

## Article

# The Mediating Role of School and Sibling Bullying in the Relationship between Subjective Well-Being and Mental Health Symptoms

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**Abstract:** Recently, empirical studies have indicated an association between well-being and mental health. The nature of this association remains unclear since some studies suggest it is weak, whilst others indicate it is strong. The present study seeks to contribute to this dialogue by modelling not only the relationship between well-being and internalising and externalising mental health symptoms but also by introducing a mediation model where school and sibling bullying, as risk factors, are acting as mediators. A national sample of 1244 youth ( $M_{\text{age}} = 12.47$ ,  $SD = 1.69$ ) from the Understanding Society household panel study in the UK was utilised to estimate the structural equation model. The findings showed that the direct effect of well-being on internalising symptoms was negative and strong, whereas it was negative and moderate on externalising symptoms. Furthermore, the pattern of indirect effects from subjective well-being to internalising and externalising mental health symptoms displayed some differences in the level of statistical significance and strength. Implications for policy and practice are discussed.

**Keywords:** sibling bullying; school bullying; well-being; mental health; symptoms; structural equation modelling; mediation analysis; Understanding Society; United Kingdom; youth



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## 1. Introduction

The nature and strength of the relationship between mental health (MH) and well-being is a much-debated issue in the international literature. For instance, the World Health Organisation defined MH as a state of well-being [1]. However, MH has been traditionally defined in terms of MH problems [2–4]. Thus, the first objective of this study is to provide an updated account of the predictive relationship between well-being and MH. Additionally, given that school and sibling bullying can be substantial risk factors for increments in MH problems in young children and adolescents [5–7], the present study seeks to contribute to the dialogue concerning the relationship of sibling and school bullying with MH and well-being by proposing an original mediation model developed with a national youth sample in the UK.

Given the conceptual ambiguities of the terms MH and well-being, the conceptualisation and operationalisation of well-being and MH are presented next.

### 1.1. Well-Being and Mental Health

Well-being is typically defined using the theoretical framework of subjective and psychological well-being (PW) [8]. Subjective well-being (SWB) typically includes indicators of life satisfaction and positive and negative affect measures [9]. Happiness, which is also part of SWB, is present when positive and negative emotions are in balance [10]. In contrast, traditional definitions of PW are concerned with self-actualisation of human potentials [11]. PW is made up by autonomy, meaning in life, personal growth, positive relationships, mastery and self-acceptance [12]. The present study is focused on the affective aspects of

SWB since SWB has a longer tradition in applied research, and PW definitions involve a lot of ambiguous operationalisations [13].

In contrast to well-being which is more concretely defined, mental health (MH) is conceptualised and measured in various ways [14]. For instance, some researchers describe MH in terms of indicators of well-being [2,10], whilst others consider MH to reflect mental illnesses [15–17]. Thus, there is a distinction in the literature between positive and negative MH, where positive features of MH incorporate well-being, and negative aspects of MH include symptoms of mental illnesses. The most common MH symptoms/difficulties in children and adolescent populations are those related to internalising and externalising problems [18]. In other words, most prevalent MH symptoms are related—among others—to mood/emotional difficulties (internalising), such as anxiety and depression, and behavioural difficulties (externalising), such as hyperactivity, peer problems, conduct and oppositional disorders [18–20]. In the present study, I adopt a definition of MH that is connected to the prevalence of symptoms of mental illnesses. Given the plurality of measures of MH, the focus herein is on emotional and behavioural difficulties.

The relationship of well-being and MH does not appear to be as straightforward as one would imagine. For instance, a longitudinal study reported that earlier SWB at age 11 negatively and weakly predicted depressive symptoms at age 14 [17]. An epidemiological study of MH symptoms and well-being in UK's children and adolescents spanning the years 1995–2014 described trends where MH symptoms increased and well-being decreased. This finding would indicate a negative association of well-being and MH. In adult samples, the results seem to favour a strong negative association. Specifically, Dawson and Golijani-Moghaddam [21] using an adult sample found that well-being is strongly negatively related to indexes of MH, such as anxiety and depression. Similarly, a study conducted using a large population-consistent US adult sample indicated that well-being is negatively associated with negative MH outcomes, such as major depression or anxiety [2].

