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Study on the economic, social and human costs of trafficking in human beings within the EU

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ABBREVIATIONS AND ACRONYMS

CEPOL	European Union Agency for Law Enforcement Training
COFOG	Classification of the functions of government
CJS	Criminal Justice Service
EASO	European Asylum Support Office
EC	European Commission
EMCDDA	The European Monitoring Centre for Drugs and Drug Addiction
EEA	European Economic Area
EFTA	European Free Trade Area
EIGE	European Institute for Gender Equality
ESSPROS	European System of integrated Social Protection statistics
EU	European Union (comprising 28 Member States unless otherwise stated)
EU-27	Member States of the European Union
EU-28	27 Member States of the European Union and UK
EU ATC	EU Anti -Trafficking Coordinator
EU-LISA	European Union Large Scale IT Systems for Freedom, Security and Justice
EUROFOUND	European Foundation for the improvement of living and working conditions
EUROPOL	EU Law Enforcement Agency
FRA	Fundamental Rights Agency
FRONTEX	The European Border and Coast Guard Agency
GBD	Global Burden of Disease
GDP	Gross Domestic Product
ILO	International Labour Organization
LEAs	Law Enforcement Authorities
MS	Member state
NGO	Non-governmental organization
NREM	National Rapporteurs and equivalent mechanisms
OSCE	Organisation for Security and Co-Operation in Europe

PTSD	Post-traumatic Stress Disorder
QALY	Quality Adjusted Life Year
R&D	Research and development
THB	Trafficking in Human Beings
UNODC	United Nations Office on Drugs and Crime
VOLY	Value of One Life Year
VOSL	Value of a Statistical Life

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KEY FINDINGS

The cost of trafficking in human beings is borne by the public because the crime persists. These are the cost of extra public services, diverted and thereby lost economic output, and the value of the lost quality of life. Without trafficking these extra services would not be needed, economic output would not be diverted, and the quality of life would be higher. **The losses are to EU society**. **Trafficking is a drain on the resources of everyone, except the traffickers who extract great profits from this criminal exploitation.**

People trafficked for all forms of exploitation suffer **violence and coercion: physical violence, sexual violence and threats.** These **generate hurts to physical health and to mental health**. These hurts to health **generate costs to society:** extra use of public services including law enforcement, specialised services, health services and social protection; lost economic output; the value of lost quality of life; and the **co-ordination of anti-trafficking prevention work.**

The cost of trafficking in human beings in 2016:

- **per victim, over their lifetime: EUR 312 756 in the EU-28** (EUR 337 462 per victim in EU-27)
- **in total for the EU-28: EUR 3 700 524 433** (EUR 2 708 804 838 for EU-27)

This is a conservative estimate: The estimate is based on the number of victims registered with the authorities in Member States of the EU in 2016; it would have been higher if victims not registered with the authorities had been included; it would have been higher if robust data were available on some additional harms.

Three main types of costs of trafficking in human beings:

- use of services (coordination and prevention, specialised services, law enforcement, health services and social protection): 40% in EU-28 (42% in EU-27)
- lost economic output: 19% in EU-28 (18% in EU-27)
- lost quality of life: 41% in EU-28 (40% in EU-27)

Coordination and prevention activities at EU and Member State (MS) levels:

- **per victim was EUR 2 059 in the EU-28** (EUR 2 949 for EU-27)
- **in total: EUR 24 356 744 in the EU-28** (EUR 23 670 826 for EU-27).

Law enforcement:

- **per victim was EUR 93 293 in the EU-28** (EUR 105 827 for EU-27),
- **in total EUR 1 103 841 971 in the EU-28** (EUR 849 476 554 in EU-27)

Specialised services:

- **per victim was EUR 9 614 in the EU-28** (EUR 11 355 in EU-27)
- **in total: EUR 113 750 742 in the EU-28** (EUR 91 149 042 in EU-27)

Health services and social protection:

Victims of trafficking were more likely to use health services and social protection than other people because of the long-term damage to their physical and mental health while in trafficking. These hurts and increased use

of these services last for several years after trafficking is over. The cost of the additional use of health services and social protection

- **per victim was EUR 20 749 in the EU-28** (EUR 21 785 in EU-27)
- **in total EUR 245 496 731 in the EU-28** (EUR 174 862 479 in EU-27)

Lost economic output:

Economic output is lost when the victim is not participating in the legal economy while in trafficking and in services, and when the victim has reduced participation post-trafficking as a consequence of long-term harms to health. The cost of the lost economic output:

