Theoretical development of hypotheses, quality of design and methods, adequate data analyses, quality of discussion, legitimacy of conclusions, clarity and readability, use of references, rationale and clarity of definition, writing style, contribution to new knowledge in the field, and integration of theory – Satisfactory (the subject addressed in this article is worthy of investigation, the information presented is new, the conclusions are supported by the data, organization of the manuscript is appropriate, and figures, tables and supplementary data are appropriate).

Quality of cited references
Satisfactory. This article focuses on a hot emerging topic and has a high integrative value in the current Scopus- and Web of Science-indexed literature by citing preponderantly Q1 and Q2 sources published in the past two years.

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