As can be seen, although MH and well-being may be considered distinct constructs, the nature of their relationship remains contested in the literature. Despite a clear picture emerging with regards to the nature and the magnitude of this association in adult populations, it is not clear whether this finding can be translated to children and adolescent populations. Moreover, the preceding evidence did not consider the mediating effects that risk factors, especially bullying, may have on this association.

### *1.2. The Relationships of Sibling and School Bullying with MH and Well-being*

Peer relationships have been connected to both adaptive and maladaptive patterns of psychological functioning in adolescence [22] since young people spend more time with their peers, and emotional separation from parents occurs [23]. However, peer bullying has also been associated with internalising and externalising difficulties [23]. Similarly, a healthy psychological adjustment in adolescence has also been attributed not only to the quality of parent–child relationships, but also to the relationships between siblings [24]. Coincidentally, sibling bullying and peer bullying in schools can be functioning as risk factors for increased MH symptoms. As will be shortly shown, both of these risk factors have been connected to MH outcomes. However, it is not yet clear how these risk factors may intervene in the relationship between MH and well-being.

Bullying in its every form can have disastrous effects on well-being and MH of young children and adolescents. Frequently, bullying can take place in school settings or in families between siblings. School bullying is usually defined in terms of aggressive behaviour that is either verbal or physical, has a duration in time and is the result of a power imbalance between bullies and victims in school contexts [25–28]. In contrast, sibling bullying differs from school bullying in the sense that it takes place in family contexts and occurs between siblings. Meanwhile, it shares some characteristics with school bullying with respect to aggressive behaviour, the power imbalance and the time duration aspects [29,30]. According to Rivers and Smith [31], three types of bullying behaviour can be identified, namely direct physical (e.g., hitting, punching, pushing),

direct verbal (e.g., spreading rumours, name-calling, threatening) and indirect bullying (i.e., mostly verbal bullying through others).

Prevalence rates for school and sibling bullying vary depending on the way of measuring these concepts and the location of the studies. Specifically, Wolke et al. [30] report that sibling bullying victimisation prevalence rates typically range between 15% to 50%. Similarly, findings from the Programme for International Student Assessment in 79 countries and economies [32] indicate that 23% of secondary school students have been victims of school bullying at least a few times per month.

A recent longitudinal study using a representative sample of UK adolescents showed that sibling bullying victimisation was related to elevated internalising and externalising MH problems [5]. In the same vein, a prospective study with young adults illustrated that sibling bullying in adolescence is connected with higher risk for developing depression and self-harm behaviours in young adulthood at age 18 [33]. Another prospective cohort study indicated that sibling and peer bullying at age 12 were associated with the caseness of MH difficulties such as depression, self-harm or suicidal ideation [34]. Moreover, a study with elementary school students investigated the effect of sibling and peer bullying on internalising MH problems (anxiety, depression, social stress) and concluded that sibling bullying was a strong predictor of MH difficulties above and beyond peer bullying [6].

Similarly, school bullying is also connected to higher probability of MH difficulties and lower SWB. Empirical evidence has shown that greater bullying victimisation in schools is associated with greater probabilities of developing internalising [6,7] and externalising MH difficulties [6]. With regard to SWB, a study using a national sample of children and adolescents reported that school bullying in the form of physical violence was related to lower levels of life satisfaction [35]. Additionally, a study with a multinational sample from 16 countries reported that bullying in the form of being hit in school or left out by peers in class was associated with lower levels of SWB [36].

However, it should be underscored that the direction of this effect may be in both ways, as Bradshaw et al. [36] accurately mention. For example, individuals with low SWB—operationalised as low satisfaction with schools, parents, friends, appearance and siblings—may be more introverted and susceptible to greater victimisation given that they may be more socially isolated or remember more experiences of victimisation [36,37]. In fact, longitudinal research studies reported that SWB measured through life satisfaction was a significant negative predictor of relational victimisation [37,38] and violent behaviours [39]. Thus, low or negative SWB may serve as a predictor of bullying victimisation.

In brief, it ought to be noted that some of the above studies did not jointly consider the effects of sibling and school bullying on MH problems and the effect of SWB on bullying and MH. Moreover, most of the preceding evidence did not take into account the complex processes that may underlie the relationships among sibling and school bullying, MH and SWB. Therefore, the current approach will address these issues.

