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The strengths of sexual and gender minoritized adolescents:

Results from the Millennium Cohort Study

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Abstract

Purpose: Prior research has outlined the ways in which the health and wellbeing of sexual and gender minoritized adolescents (SGMA) is compromised relative to heterosexual cisgender adolescents. However, to date the strengths of SGMA have been under-explored. Informed by the 5Cs framework (i.e., competence, confidence, connection, character, and caring) of positive youth development, this paper considers some of the strengths reported by SGMA, as well as those of heterosexual cisgender adolescents.

Methods: Aspects of positive youth development, drawing on the 5Cs framework, were explored amongst 7,076 adolescents aged 17 years old from the United Kingdom's nationally representative Millennium Cohort Study. Logistic regression models were used to compare outcomes between heterosexual cisgender males and the other sex, gender and sexuality groups.

Results: The sample included 40.7% cisgender heterosexual males (n=2,877), 33.3% cisgender heterosexual females (n=2,359), 17.0% cisgender sexual minority females (n=1,205), 7.6% cisgender sexual minority males (n=541), and 1.3% (n=94) gender minoritized adolescents. The majority, regardless of sex, gender and sexuality, reported strengths, especially in relation

to indicators of positive social connections and having caring dispositions. Compared to exclusively heterosexual cisgender males certain strengths were identified amongst SGMA, for example sexual minoritized adolescents were more likely to report competence in terms of academic qualifications, whilst gender minoritized adolescents were more likely to report often volunteering to help others and seeing themselves as original and as coming up with new ideas.

Conclusions: SGMA, as with all adolescents generally, have a range of strengths. These features are infrequently reinforced in the literature and warrant further attention.

Key words: positive youth development, strengths, well-being, adolescents, LGBT, sexuality, gender identity, developmental assets

Implications and Contributions statement: Sexual and gender minoritized adolescents (SGMA) have been described as 'at risk' in relation to their wellbeing. However, there is a dearth of quantitative data which seeks to establish the assets of SGMA. Utilizing a nationally representative sample of adolescents from the United Kingdom, the findings of this study demonstrate that SGMA have a range of notable strengths.

The strengths of sexual and gender minoritized adolescents: Results from the Millennium Cohort Study

The results of meta-analytic systematic reviews have found that sexual and gender minoritized adolescents (SGMA) are at increased risk of challenges, including depression and anxiety [e.g., 1, 2]. However, in recent years there has been a movement away from the 'at risk' discourse, which tends to focus on the perceived deficits of SGMA, towards a more holistic understanding, which also incorporates the strengths of these adolescents [3]. SGMA, like all young people, present with a range of strengths, yet there is a dearth of literature exploring the strengths of these populations [4]. Yet, such strengths can be harnessed to support and improve health-related interventions and services provided to these youths [5]. For example, effective mental health services and supports for SGMA should both actively incorporate the identification of the personal strengths of SGMA in therapeutic practice, as well as routinely operate using strengths-based approaches [6].

Positive youth development models are valuable ways in which to investigate the strengths of all adolescents, and Lerner and Lerner's 5Cs encapsulates five key areas of focus, specifically competence, confidence, connection, character, and caring [7]. Competence in the model pertains to positive perceptions of an adolescent's view of themselves in terms of their social, academic, cognitive and vocational spheres [7]. Confidence is the adolescent's sense of self-efficacy and self-worth [7]. Connection relates to the positive bonds an adolescent has with the people around them (e.g., individuals at home, at school and in their community) [7]. Character is about an adolescent's respect for the standards of correct behavior, sense of right and wrong and their overall integrity, whilst caring is the adolescent's sympathy and empathy for others [7].

Qualitative research has previously delved into the strengths identified by SGM individuals. For example, Harper and colleagues' study conducted amongst gay and bisexual male adolescents in the USA revealed their participants reported positive personal conceptualizations of their sexuality alongside personal resilience as strengths, particularly when faced with gay- or bisexuality-related oppression [8]. Conducted with gender minoritized participants 18 years and older in the UK and North America, Riggle et al. identified eight positive aspects of being transgender, such as enhanced self-congruence, personal growth opportunities, improved empathy for others as well as increased engagement in activism [9]. Adult lesbian and bisexual women in Australia have also previously highlighted how the communities and connections that they actively create in turn bolsters their confidence [10]. Moreover, 11 strengths related to bisexual self-identification have been outlined amongst adults in the UK and North America, such as: authenticity and honesty; having unique perspectives; increased levels of insight and awareness; and becoming an advocate or activist for others [11].

By contrast there is a lack of quantitative research which has highlighted the strengths of SGMA in comparison to their peers who are heterosexual and cisgender (i.e., someone whose gender identity corresponds to the sex they were assigned at birth). This is particularly so in relation to population-based research that utilizes nationally representative samples. To the best of the authors' knowledge only a single such study has been published, and this research reported that sexual minoritized adolescents in New Zealand were more likely to work as volunteers than exclusively heterosexual adolescents [12]. In this current study, we investigated the strengths of adolescents, with a focus on SGMA. We had two main objectives:

1. To establish the percentage of adolescents reporting qualities that indicate strengths, comparing participants by sex, gender and sexuality groups.
2. To explore whether differences in the reporting of qualities indicative of positive youth development (informed by the 5Cs framework) differ by sex, gender and sexuality groups, whilst adjusting for socio-demographic characteristics.

Methods

Study Design

We conducted a secondary analysis of data from the UK's Millennium Cohort Study (MCS); a nationally representative longitudinal study of 19,519 infants born between September 2000 and January 2002 [13]. To date, the MCS has followed cohort members over seven sweeps at age 9 months (i.e., MCS1), 3 years (i.e., MCS2), 5 years (i.e., MCS3), 7 years (i.e., MCS4), 11 years (i.e., MCS5), 14 years (i.e., MCS6), and 17 years (i.e., MCS7). We drew on data from the most recent sweep (i.e., MSC7) when participants were 17 years old. Detailed descriptions of the survey design are available elsewhere (see <https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/>). Ethics approval for MCS7 was obtained from the National Research Ethics Service Research Ethics Committee North East-York (REC ref: 17/NE/0341).