- **per victim was EUR 59 537 in the EU-28** (EUR 59 795 in EU-27)
- **in total EUR 704 449 058 in the EU-28** (EUR 479 973 675 in EU-27)

Lost quality of life:

Victims of trafficking are subject to **physical, sexual and mental injuries that reduce the quality of life**. A value is placed on these losses in the quality of life. The cost of lost quality of life:

- **per victim was EUR 127 504 in the EU-28** (EUR 135 751 in EU-27)
- **in total EUR 1 508 629 186 in the EU-28** (EUR 1 089 672 262 in EU-27)

Victims of sexual exploitation:

- There are **higher costs for victims of sexual exploitation.** This is largely driven by the larger costs to health associated with sexual violence (rather than physical violence or threat).
- There are **higher costs for female** rather than male **victims:**
    - This is driven by the **larger costs associated with sexual exploitation, which is disproportionately experienced by women.**
    - The larger costs associated with sexual exploitation are linked to greater utilisation of health services and social protection, **greater lost economic output and greater lost quality of life.**
- There are **higher costs for child rather than adult victims** due to greater utilisation of health services and greater lost quality of life.

The effects of trafficking on victims have significant duration: The cost of trafficking is spread across the different phases of trafficking: in trafficking (33% for EU-28, 35% for EU-27), in services (16% for EU-28, 15% for EU-27), and post-trafficking (51% for both EU-28 and EU-27). About half (51% for both EU-28 and EU-27) of the cost of trafficking in human beings occurs after the period in trafficking and in services are over.

The approach taken to estimates is conservative. Where there are doubts about the quality of data, costs are not included. **The cost is thus an underestimate.**

EXECUTIVE SUMMARY

1 Introduction

The purpose of the Study is to measure the cost of trafficking in human beings in the European Union.

Trafficking in human beings is a particularly serious crime, driven by profits and involves a chain of actors who are knowingly or unknowingly involved. "It brings high profits to the perpetrators, who abuse people's vulnerabilities and exploit the demand for the services provided by the victims. It results in long-term harm to its victims, our societies and economies."[1] It is a violation of fundamental rights that causes immense harm to the victims. It has economic, social and human costs. The existence of trafficking in human beings is a cost to the wider economy and society by creating need for public services, in diverting resources away from the legal economy, and in its effects on the quality of life.

The crime of trafficking in human beings[2]

Art. 2.1 of Directive 2011/36/EU (hereinafter, the Anti-Trafficking Directive) includes three constitutive elements of this crime: **acts, means and purpose. The act** is linked to the establishment of control over a person; it consists in the recruitment, transportation, transfer, harbouring or reception of persons, including the exchange or transfer of control over them. **The means** are the way in which control is attained: the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person. **The purpose** is the exploitation of the trafficked person. The Anti-Trafficking Directive contains minimum rules concerning the definition of criminal offences, **including a non-exhaustive list of forms of exploitation**: prostitution and other forms of sexual exploitation, forced labour or services, including begging, slavery and similar practices, the exploitation of criminal activities and the removal of organs. Other forms of exploitation can take place.

Consent: A victim may have "consented" to being trafficked but this consent is irrelevant when it has been obtained by the means listed in the Anti-Trafficking Directive: threat, use of force or coercion, fraud, deception, abuse of power or taking advantage of a person's vulnerability. This is also the case when a person who has control over the victim has received benefits to surrender her to traffickers. In the case of a child, trafficking is punishable even if none of the above-mentioned means has been used to obtain his or her consent.

Measuring the cost of trafficking in human beings in a monetary form is done in order to improve the quality of decision-making where cost-benefit analysis is relevant to decisions over the allocation of public resources. Translating trafficking in human beings into a cost is relevant to public policy concerning developing the European area of freedom, security and justice, and the Single European Market.

This Study is a key Commission action to build a sound knowledge base for the 2017 Commission Communication "Reporting on the follow up to the EU Strategy towards the eradication of trafficking in human beings and identifying further concrete actions"[3,4] and the EU Anti-trafficking Directive[5].

(1) European Commission (2018b) *Second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_com-2018-777-report_en.pdf

(2) European Commission (2018e) *Key concepts in a nutshell.* https://ec.europa.eu/anti-trafficking/eu-policy/working-together-to-address-trafficking-in-human-beings-concepts-in-a-nutshell_en

(3) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf

(4) https://ec.europa.eu/anti-trafficking/eu-anti-trafficking-coordinator_en

(5) *Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA* https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

The cost of trafficking in human beings per victim is EUR 312 756 (over their lifetime) in the EU-28 (EUR 337 462 per victim, EU-27) and a total of EUR 3 700 524 433 for the EU-28 (EUR 2 708 804 838, EU-27) per year (see Table S1).