### *1.3. The Present Study*

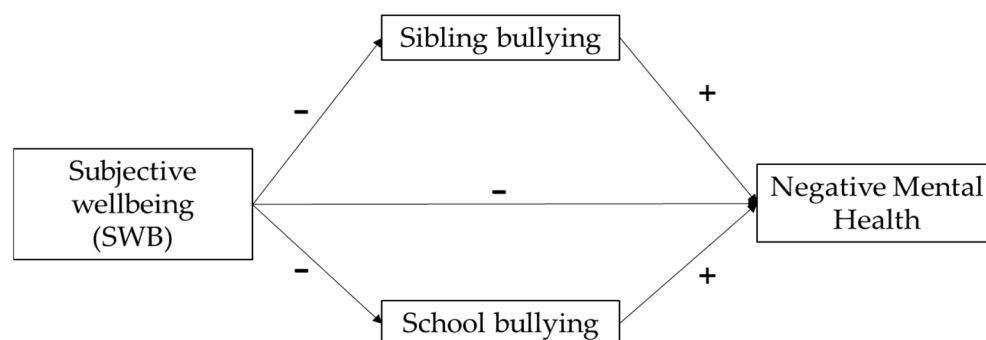
The present study contributes to the literature by testing several models that examine the processes between SWB and MH symptoms as well as the potential role of bullying in mediating the relationship between SWB and MH difficulties. As far as it was possible to ascertain, this is the first study proposing a model where sibling and school bullying mediate the associations among SWB and internalising and externalising MH difficulties. As such, the following research questions and hypotheses guide the present work:

RQ1: What is the nature of the predictive relationship of SWB with internalising and externalising MH problems?

RQ2: Do sibling and school bullying mediate the association of SWB with internalising and externalising MH problems?

RQ3: Which pathways from SWB to internalising and externalising MH problems are stronger?

It is expected that SWB will be a negative predictor of internalising and externalising MH problems (H1) since earlier evidence [17] showed that SWB predicts MH, but MH does not predict SWB. Additionally, SWB will predict lower levels of sibling (H2) and school (H3) bullying since the association of bullying and SWB may be bidirectional [36–38]. Finally, it is hypothesised that sibling and school bullying will be positive predictors of internalising and externalising MH problems (H4) based on previous studies [6,34,40]. The conceptual model of the study is presented in Figure 1.



**Figure 1.** Conceptual model.

## 2. Materials and Methods

### 2.1. Dataset and Sample

Data from the latest wave (November 2021) of the Understanding Society (US) survey, the UK Household Longitudinal Study [41], are utilised to address the research questions. The survey has received ethical approval from the University of Essex Ethics Committee [42]. Completely anonymised Understanding Society datasets are available and accessible for secondary analyses through the UK Data Archive upon registration. Understanding Society is a yearly interview-based panel survey of households in the United Kingdom (England, Wales, Scotland, Northern Ireland) that began in 2009-10. The survey implements a complex sampling design, where the sample for England, Wales, and Scotland is a clustered stratified sample, and the sample for Northern Ireland is unclustered systematic random [42].

The effective youth sample of the latest wave of the Understanding Society amounted to 1501 adolescents. However, the effective sample was restricted to those who had at least a sibling at home and those who reported that they had both parents. Then, the youth sample was merged with the household-level dataset to retain specific demographics. Thus, a nationally representative adolescent sample of  $N = 1244$  adolescents ( $M_{age} = 12.483$ ,  $SD = 1.675$ ) serves as the basis for all analyses. All the adolescents in the sample experienced the impact of COVID-19 in their daily lives since 63.09% of the sample were interviewed in 2019, 35.58% of the participants were interviewed in 2020, and 1.33% were interviewed in 2021. 50.48% of the participants were females. The majority of the households (75.24%) were identifying as English, Scottish, Welsh, or Northern Irish. The household average gross income in the month before the interview was 5213.64 GBP. Regarding subjective health evaluation, 27.73% of the adolescents indicated excellent health, 64.23% indicated very good or good health, whilst only 7.31% reported fair or poor health (0.72% missing).