Variables

Sex, gender and sexuality groups: We created a discrete variable with five categories, specifically: heterosexual cisgender male; heterosexual cisgender female; sexual minoritized cisgender female; sexual minoritized cisgender male; and gender minoritized. Gender identity using MCS7 data was determined by following the approach previously outlined by White et

al. [14]. In summary, at age 17, adolescents were asked 'Which of the following describes how you think of yourself?' with response options of "male", "female" and "in another way [please write in the box below]" and "prefer not to say". The responses to "in another way" were coded by the MCS team into "androgenous (male and female)", "gender fluid", "non-binary" and "other". In order to be inclusive of diverse gender identities, and to maximize numbers, participants reporting in an "other way" were categorized as gender minoritized. The gender identity self-reported by adolescents at age 17 was also compared to the sex (options available "male" or "female" only) reported by their guardian/s at 9 months (MC1) and 3 years (MC2). Where these did not match (e.g. the sex reported by a parent at 9 months was male, whereas the gender identity self-reported at age 17 was female) participants were categorized as gender minoritized.

Given cohort members developmental context, sexuality was determined using information on sexual identity and sexual attraction [15]. Adolescents at age 17 were asked "which of the following options best describes how you currently think of yourself" with response options "completely heterosexual", "mainly heterosexual", "bisexual", "mainly gay or lesbian", "completely gay or lesbian", "other", "don't know", "prefer not to say". Adolescents were also asked to respond to the statement "I have felt sexually attracted to...." with response options of "only to the opposite sex, never to the same sex", "more often to the opposite sex, and at least once to someone of the same sex", "about equally often to the opposite sex and the same sex", "more often to the same-sex, and at least once to the opposite sex", "only ever to the same sex", "I have never felt sexually attracted to anyone", "Don't know", "I do not wish to answer". Those responding that they thought of themselves as "completely heterosexual" and had felt sexually attracted "only to the opposite sex, never

to the same sex” were categorized as exclusively heterosexual. Those responding that they had “never felt sexually attracted to anyone” were excluded as previous research has found they have a markedly different profile to other sexual minoritized adolescents [16]. Those responding that they preferred not to say or not to answer for either variable were also excluded from analyses. All other respondents were categorized as sexual minoritized adolescents.

Outcomes: We assessed a range of strengths drawing upon the 5Cs of Lerner and Lerner’s positive youth development framework (i.e., Competence, Confidence, Connection, Character, and Caring) [7] to inform our variable selection. Two authors (XX and XX) independently reviewed the available MCS measures and questionnaire items and identified those that most closely aligned with the 5-C framework, these variables were then checked by the remaining authors (i.e., XX and XX). Participants were assessed using the following measures:

- The NEO Five-Factor Inventory [17]: We used the items from this assessment which appraised different aspects of their personality, specifically: “I see myself as someone who does a thorough job” (i.e., competence), “I see myself as someone who does things efficiently” (i.e., competence), “I see myself as someone who gets nervous easily” (i.e., confidence), “I see myself as someone who is original, comes up with new ideas” (i.e., confidence), “I see myself as someone who has a forgiving nature” (i.e., character), “I see myself as someone who tends to be lazy” (i.e., character) and “I see myself as someone who is considerate and kind to almost everyone” (i.e., caring). Adolescents were asked to rate how much each statement applied to them on a scale of 1

(does not apply to me at all) to 7 (applies to me perfectly). We collapsed these items into binary variables (e.g., where those responding 5-7 were “does apply to me”).

- Strengths and Difficulties Questionnaire (SDQ) [18]: Adolescents were asked how true statements about their behavior in the six months preceding the survey were, with possible response options being “not true”, “somewhat true” and “certainly true”. The items utilized were “I am nervous in new situations. I easily lose confidence” (i.e., confidence), “I often volunteer to help others” (i.e., character), “I have one good friend or more” (i.e., connection), “I try to be nice to other people. I care about their feelings” (i.e., caring), and “I am kind to young children” (i.e., caring). For the positive variables we collapsed these items into binary variables, with “somewhat true” and “not true” combined. For “I am nervous in new situation”, we combined “somewhat true” and “certainly true”.
- Educational achievement: Academic or educational achievement (i.e., competence) was derived from self-reported information about the participant’s grades that they had obtained. Participants who reported that they had 5 General Certificate of Secondary Education pass grades (i.e., GCSEs or International GCSEs grades A to C or 4 to 9), or Scottish National 5 pass grades at A to C, were categorized as one group (i.e., 5 GCSEs or Scottish equivalent), with those who had not obtained these qualifications categorized as “Not obtained”.
- Closeness to others: The questionnaire item “I have been feeling close to other people” (i.e., connection) was based on the past two weeks and included the

following response options: “none of the time”, “rarely”, “some of the time”, “often” and “all of the time”. A binary variable was created with those reporting they felt close to other people “often” or “all the time” categorized together. Adolescents who were resident with parents were asked the following questions: “overall, how close would you say you are to your father” (i.e., connection) and “overall, how close would you say you are to your mother” (i.e., connection) with the response options “not very close”, “fairly close”, “very close”, and “extremely close”. Adolescents reporting being “very close” or “extremely close” to either their co-resident mother or father were categorized together.

Covariates: Socio-demographic variables included age, ethnicity, living arrangements, socio-economic status and whether the adolescent was resident in England, Wales, Scotland, or Northern Ireland. Details on living arrangements were obtained using information on whether parents/carers were living in the household with the adolescent. This variable was coded as: 1) two parents/carers; 2) one parent/carer. Socio-economic status was assessed using information on the number of unemployed parents/carers living with the adolescent and parent/carer home ownership based on responses from parents/carers. Possible responses were “employment”, “self-employment”, “looking after family”, “waiting to start a job”, “looking for a job”, “being on a government scheme”, “full-time education”, “retirement”, and “not in paid work but not being sick, on a training scheme, studying or retired or looking after the family”. Parents/carers stating they were employed or self-employed were combined in a category whilst all others were categorized as unemployed/economically inactive. The number of parents/carers who reported being unemployed/economically inactive were summed. Parents/carers were also asked “Do you or your partner [if co-resident] own or rent

your home or have some other arrangement?”. Those who “own outright” or “own - mortgage/loan” were categorized as being owner-occupied, whilst all other responses were categorized as non-owner-occupied housing.

Data Analysis

In total 14,496 families were invited to take part in the MCS7, with 10,345 (71.4%) cohort members participating [19]. Of those participating, 10,127 formed the core sample who took part in the face-to-face interviews. In the current study we excluded the additional 218 adolescents who formed a booster sample, as they only took part in a shorter online survey. Adolescents were also excluded if they preferred not to state their gender identity. Amongst cisgender adolescents, those who did not want to report (or preferred not to say) their sexual attraction/s or identity, or stated they had never been sexually attracted to anyone, were excluded. Therefore, 375 adolescents were excluded from the sample. Missing socio-demographic variables data ranged from 0.04% to 23.8%. Adolescents with missing socio-demographic data were excluded, giving an analytical sample of 7,706.