### 2.2. Measures

#### 2.2.1. Subjective Well-being

SWB was measured using a six-item scale that is commonly administered in the British Household Panel study [16]. This scale indexes young people's happiness (emotional domain of well-being) with different aspects of their lives (see Table 1). The question prompt was "how you feel about different aspects of your life?". The available response options range from 1 "completely happy" to 7 "not at all happy". All items were reverse scored so that higher scores indicate greater SWB. Items were treated as ordered categorical. McDonald's coefficient omega was 0.80, and Cronbach's coefficient was 0.79.

**Table 1.** Descriptive statistics for the whole sample (N = 1244).

Items	Males	Females	Min	Max
	Mean (SD)	Mean (SD)		
Internalising- emotional symptoms	2.732 (2.285)	3.876 (2.433)	0	10
Internalising- peer problems	1.961 (1.813)	1.893 (1.614)	0	10
Externalising- conduct problems	2.181 (1.783)	1.942 (1.657)	0	9
Externalising- hyperactivity/inattention	4.227 (2.492)	4.063 (2.318)	0	10
Sibling bullying- being hit, kicked or pushed	2.162 (1.043)	2.040 (0.967)	1	4
Sibling bullying- siblings take your belongings	1.635 (0.848)	1.765 (0.828)	1	4
Sibling bullying- called nasty names	2.037 (1.10)	2.007 (1.00)	1	4
Sibling bullying- made fun of (teasing)	1.946 (1.051)	1.942 (0.991)	1	4
School bullying- being physically bullied	1.231 (0.550)	1.166 (0.504)	1	4
School bullying- being bullied in other ways (e.g., called names, getting left out of games, etc.)	1.407 (0.722)	1.509 (0.806)	1	4
SWB- happiness with schoolwork	5.264 (1.390)	5.294 (1.299)	1	7
SWB- happiness with appearance	5.495 (1.398)	4.989 (1.555)	1	7
SWB- happiness with family	6.482 (0.854)	6.350 (0.998)	1	7
SWB- happiness with friends	6.228 (1.079)	6.189 (1.045)	1	7
SWB- happiness with school	5.515 (1.537)	5.444 (1.515)	1	7
SWB- happiness with life as whole	5.855 (1.141)	5.522 (1.289)	1	7

Note: Weighted statistics using the wave 11 cross-sectional youth weight.

### 2.2.2. Mental Health Symptoms

MH symptoms were measured using the Strengths and Difficulties questionnaire (SDQ) [15]. The SDQ is a validated and well-established psychometric instrument used in the UK context. This scale indexes children's and young people's MH symptoms and comprises five subscales, namely emotional symptoms, conduct problems, hyperactivity/inattention, peer problems and prosocial behaviours [15]. The present study is focused on the MH symptoms and, thus considers the first four subscale scores only. All items were scored using a three-point scale ranging from 0 "not true" to 2 "certainly true". The sum of the conduct and hyperactivity scales forms the externalising score, whilst the sum of the emotional symptoms and the peer problems scales forms the internalising score. All subscale scores were treated as continuous. Cronbach's coefficient alpha and McDonald's omega coefficient of reliability converged to 0.68 for the four subscale scores.

### 2.2.3. School Bullying

Two items tap into school bullying. One item indexes physical bullying, whilst the second one indexes other ways of bullying such as name-calling, being left out of games and spreading rumours. The response options range from 1 "never" to 4 "a lot (a few times every week)". Items were treated as ordered categorical. Cronbach's coefficient alpha was 0.63.

### 2.2.4. Sibling Bullying

A four-item scale was utilised to measure sibling bullying. The items asked whether brother(s) or sister(s) engaged in physical or verbal bullying (see Table 1). The response options range from 1 "never" to 4 "a lot". Items were treated as ordered categorical. Cronbach's coefficient alpha and McDonald's coefficient of reliability converged to 0.76.