Total numbers and weighted percentages were calculated for the socio-demographic characteristics and various outcomes according to our sex, gender, and sexuality groups. The results have been separated for the cisgender participants in recognition of the differences in outcomes between male and female adolescents in a range of phenomena [e.g., 12, 15, 20-21]. We also separated male and female sexual minoritized adolescents in analyses, as a systematic review and meta-analysis in the area of SGMA mental health has highlighted significant differences [2].

Logistic regression models were used to compare outcomes between heterosexual cisgender males and the other sex, gender and sexuality groups whilst adjusting for the

adolescents' age, living arrangement, residence, socio-economic status and ethnicity. Given that the characteristics of those included in the final analytical sample differ to those excluded in the current study [see Supplementary Table 1], as a sensitivity analysis we re-ran the analysis using multiple imputation to address missing data. We used multiple imputation utilizing chained equations and using pooled results across 20 datasets. The imputation model included all variables. No substantial differences were found in most results [Supplementary Table 2]. For comparison we also ran logistic regression models which investigated outcomes between exclusively heterosexual youth versus sexual minoritized adolescents as well as cisgender adolescents versus gender minoritized adolescents [Supplementary Tables 3 and 4] which also illustrated patterns related to sexuality and gender identity. To account for the study design of the MCS, as well as attrition over the waves, analyses were weighted with sampling and attrition weights [13] using the Stata svy prefix. All statistical analyses were conducted using STATA software version 14.1 (Stata Corp. Inc, TX, USA).

Results

The socio-demographic characteristics of the sample are reported in Table 1. Approximately three quarters of participants overall were exclusively heterosexual and cisgender, whilst almost one quarter were sexual minoritized and cisgender. Of the cisgender males, 84.2% were exclusively heterosexual (n=2,877), and 15.8% (n=541) were sexual minoritized. Of the cisgender females, 66.2% were exclusively heterosexual (n=2,359), and 33.8% were sexual minoritized (n=1,205). In total, 1.3% (n=94) of the sample were gender minoritized. Reflecting the demographics of the UK, the majority of participants were White (between 87.5-92.9%) and resided in England (between 82.4-84.8%). Seventy percent or more of participants lived with two parents/carers. Approximately one in five

participants (between 19.7-23.5%) lived with one or more unemployed parents/carers. The majority lived with parents/carers who own their home.

Table 1: Socio-demographic characteristics of participants by sex, gender and sexuality group (weighted percentages)

	Exclusively heterosexual cisgender male (n=2,877)	Exclusively heterosexual cisgender female (n=2,359)	Sexual minoritized cisgender female (n=1,205)	Sexual minoritized cisgender male (n=541)	Gender minoritized ^b (n=94)
Ethnicity ^a					
White	2,368 (87.5%)	1,922 (87.1%)	1,049 (89.1%)	477 (90.5%)	84 (92.9%)
Mixed	135 (4.9%)	101 (3.6%)	59 (4.4%)	33 (6.5%)	4 (3.4%)
Indian	77 (1.5%)	64 (1.8%)	25 (2.7%)	9 (0.7%)	2 (1.9%)
Pakistani and Bangladeshi	147 (2.5%)	156 (3.6%)	27 (1.1%)	9 (1.1%)	4 (1.7%)
Black or Black British	93 (2.2%)	66 (2.3%)	27 (1.5%)	7 (0.7%)	0 (0.0%)
Other ethnic group	57 (1.4%)	50 (1.7%)	18 (1.2%)	6 (0.5%)	0 (0.0%)
Age					
Mean (SD)	17.2 (0.33)	17.2 (0.33)	17.2 (0.32)	17.1 (0.34)	17.2 (0.32)
Nation/region					
England	1,918 (83.3%)	1,537 (84.2%)	775 (82.4%)	346 (83.8%)	65 (84.8%)
Wales	398 (6.1%)	331 (5.1%)	175 (5.2%)	71 (4.3%)	10 (3.5%)
Scotland	317 (7.8%)	248 (7.4%)	161 (9.7%)	72 (8.8%)	11 (8.8%)
Northern Ireland	244 (2.8%)	243 (3.3%)	94 (2.6%)	52 (3.2%)	8 (2.9%)
Living arrangement					
Two parents/carers	2,210 (75.9%)	1,789 (74.2%)	895 (73.2%)	397 (74.5%)	67 (71.2%)
One parent/carers	667 (24.1%)	570 (25.8%)	310 (26.8%)	144 (26.5%)	27 (28.8%)
Co-resident parents/carers home ownership status					
Ownership	2,172 (75.3%)	1,731 (74.2%)	915 (76.1%)	407 (76.7%)	62 (66.4%)
Non-ownership	705 (24.7%)	628 (25.9%)	290 (23.9%)	134 (23.3%)	32 (33.6%)
Unemployment status of co- resident parents/carers					
0	2,227 (79.8%)	1,815 (79.7%)	945 (80.2%)	425 (80.3%)	72 (76.5%)
1	597 (18.7%)	506 (19.2%)	237 (18.3%)	98 (17.8%)	21 (21.6%)
2	53 (1.5%)	38 (1.1%)	23 (1.5%)	8 (1.9%)	1 (1.9%)

^a Self-reported at age 14, based on participants' responses to the question "What is your ethnic group?"

^b The gender minoritized participants described themselves as male (n=32, 34.0%), female (n=12, 12.8%), androgynous (n=6, 6.4%), gender fluid (n=9, 9.6%), non-binary (n=19, 20.2%) or categorized as 'other' by the MCS (n=16, 17.0%)

Table 2 highlights that the majority of participants rated themselves positively for most of the strengths indicators. Over 70% of participants in all groups reported that they felt at least very close to a parent and that they were someone who is considerate and kind to almost everyone. Over 80% of participants in all groups reported that they had one good friend or more. Exceptions to this pattern were the variables related to nervousness, volunteering to help others, and for gender minoritized adolescents and sexual minoritized cisgender males, perceptions of laziness.

The logistic regression models (Table 2) indicated significant differences in the likelihood of reporting strengths by sex, gender and sexuality group, adjusting for socio-demographic characteristics. There were several strength indicators which sexual or gender minoritized adolescents were more likely to report in comparison to exclusively heterosexual cisgender males (i.e. the reference group). Sexual minoritized adolescents (and exclusively heterosexual cisgender females), had higher odds of reporting having five GCSEs (or the Scottish equivalent). Gender minoritized adolescents had higher odds of reporting being original and coming up with new ideas. Gender minoritized adolescents, as well as both groups of females, had higher odds of reporting volunteering to help others, compared to the referents. Both groups of females had higher odds of reporting having a forgiving nature, being nice to other people, being kind to young children and considerate of others, compared to exclusively heterosexual males. However, the differences in the odds between exclusively heterosexual cisgender males and sexual minoritized cisgender females reporting a forgiving nature was nonsignificant in models using imputed data [see Supplementary Table 2].

Table 2 Association between the sex, gender and sexuality group and strength measures

	N	Weighted % 95% confidence interval	Odds ratio 95% confidence interval	p value
Competence				
<i>I see myself as someone who does a thorough job</i> (n=7,058)				
Exclusively heterosexual cisgender male	2135		1	
Exclusively heterosexual cisgender female	1808	77.2% (74.6-79.7)	1.14 (0.95-1.37)	0.161
Sexual minoritized cisgender female	843	73.2% (69.9-76.2)	0.90 (0.74-1.10)	0.320
Sexual minoritized cisgender male	356	60.4% (54.3-66.1)	0.50 (0.38-0.67)	<0.0001
Gender minoritized	62	63.7% (52.2-73.8)	0.60 (0.37-0.98)	0.040
<i>I see myself as someone who does things efficiently</i> (n=7,069)				
Exclusively heterosexual cisgender male	2132	74.1% (71.9-76.2)	1	
Exclusively heterosexual cisgender female	1866	78.7% (76.3-80.8)	1.30 (1.11-1.52)	0.001
Sexual minoritized cisgender female	844	71.5% (68.1-74.6)	0.88 (0.72-1.07)	0.204
Sexual minoritized cisgender male	261	61.6% (55.4-67.3)	0.57 (0.42-0.75)	<0.0001
Gender minoritized	62	62.3% (51.1-72.4)	0.59 (0.37-0.95)	0.031
<i>5 GSCEs or Scottish equivalent</i> (n=7,060)				
Exclusively heterosexual cisgender male	2101	73.4% (70.8-75.8)	1	
Exclusively heterosexual cisgender female	1949	82.8% (80.2-85.1)	1.92 (1.56-2.37)	<0.0001
Sexual minoritized cisgender female	1015	86.4% (83.8-88.7)	2.60 (2.13-3.17)	<0.0001
Sexual minoritized cisgender male	429	79.9% (73.5-85.0)	1.56 (1.02-2.36)	0.038
Gender minoritized	73	77.4% (66.5-85.4)	1.55 (0.91-2.64)	0.110
Confidence				
<i>Does not get nervous easily</i> (n=7,070)				
Exclusively heterosexual cisgender male	2,083	71.6% (69.3-73.6)	1	
Exclusively heterosexual cisgender female	1,200	51.7% (49.2-54.1)	0.42 (0.37-0.48)	<0.0001
Sexual minoritized cisgender female	456	38.7% (35.1-42.4)	0.25 (0.21-0.31)	<0.0001
Sexual minoritized cisgender male	273	50.1% (44.4-55.9)	0.40 (0.31-0.53)	<0.0001
Gender minoritized	28	31.2% (21.6-42.7)	0.18 (0.11-0.31)	<0.0001
<i>I see myself as someone who is original, comes up with new ideas</i> (n=7,073)				
Exclusively heterosexual cisgender male	1645	57.1% (54.6-59.6)	1	
Exclusively heterosexual cisgender female	1270	53.2% (50.8-55.6)	0.85 (0.74-0.98)	0.021
Sexual minoritized cisgender female	696	57.5% (54.1-60.8)	1.02 (0.87-1.19)	0.833

Sexual minoritized cisgender male	327	59.6% (53.5-65.4)	1.12 (0.85-1.47)	0.434
Gender minoritized	70	75.0% (63.8-83.6)	2.31 (1.35-3.98)	0.002
<i>Not nervous in new situations, doesn't easily lose confidence (n=7,044)</i>				
Exclusively heterosexual cisgender male	1856	33.8% (31.4-36.2)	1	
Exclusively heterosexual cisgender female	1781	23.5% (21.8-25.9)	0.60 (0.51-0.71)	<0.0001
Sexual minoritized cisgender female	1004	16.2% (13.6-19.2)	0.38 (0.30-0.47)	<0.0001
Sexual minoritized cisgender male	411	20.9% (17.1-25.4)	0.52 (0.39-0.69)	<0.0001
Gender minoritized	84	11.3% (5.9-20.5)	0.26 (0.13-0.52)	<0.0001
Connection				
<i>I have one good friend or more (n=7,053)</i>				
Exclusively heterosexual cisgender male	2505	87.6% (85.9-89.1)	1	
Exclusively heterosexual cisgender female	2062	87.3% (85.4-89.0)	0.98 (0.79-1.22)	0.844
Sexual minoritized cisgender female	1006	83.4% (80.2-86.2)	0.70 (0.55-0.91)	0.007
Sexual minoritized cisgender male	449	81.1% (74.3-86.4)	0.60 (0.39-0.92)	0.020
Gender minoritized	80	84.5% (73.6-91.4)	0.81 (0.40-1.65)	0.559
<i>I've been feeling close to other people (n=7,068)</i>				
Exclusively heterosexual cisgender male	1919	66.6% (64.2-69.0)	1	
Exclusively heterosexual cisgender female	1668	71.8% (69.3-74.2)	1.29 (1.11-1.49)	0.001
Sexual minoritized cisgender female	669	57.6% (53.6-62.0)	0.68 (0.57-0.81)	<0.0001
Sexual minoritized cisgender male	319	59.4% (53.9-64.6)	0.73 (0.57-0.94)	0.016
Gender minoritized	53	58.5% (47.6-68.6)	0.72 (0.46-1.13)	0.157
<i>Very close (or more) to at least one co-resident parent/carer (n=7,039)</i>				
Exclusively heterosexual cisgender male	2519	87.4% (85.0-89.4)	1	
Exclusively heterosexual cisgender female	2033	86.8% (85.1-88.4)	0.95 (0.76-1.20)	0.693
Sexual minoritized cisgender female	968	79.5% (76.2-82.4)	0.55 (0.43-0.72)	<0.0001
Sexual minoritized cisgender male	437	79.5% (74.6-83.7)	0.55 (0.40-0.76)	<0.0001
Gender minoritized	65	70.6% (59.7-79.5)	0.35 (0.21-0.60)	<0.0001
Character				
<i>I often volunteer to help others (n=7,055)</i>				
Exclusively heterosexual cisgender male	677	22.3% (20.6-24.2)	1	
Exclusively heterosexual cisgender female	988	39.1% (36.5-41.8)	2.26 (1.93-2.64)	<0.0001
Sexual minoritized cisgender female	481	38.2 (35.1-41.5)	2.17 (1.81-2.60)	<0.0001
Sexual minoritized cisgender male	125	25.9% (20.8-31.8)	1.23 (0.90-1.68)	0.190
Gender minoritized	40	40.3 (30.2-51.4)	2.41 (1.48-3.90)	<0.0001
<i>I see myself as someone who has a forgiving nature (n=7,066)</i>				