## 2.3. Data Analysis

Given that the measures are saturated with measurement error as indicated by some lower than expected reliability coefficients, structural equation modelling (SEM) is more efficient than OLS regression procedures that do not attenuate measurement error [43]. All structural equation models were estimated using the WLSMV estimator since the self-reported data on SWB, sibling and school bullying are ordered categorical data. WLSMV is an appropriate estimation method when the data are ordered categorical [44,45]. Multiple



goodness-of-fit (GOF) indices were inspected to evaluate whether a model is a good approximation to the data-generating process. Specifically, CFI and TLI values close to 0.95 accompanied by RMSEA and SRMR values lower than 0.06 were considered as indicators of a good model [46]. A two-step SEM testing approach was followed as proposed in the methodological literature [47]. Thus, a pooled measurement model was tested in the first instance followed by testing the model with the structural regressions. Subsequently, equality constraints were placed on the structural pathways to identify which latent factor may exhibit greater explanatory power. Nested models were compared using scaled differences between the two models' chi-square values. All descriptive and inferential statistics were calculated using sampling weights and clustering and stratification information as outlined in the survey's manual [42]. Preliminary analyses were implemented using Stata 17, and SEMs were estimated utilising Mplus 8.7.

### 3. Results

Descriptive statistics were calculated for all the main variables and are presented in Table 1. The pooled measurement model was tested using confirmatory factor analysis with covariances between latent factors. The pooled model exhibited good fit to the data with the following GOF indices: scaled  $\chi^2(93) = 335.041$ ,  $p < 0.001$ , CFI = 0.956, TLI = 0.944, RMSEA = 0.046 90% CI [0.041, 0.051] and SRMR = 0.041.

The resulting latent correlations between the latent factor structures of the pooled CFA model are presented in Table 2. All latent correlations reached statistical significance at 1% level. Internalising symptoms were negatively correlated with SWB ( $r = -0.761$ ) but positively with school ( $r = 0.75$ ) and sibling ( $r = 0.362$ ) bullying. Externalising symptoms were negatively correlated with SWB ( $r = -0.481$ ) but positively correlated with school ( $r = 0.44$ ) and sibling ( $r = 0.515$ ) bullying.

**Table 2.** Error-free latent correlation matrix.

	1	2	3	4
1. Internalising MH Symptoms	1			
2. Externalising MH Symptoms	0.606	1		
3. SWB	-0.761	-0.481	1	
4. School bullying	0.750	0.440	-0.420	1
5. Sibling bullying	0.362	0.515	-0.354	0.361

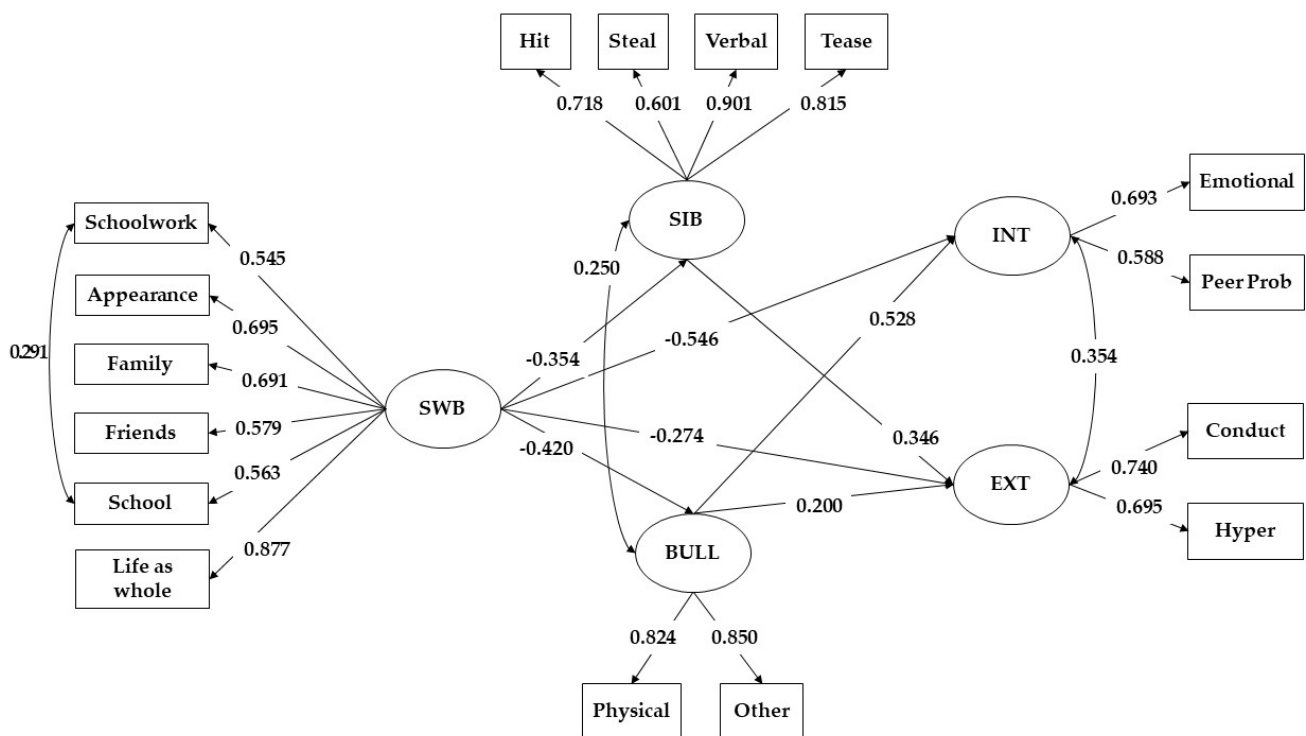
Note: All correlations are statistically significant at  $p < 0.001$  level.