Exclusively heterosexual cisgender male	1969	67.7% (65.3-70.0)	1	
Exclusively heterosexual cisgender female	1814	74.7% (71.7-77.5)	1.43 (1.17-1.74)	<0.0001
Sexual minoritized cisgender female	862	71.9% (68.7-74.9)	1.22 (1.01-1.48)	0.039
Sexual minoritized cisgender male	374	69.4% (64.4-74.0)	1.10 (0.86-1.41)	0.428
Gender minoritized	70	76.8% (65.8-85.0)	1.63 (0.98-2.71)	0.061
<i>Not someone who tends to be lazy (n=7,069)</i>				
Exclusively heterosexual cisgender male	1704	58.2% (55.7-60.7)	1	
Exclusively heterosexual cisgender female	1485	65.0% (62.2-67.6)	1.33 (1.15-1.55)	<0.0001
Sexual minoritized cisgender female	579	51.4% (47.8-54.9)	0.76 (0.64-0.90)	0.001
Sexual minoritized cisgender male	243	44.4% (38.9-50.0)	0.57 (0.45-0.73)	<0.0001
Gender minoritized	36	38.2% (28.5-48.9)	0.45 (0.28-0.70)	<0.0001
Caring				
<i>I try to be nice to other people, I care about their feelings (n=7,059)</i>				
Exclusively heterosexual cisgender male	2106	73.9% (71.7-76.0)	1	
Exclusively heterosexual cisgender female	2081	88.1% (86.0-90.0)	2.69 (2.15-3.36)	<0.0001
Sexual minoritized cisgender female	1016	84.2% (81.5-86.5)	1.88 (1.53-2.31)	<0.0001
Sexual minoritized cisgender male	378	70.6% (65.7-75.0)	0.85 (0.66-1.09)	0.189
Gender minoritized	76	80.3% (69.9-87.7)	1.50 (0.83-2.69)	0.177
<i>I am kind to young children (n=7,058)</i>				
Exclusively heterosexual cisgender male	2058	71.9% (69.5-74.2)	1	
Exclusively heterosexual cisgender female	2130	91.0% (89.5-92.2)	3.97 (3.26-4.84)	<0.0001
Sexual minoritized cisgender female	980	80.7 (78.1-83.1)	1.64 (1.36-1.99)	<0.0001
Sexual minoritized cisgender male	353	65.3 (60.1-70.2)	0.74 (0.59-0.94)	0.013
Gender minoritized	65	63.8 (52.0-74.1)	0.70 (0.41-1.17)	0.173
<i>Someone who is considerate and kind to almost everyone (n=7,070)</i>				
Exclusively heterosexual cisgender male	2280	79.4% (77.4-81.2)	1	
Exclusively heterosexual cisgender female	2137	89.9% (87.6-91.7)	2.34 (1.81-3.01)	<0.0001
Sexual minoritized cisgender female	1056	85.0% (75.6-91.2)	1.75 (1.36-2.23)	<0.0001
Sexual minoritized cisgender male	415	76.7% (72.3-80.5)	0.86 (0.67-1.12)	0.263
Gender minoritized	80	84.0% (82.9-85.0)	1.50 (0.81-2.79)	0.197

There were also several strength indicators which sexual or gender minoritized youth were less likely to report in comparison to exclusively heterosexual cisgender males. Sexual minority males and gender minoritized adolescents had lower odds of reporting being efficient and doing a thorough job compared to the reference category. However, in the model using imputed data [see Supplementary Table 2] the differences between gender minoritized adolescents and exclusively heterosexual cisgender males were nonsignificant for both of those outcomes. All groups had lower odds of reporting not being nervous easily or in new situations relative to exclusively heterosexual cisgender males. Both sexual minoritized groups had lower odds of reporting having one good friend (or more) and feeling close to other people, compared to the reference category. SGMA had lower odds of being close to at least one parent and not being lazy. Sexual minority males had lower odds of being kind to young children compared to the reference group, although this was nonsignificant in the model using imputed data [see Supplementary Table 2].

Discussion

Summary of main findings and implications

As with prior research conducted amongst sexual and gender minoritized adults [e.g., 4, 22], the majority of SGMA in the MCS reported strengths, particularly with regards to having a caring nature and in terms of their connections with friends and their co-resident parents. The results are timely, given the need to disrupt de-contextualized discourses that describe SGMA as being ‘pathological’ and ‘at risk’ [23]. The indicators of positive youth development in this current study are also largely de-contextualized from the cis-heteronormative challenges facing these adolescents, although the 5Cs framework includes more recognition of structural features (e.g., opportunities for connection and support) in understanding

SGMA's experiences. Importantly, the results emphasise the many domains in which these adolescents are experiencing the conditions for positive youth development.

These findings demonstrate where opportunities exist to bolster areas of promise and buttress other domains. For instance, SGMA strengths included a greater likelihood of academic competence, and gender minoritized adolescents were more likely to be original and to come up with new ideas. Moreover, sexual minoritized cisgender females and gender minoritized adolescents were more likely to volunteer to help others. These existing domains of strength, relative to cisgender heterosexual males, provide opportunities to further build upon to improve the positive youth development opportunities of SGMA. Feasibly, initiatives that can combine a focus on these strengths are needed, but the programs created to help SGMA sustain these strengths (e.g., in relation to volunteering) should also address the potential challenges (e.g., burnout or compassion fatigue resulting from a greater tendency to help others and volunteer).