After examining the latent correlations, structural regressions were introduced to form the multiple mediation model. The structural baseline model displayed the same fit as the measurement model with the following GOF indices: scaled  $\chi^2(93) = 335.041$ ,  $p < 0.001$ , CFI = 0.956, TLI = 0.944, RMSEA = 0.046 90% CI [0.041, 0.051], SRMR = 0.041. To determine the explanatory power of the structural model, the coefficients of determination,  $R^2$ , were inspected. The model reached exceptional explanatory power for internalising MH and moderate explanatory power for externalising MH with  $R^2 = 0.804$ ,  $p < 0.001$ , and  $R^2 = 0.398$  and  $p < 0.001$ , respectively.

After examining the model's fit, more restrictive models were tested where equality constraints were placed on the paths to determine which model was fitting the data best. A model was estimated with equality constraints on paths from SWB to the externalising and internalising MH (Model A). Model A compared to the baseline model exhibited significantly worse fit, scaled  $\Delta\chi^2(1) = 30.951$ ,  $p < 0.001$ . Another more restrictive model was estimated where equality constraints were placed on the paths from SWB to the two bullying latent factors (Model B). Model B compared to the baseline model was degraded from a model fit perspective with scaled  $\Delta\chi^2(1) = 4.067$ ,  $p < 0.05$ . When equality constraints were

imposed on the paths from school bullying to internalising and externalising MH (Model C), the model comparison indicated a worse fit, with scaled  $\Delta\chi^2(1) = 31.770$ ,  $p < 0.001$ . Similarly, equality constraints on the paths from sibling bullying to internalising and externalising MH (Model D) resulted in a worse fit, scaled  $\Delta\chi^2(1) = 31.770$ ,  $p < 0.001$ . Thus, the unconstrained model is the most appropriate one to describe the data-generating procedure.

Statistically significant standardised regression coefficients for the unconstrained baseline model are presented in Figure 2. The direct effect of SWB on internalising MH was  $\beta = -0.546$ ,  $p < 0.001$ , whilst the direct effect on externalising MH was  $\beta = -0.274$ ,  $p < 0.001$ . The SWB's effects on sibling and school bullying were  $\beta = -0.354$ ,  $p < 0.001$ , and  $\beta = -0.420$ ,  $p < 0.001$ , respectively. Sibling bullying had an impact ( $\beta = 0.346$ ,  $p < 0.001$ ) on externalising MH, whereas it had no effect on internalising MH. On the other hand, school bullying exerted effects on both internalising MH ( $\beta = 0.528$ ,  $p < 0.001$ ) and externalising MH ( $\beta = 0.200$ ,  $p < 0.001$ ). Total, total indirect and specific indirect effects were calculated for pathways leading from SWB to the MH latent factors. The total effect of SWB on internalising MH was  $\beta = -0.761$ ,  $p < 0.001$ , and the total indirect effect was  $\beta = -0.214$ ,  $p < 0.001$ . The total effect of SWB on externalising MH was  $\beta = -0.481$ ,  $p < 0.001$ , and the total indirect effect was  $\beta = -0.207$ ,  $p < 0.001$ .