The recognition that connection is a common disparity for many SMGA also highlights the structural opportunities that exist to support this aspect of young people's development. The analysis reflects earlier work which highlights that safe and supportive environments are vital for SGMA [24], this is a salient point given that internationally there is overwhelming evidence of disproportionate amounts of bullying and victimization faced by SGMA [25]. The results suggest that opportunities are needed to develop positive relationships in the homes of SGMA, as such connections are widely recognized as especially important for SGMA [25]. In particular, research from the USA provides insights that can help foster such connections for gender minoritized adolescents, noting that parents often lack knowledge of what it means to be gender diverse, and they may hold a range of prejudices about transgender

identities [26], which may disrupt the positive parent-child connections that are so valuable. Hence, approaches that support parents in managing their emotional reactions to the challenges associated with raising a SGMA young person, in contexts where such parents are routinely isolated and unsupported, are warranted [26].

The current findings highlight gendered patterns. For example, females appear to be more caring, whilst exclusively heterosexual cisgender males report more confidence. These findings, including some persistence across sexuality categories, likely link to patriarchal standards related to gender which can undermine confidence in SGMA [27]. Therefore, a pressing need exists to support the confidence of gender minoritized adolescents (and all gender non-conforming young people), which, given the impacts of the anti-transgender sentiments they face [28], is particularly urgent. Conversely, increased opportunities for males to develop caring, supportive and advocacy-related dispositions and abilities is also indicated.

Strengths and Limitations

Strengths of this study include the relatively large sample, which enabled five groups in terms of sex, gender and sexuality to be viable. Another major strength is that the data are from a robust nationally representative sample, specifically the MCS. Although given the small numbers within certain groups, especially for the gender minoritized adolescents, we were underpowered to explore additional within-group differences (e.g., the strengths of SGMA who were also from a minoritized ethnicity). The findings, in relation to the outcomes investigated, are based on participants' self-report, which are influenced by issues such as a social desirability bias. As a secondary data analysis, exploring strengths whilst drawing upon the 5C framework was constrained to items available in the MCS dataset, which varied in

terms of their potential congruence with the framework. A 34-item Positive Youth Development (PYD)-5C self-report measure has previously been developed [29], thus a limitation of the current study, in utilizing secondary data, is that only items from the MCS's extensive battery of questionnaires, and not a standardized measure, were able to be used for the analyses. Nonetheless these items still demonstrate the importance of understanding, and maximizing, the potential strengths of SGMA.

Conclusion

Utilizing a broad understanding of strengths, informed by the 5C framework, demonstrated a range of features that can foster positive youth development for all adolescents, including SGMA. Importantly, using nationally representative data from the UK in this analysis, the findings show unique patterns where SGMA demonstrated a range of noteworthy strengths. Aspects which are valuable to consider in terms of improving the health and wellbeing of young people across a range of sex, gender and sexuality groupings.

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Supplementary Table 1: Socio-demographic characteristics of Wave 7 Millennium Cohort Study Cohort included and excluded from the analytical sample

	Included in analytical sample (n=7,076)	Excluded from analytical sample (n=3,269)	P-value
Ethnicity ^a			
White	5,900 (83.4%)	1,476 (45.2%)	<0.0001
Non-white	1,176 (65.9%)	764 (23.4%)	
Missing/refused	0 (0.0%)	1,029 (31.5%)	
Nation/region			
England	4,641 (65.6%)	2,157 (66.0%)	<0.0001
Wales	985 (13.9%)	364 (11.1%)	
Scotland	809 (11.4%)	246 (7.5%)	
Northern Ireland	641 (9.1%)	285 (8.7%)	
Missing/refused	0 (0.0%)	218 (6.7%)	
Living arrangement			
Two parents/carers	5,358 (75.7%)	1,771 (54.2%)	<0.0001
One parent/carers	1,771 (24.3%)	1,068 (32.7%)	
Missing/refused	0 (0.0%)	430 (13.2%)	
Co-resident parents/carers home ownership status			
Ownership	5,287 (73.7%)	369 (11.3%)	<0.0001
Non-ownership	1,789 (25.3%)	576 (17.6%)	
Missing/refused	0 (0.0%)	2,324 (71.1%)	
Unemployment status of co-resident parents/carers			
0	5,494 (77.6%)	647 (19.8%)	<0.0001
1	1,459 (20.6%)	279 (8.5%)	
2	123 (1.7%)	19 (0.6%)	
Missing/refused	0 (0.0%)	2,324 (71.1%)	
Sex, sexuality and gender group			
Exclusively heterosexual cisgender male	2,877 (40.7%)	1,132 (34.6%)	<0.0001
Exclusively heterosexual cisgender female	2,359 (33.3%)	947 (29.0%)	
Sexual minoritized cisgender female	1,205 (17.0%)	358 (11.0%)	
Sexual minoritized cisgender male	541 (7.7%)	197 (6.0%)	
Gender minoritized	94 (1.3%)	15 (0.5%)	
Missing/ not sexually attracted to anyone	0 (0.05)	620 (19.0%)	

Supplementary Table 2 - Association between the sex, gender and sexuality group and strength measures using imputed data

	Odds ratio 95% confidence interval	p value
Competence		
<i>I see myself as someone who does a thorough job</i> (n=7,058)		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	1.11 (0.88-1.38)	0.374
Sexual minoritized cisgender female	0.94 (0.75-1.18)	0.577
Sexual minoritized cisgender male	0.44 (0.34-0.58)	<0.0001
Gender minoritized	0.62 (0.37-1.03)	0.067
<i>I see myself as someone who does things efficiently</i> (n=7,069)		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	1.26 (1.01-1.56)	0.040
Sexual minoritized cisgender female	0.87 (0.70-1.07)	0.181
Sexual minoritized cisgender male	0.52 (0.39-0.69)	<0.0001
Gender minoritized	0.63 (0.38-1.06)	0.079
<i>5 GSCEs or Scottish equivalent</i> (n=7,060)		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	1.67 (1.29-2.15)	<0.0001
Sexual minoritized cisgender female	2.54 (1.8703.45)	<0.0001
Sexual minoritized cisgender male	1.58 (1.02-2.44)	0.040
Gender minoritized	1.20 (0.72-2.00)	0.488
Confidence		
<i>Does not get nervous easily</i> (n=7,070)		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	0.40 (0.33-0.48)	<0.0001
Sexual minoritized cisgender female	0.24 (0.19-0.30)	<0.0001
Sexual minoritized cisgender male	0.38 (0.29-0.51)	<0.0001
Gender minoritized	0.2 (0.12-0.35)	<0.0001

I see myself as someone who is original, comes up with new ideas (n=7,073)

Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	0.87 (0.73-1.04)	0.118
Sexual minoritized cisgender female	1.12 (0.91-1.35)	0.252
Sexual minoritized cisgender male	1.13 (0.87-1.47)	0.350
Gender minoritized	2.57 (1.41-4.68)	0.002

Not nervous in new situations, doesn't easily lose confidence (n=7,044)

Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	0.51 (0.42-0.62)	<0.0001
Sexual minoritized cisgender female	0.40 (0.30-0.52)	<0.0001
Sexual minoritized cisgender male	0.45 (0.34-0.59)	<0.0001
Gender minoritized	0.23 (0.10-0.50)	<0.0001

Connection

I have one good friend or more (n=7,053)

Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	0.89 (0.71-1.12)	0.313
Sexual minoritized cisgender female	0.70 (0.54-0.91)	0.008
Sexual minoritized cisgender male	0.56 (0.38-0.82)	0.003
Gender minoritized	1.08 (0.5-2.36)	0.843

I've been feeling close to other people (n=7,068)

Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	1.03 (0.85-1.25)	0.752
Sexual minoritized cisgender female	0.58 (0.46-0.72)	<0.0001
Sexual minoritized cisgender male	0.71 (0.55-0.92)	0.009
Gender minoritized	0.68 (0.42-1.09)	0.112

Very close (or more) to at least one co-resident parent/carer (n=7,039)

Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	0.91 (0.68-1.22)	0.536
Sexual minoritized cisgender female	0.49 (0.36-0.66)	<0.0001
Sexual minoritized cisgender male	0.56 (0.41-0.77)	<0.0001

Gender minoritized	0.35 (0.20-0.61)	<0.0001
Character		
<i>I often volunteer to help others (n=7,055)</i>		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	2.25 (1.86-2.72)	<0.0001
Sexual minoritized cisgender female	2.14 (1.72-2.67)	<0.0001
Sexual minoritized cisgender male	1.34 (0.98-1.84)	0.064
Gender minoritized	2.56 (1.55-4.23)	<0.0001
<i>I see myself as someone who has a forgiving nature (n=7,066)</i>		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	1.38 (1.12-1.71)	0.003
Sexual minoritized cisgender female	1.18 (0.96-1.46)	0.122
Sexual minoritized cisgender male	1.11 (0.87-1.4)	0.395
Gender minoritized	1.68 (0.95-2.99)	0.076
<i>Not someone who tends to be lazy (n=7,069)</i>		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	1.35 (1.10-1.64)	0.004
Sexual minoritized cisgender female	0.71 (0.57-0.89)	0.003
Sexual minoritized cisgender male	0.58 (0.44-0.76)	<0.0001
Gender minoritized	0.44 (0.28-0.7)	0.001
Caring		
<i>I try to be nice to other people, I care about their feelings (n=7,059)</i>		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	2.79 (2.16-3.59)	<0.0001
Sexual minoritized cisgender female	2.04 (1.60-2.59)	<0.0001
Sexual minoritized cisgender male	0.90 (0.70-1.16)	0.404
Gender minoritized	1.77 (0.89-3.52)	0.103
<i>I am kind to young children (n=7,058)</i>		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	3.93 (3.17-4.86)	<0.0001
Sexual minoritized cisgender female	1.86 (1.48-2.32)	<0.0001

Sexual minoritized cisgender male	0.82 (0.64-1.05)	0.118
Gender minoritized	0.72 (0.40-1.30)	0.275
<i>Someone who is considerate and kind to almost everyone</i>		
(n=7,070)		
Exclusively heterosexual cisgender male	1	
Exclusively heterosexual cisgender female	2.08 (1.50-2.89)	<0.0001
Sexual minoritized cisgender female	1.76 (1.33-2.33)	<0.0001
Sexual minoritized cisgender male	0.88 (0.66-1.16)	0.354
Gender minoritized	1.35 (0.67-2.72)	0.398

Supplementary Table 3 Comparison of exclusively heterosexual and sexual minoritized adolescents in terms of strength measures

	N	% 95% confidence interval	Odds ratio (95% confidence interval)	p value
Competence				
<i>I see myself as someone who does a thorough job</i> (n=7,046)				
Exclusively heterosexual adolescents	3,947	76.0% (74.3-77.7)	1	
Sexual minoritized adolescents	1,249	68.8% (65.7-71.8)	0.69 (0.58-0.82)	<0.0001
<i>I see myself as someone who does things efficiently</i> (n=7,057)				
Exclusively heterosexual adolescents	4,002	76.1% (74.4-77.8)	1	
Sexual minoritized adolescents	1,256	68.1% (65.0-71.1)	0.67 (0.56-0.81)	<0.0001
<i>5 GSCEs or Scottish equivalent</i> (n=7,048)				
Exclusively heterosexual adolescents	4,054	77.5% (75.6-79.4)	1	
Sexual minoritized adolescents	1,504	84.0% (81.0-86.6)	1.63 (1.31-2.02)	<0.0001
Confidence				
<i>Does not get nervous easily</i> (n=7,058)				
Exclusively heterosexual adolescents	3,286	62.8% (61.0-64.5)	1	
Sexual minoritized adolescents	753	41.9% (39.1-44.8)	0.43 (0.37-0.50)	<0.0001
<i>I see myself as someone who is original, comes up with new ideas</i> (n=7,061)				
Exclusively heterosexual adolescents	2,919	55.4% (53.7-57.2)	1	
Sexual minoritized adolescents	1,083	58.9% (55.9-61.9)	1.16 (1.01-1.33)	0.034
<i>Not nervous in new situations, doesn't easily lose confidence</i> (n=7,032)				
Exclusively heterosexual adolescents	1,577	29.2% (27.7-30.9)	1	
Sexual minoritized adolescents	330	17.4% (15.2-19.9)	0.51 (0.43-0.61)	<0.0001
Connection				
<i>I have one good friend or more</i> (n=7,041)				
Exclusively heterosexual adolescents	4,572	87.4% (86.2-88.7)	1	
Sexual minoritized adolescents	1,523	82.8% (79.7-85.5)	0.68 (0.54-0.86)	0.001
<i>I've been feeling close to other people</i> (n=7,056)				