**Figure 2.** Path diagram of mediation model—statistically significant standardised coefficients shown.

With regards to the specific indirect effects, the following conclusions can be reached. First, the specific indirect effect of SWB on internalising MH through sibling bullying did not reach statistical significance,  $\beta = 0.007$ ,  $p > 0.05$ . However, the specific indirect effect of SWB on internalising MH through school bullying was highly statistically significant,  $\beta = -0.222$ ,  $p < 0.001$ . The specific indirect effect of SWB on externalising MH through sibling bullying reached statistical significance,  $\beta = -0.122$ ,  $p < 0.001$ . Similarly, the specific indirect effect through school bullying was also significant, though less powerful,  $\beta = -0.084$ ,  $p < 0.001$ .

Following the inspection of the structural regression coefficients, the specific indirect effects of the latent SWB factor on the specific aspects of sibling and school bullying were examined through the SEM model. The specific indirect effects of SWB on being hit by siblings ( $\beta = -0.254$ ,  $p < 0.001$ ), on having belongings taken by siblings ( $\beta = -0.213$ ,  $p < 0.001$ ),

on being verbally abused by nasty name-calling by siblings ( $\beta = -0.319, p < 0.001$ ) and on being made fun of by siblings ( $\beta = -0.289, p < 0.001$ ) reached high levels of statistical significance. In addition to the above, SWB exerted statistically significant specific indirect effects on physical school bullying ( $\beta = -0.346, p < 0.001$ ) and on other forms of school bullying ( $\beta = -0.357, p < 0.001$ ) such as getting called names, getting left out of games or having nasty stories spread on purpose. As can be seen from the above findings, SWB had a greater effect on verbal aspects of sibling and school bullying compared to physical forms of bullying.

Having examined the specific indirect effects of SWB on the mediators, the specific effects on the MH facets were inspected. The specific indirect effect of the latent SWB factor on both emotional symptoms ( $\beta = -0.379, p < 0.001$ ) and peer relationship problems ( $\beta = -0.321, p < 0.001$ ) were quite substantial, but SWB had a greater impact on emotional/mood MH symptoms compared to peer relationship problems. Specific indirect effects were also calculated for the externalising MH latent factor. The impact of SWB on conduct problems ( $\beta = -0.203, p < 0.001$ ) and on hyperactivity/inattention ( $\beta = -0.190, p < 0.001$ ) was less compared to that of SWB on specific facets of internalising MH difficulties.

#### 4. Discussion

The purpose of the present study was threefold. First, the relationship between SWB and MH difficulties was examined. Second, the potential mediating effects of sibling and school bullying were estimated, and finally, the equality of the paths was tested. Results of structural equation modelling indicated that sibling and school bullying mediate the association of well-being and MH symptoms in different ways. This is the first such study that has empirically shown that well-being, operationalised as subjective happiness (SWB), may exhibit a predictive relationship with both sibling and school bullying, which in turn may predict MH.

This particular result is significant since it illustrates that more positive subjective judgments of being well (SWB) are strongly associated to lower MH. In greater detail, the modelling indicated that SWB had nearly a two times greater impact on internalising MH symptoms than on externalising MH, all else being equal. Additionally, the model's specific indirect effects showed that SWB had a more substantial effect on emotional symptoms and peer relationships compared to conduct and hyperactivity symptoms. This means that SWB may be considered a stronger predictor of mood/emotional disorders such as anxiety or depression. This finding is in contrast to the findings of Patalay and Fitzsimons [17], who found a very small negative effect of SWB on depression symptoms. However, the present evidence is in line with the findings of other studies with adult samples that reported a strong and negative correlation [2,21]. Given the strong predictive relationships between SWB and negative MH, I argue that SWB exhibits strong discriminant validity and is distinct from negative MH. Thus, Hypothesis 1 (H1) was confirmed.