Exclusively heterosexual adolescents	3,590	68.9% (67.0-70.7)	1	
Sexual minoritized adolescents	1,034	58.3% (55.1-61.5)	0.63 (0.54-0.73)	<0.0001
<i>Very close (or more) to at least one co-resident parent/carer (n=7,027)</i>				
Exclusively heterosexual adolescents	4,555	87.1% (85.6-88.5)	1	
Sexual minoritized adolescents	1,457	79.1% (76.4-81.6)	0.56 (0.46-0.68)	<0.0001
Character				
<i>I often volunteer to help others (n=7,043)</i>				
Exclusively heterosexual adolescents	1,665	29.7% (28.2-31.2)	1	
Sexual minoritized adolescents	643	34.7% (32.1-37.5)	1.27 (1.10-1.46)	0.001
<i>I see myself as someone who has a forgiving nature (n=7,054)</i>				
Exclusively heterosexual adolescents	3,787	70.8% (69.1-72.4)	1	
Sexual minoritized adolescents	1,294	71.4% (68.8-73.8)	1.03 (0.89-1.20)	0.671
<i>Not someone who tends to be lazy (n=7,057)</i>				
Exclusively heterosexual adolescents	3,192	61.2% (59.3-63.1)	1	
Sexual minoritized adolescents	852	48.7% (45.7-51.7)	0.60 (0.52-0.69)	<0.0001
Caring				
<i>I try to be nice to other people, I care about their feelings (n=7,047)</i>				
Exclusively heterosexual adolescents	4,190	80.2% (78.7-81.6)	1	
Sexual minoritized adolescents	1,458	79.9% (77.6-82.1)	0.98 (0.83-1.15)	0.781
<i>I am kind to young children (n=7,046)</i>				
Exclusively heterosexual adolescents	4,192	80.3% (78.4-81.7)	1	
Sexual minoritized adolescents	1,385	75.4% (73.0-77.6)	0.75 (0.65-0.87)	<0.0001
<i>Someone who is considerate and kind to almost everyone (n=7,058)</i>				
Exclusively heterosexual adolescents	4,442	84.0% (82.6-85.3)	1	
Sexual minoritized adolescents	1,539	83.9% (81.8-85.8)	0.99 (0.82-1.20)	0.931

Supplementary Table 4: Comparison of cisgender and gender minoritized adolescents in terms of strength measures

	N	% 95% confidence interval	Odds ratio (95% confidence interval)	p value
Competence				
<i>I see myself as someone who does a thorough job</i> (n=7,058)				
Cisgender adolescents	5142	74.3% (72.8-75.7)	1	
Gender minoritized adolescents	62	63.7% (52.2-73.8)	0.63 (0.39-1.01)	0.054
<i>I see myself as someone who does things efficiently</i> (n=7,069)				
Cisgender adolescents	5203	74.2% (77.4-81.0)	1	
Gender minoritized adolescents	62	62.3% (51.1-72.4)	0.59 (0.37-0.93)	0.023
<i>5 GSCEs or Scottish equivalent</i> (n=7,060)				
Cisgender adolescents	5595	79.2% (77.4-81.0)	1	
Gender minoritized adolescents	73	77.4% (66.5-85.4)	1.05 (0.62-1.78)	0.861
Confidence				
<i>Does not get nervous easily</i> (n=7,070)				
Cisgender adolescents	4012	57.7% (56.2-59.1)	1	
Gender minoritized adolescents	28	31.2% (21.6-42.7)	0.34 (0.21-0.56)	<0.0001
<i>I see myself as someone who is original, comes up with new ideas</i> (n=7,044)				
Cisgender adolescents	3938	56.1% (54.5-57.7)	1	
Gender minoritized adolescents	70	75.0% (63.8-83.6)	2.41 (1.42-4.10)	0.001
<i>Not nervous in new situations, doesn't easily lose confidence</i> (n=7,070)				
Cisgender adolescents	1898	26.4% (25.0-27.7)	1	
Gender minoritized adolescents	10	11.3% (5.9-20.5)	0.37 (0.18-0.74)	0.006
Connection				
<i>I have one good friend or more</i> (n=7,053)				
Cisgender adolescents	6022	86.3% (85.0-87.4)	1	
Gender minoritized adolescents	80	84.5% (73.6-91.4)	0.91 (0.45-1.85)	0.799
<i>I've been feeling close to other people</i> (n=7,068)				

Cisgender adolescents	4575	66.2% (64.6-67.8)	1	
Gender minoritized adolescents	53	58.5% (47.6-68.6)	0.74 (0.47-1.15)	0.173
<i>Very close (or more) to at least one co-resident parent/carer (n=7,039)</i>				
Cisgender adolescents	5957	85.2% (83.8-86.5)	1	
Gender minoritized adolescents	65	70.6% (59.7-79.5)	0.43 (0.26-0.70)	0.001
Character				
<i>I often volunteer to help others (n=7,055)</i>				
Cisgender adolescents	2,783	30.1% (29.1-31.6)	1	
Gender minoritized adolescents	45	40.5% (30.4-51.5)	1.54 (0.96-1.47)	0.075
<i>I see myself as someone who has a forgiving nature (n=7,066)</i>				
Cisgender adolescents	6,114	70.3% (68.9-71.6)	1	
Gender minoritized adolescents	80	76.4% (66.2-84.3)	1.39 (0.83-2.35)	0.212
<i>Not someone who tends to be lazy (n=7,069)</i>				
Cisgender adolescents	3,623	58.2% (56.7-59.8)	1	
Gender minoritized adolescents	68	35.4% (26.1-46.0)	0.45 (0.29-0.70)	<0.0001
Caring				
<i>I try to be nice to other people, I care about their feelings (n=7,059)</i>				
Cisgender adolescents	5,581	80.1% (78.8-81.3)	1	
Gender minoritized adolescents	76	80.3% (69.9-87.7)	1.04 (0.58-1.88)	0.886
<i>I am kind to young children (n=8,689)</i>				
Cisgender adolescent	5,521	79.2% (77.8-80.4)	1	
Gender minoritized adolescents	65	63.8% (52.0-74.1)	0.47 (0.28-0.78)	0.003
<i>Someone who is considerate and kind to almost everyone (n=7,058)</i>				
Cisgender adolescents	5,888	84.0% (82.9-85.0)	1	
Gender minoritized adolescents	80	85.0% (75.6-91.2)	0.47 (0.28-0.78)	0.003