The second finding of the modelling process indicated that SWB was a negative predictor of both sibling and school bullying. This result is unique since very few studies have considered that the association between SWB and bullying may be bidirectional as Bradshaw et al. [36] mention. In other words, sibling and school bullying may act as negative predictors of SWB, but SWB may serve as a negative antecedent of bullying. Previous studies that have reported the negative impact of SWB on bullying found evidence in favour of an effect only on relational [37,38] or violent [39] aspects of bullying. However, the present approach illustrated that the effects of SWB were substantial on both physical and verbal aspects of sibling and school bullying. Specifically, the latent SWB factor exerted specific indirect effects on being hit, having belongings stolen, being called nasty names or being made fun of by siblings as well as on physical and other forms of school bullying. Despite that, the effects tended to be stronger on the verbal rather than on the physical facets of sibling and school bullying. Thus, Hypotheses 2 (H2) and 3 (H3) were confirmed.

Additionally, a differential pattern of effects emerged with respect to the association of bullying with MH symptoms. Specifically, the SEM illustrated that, whereas school bullying



affects both internalising and externalising MH symptoms, sibling bullying was affecting only externalising MH. This result disagrees with previous evidence that suggested that sibling bullying was correlated with both internalising and externalising MH [5]. Despite that, the impact of sibling bullying on internalising MH is more frequently associated with internalising MH problems such as depression and anxiety [34,40]. School bullying emerged as a predictor of higher internalising and externalising MH, which is in line with preceding evidence [6,7]. Moreover, school bullying appears to be a much stronger predictor of internalising instead of externalising MH problems since the path coefficient is 0.3 standard deviations greater in magnitude compared to the coefficient on externalising MH. These findings partially support Hypothesis 4 (H4) since the path from sibling to internalising MH failed to reach statistical significance. This means that sibling bullying partially mediates the association of SWB with externalising MH, whereas school bullying partially mediates the associations of SWB with both externalising and internalising MH.

#### *4.1. Implications for Policy and Practice*

The current findings can be especially helpful for explaining declines in MH in general population adolescent samples. Sibling and school bullying emerged as significant threats to adolescents' MH problems. This underscores the need for further family and school policies that would aim to curb aggressive behaviours in family and school settings. It may be indicative of the need for more social workers or school psychologists that should be available in schools. Additionally, given the significant impact of school bullying on both internalising and externalising MH difficulties, it is important that teachers should attend more specialised training with regards to managing potential aggressive behaviours. This may help with preventing these behaviours from taking place in schools, especially since they may jeopardise adolescent students' MH. Finally, it would seem that more SWB interventions may be needed given that SWB emerged as a substantial protective factor against MH symptoms and bullying.

#### *4.2. Limitations and Future Directions for Research*

This work has some limitations that need to be acknowledged. Specifically, some of the measures used in this study were very short scales which prohibits specific tests of isolated measurement models. Furthermore, the types of feasible analyses were constrained by the nature and availability of the datasets since this research study is a secondary data analysis of pre-existing data that were already collected. Regarding potential research directions, it would be interesting to see whether these structural relationships vary depending on gender classification or specific developmental stages in adolescence. Moreover, future research may also examine whether SWB may serve as a mediating or a moderating latent factor instead of as an exogenous one. Finally, it is suggested that future studies replicate this finding in adult populations with past issues with sibling and/or school bullying.

### **5. Conclusions**

In conclusion, the contribution of the present study was threefold. First, the study confirmed that the impact of SWB on MH symptoms is very strong and negative, which indicated that higher subjective well-being is connected to lower mental health problems in adolescents. Second, the role of SWB as a protective factor against sibling and school bullying and MH was confirmed. This may be the first study to have shown that SWB is a predictor of both sibling and school bullying collectively. This indicates that well-being is a strong inner force that not only is being influenced by other factors, but also helps people to be more resilient against risk factors such as bullying. Finally, despite the higher prevalence rates of sibling bullying [30], it was illustrated that school bullying instead of sibling bullying is the bigger threat to young people's MH difficulties.

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**Institutional Review Board Statement:** The Understanding Society study received ethical approval by letter by the University of Essex Ethics Committee (4/10/2016) [42]. This study was conducted in accordance with the Declaration of Helsinki.

**Informed Consent Statement:** Informed consent was obtained from all participants involved in the Understanding Society study [42] (see [48]).

**Data Availability Statement:** The datasets used in this article are freely available through the UK Data Archive upon registration [49].

**Conflicts of Interest:** No conflict of interest to disclose.

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