Table S1 The cost of trafficking in human beings, per victim, total EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	312 756	3 700 524 433	337 462	2 708 804 838

2 What costs?

Three main types of costs of trafficking in human beings were identified: use of services (coordination and prevention, specialised services, law enforcement, health services and social protection); lost economic output; and lost quality of life. Three phases are distinguished: in trafficking; in specialist services; and, post-trafficking.

Types of Cost

Coordination and prevention. Agencies at EU and authorities at Member State levels coordinate services and policies to help victims, prosecute traffickers and build the knowledge base to intervene in the processes generating trafficking in order to prevent it.

Specialised services. Victims of trafficking are legally entitled to specialised services[6]. These include accommodation, medical and psychological assistance, legal assistance, education, training, job placement, reintegration assistance, return assistance.

Law enforcement. Law enforcement includes the criminal justice system (police, prosecution, courts, prisons), civil legal system (regulating environments prone to trafficking), coordination by EU agencies.

Health services and social protection. Health includes the full range of services, since there are many different ways in which the health of the victim is damaged, with long term as well as immediate need for assistance. Welfare, or social protection, includes the benefits to support someone who is unable to be fully employed, including by reason of sickness or disability.

Lost economic output. The loss of employment in the legal economy, either fully or partially, with the consequence of lost wages, profits and taxes.

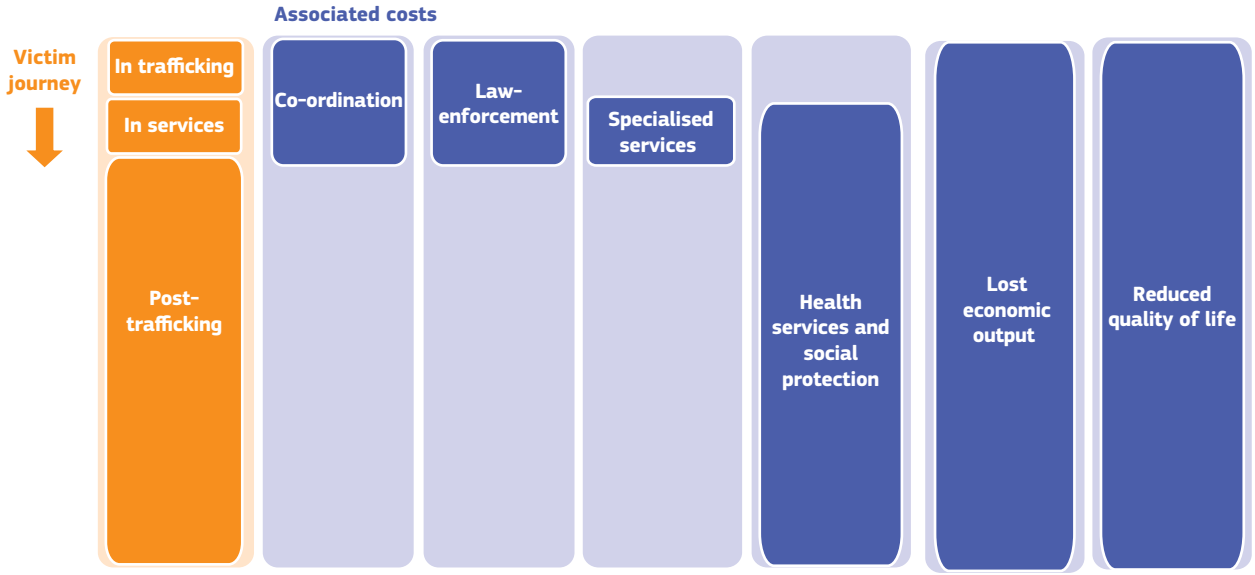
Lost quality of life. The public's willingness to pay to avoid pain and suffering is routinely included in governmental cost-benefit analysis even though it is 'intangible'. This is calculated as lost years of life adjusted for quality of health.

Phases

The three phases – **in trafficking, in services, and post-trafficking** – have different implications for costs. See Figure S2.

(6) See, Articles 11, 12, 13,14, 15, 16 of the Anti-trafficking Directive

Figure S2 Costs generated along the victim's journey



In trafficking. Whilst being trafficked, many victims suffer harms of physical violence, sexual violence, and threats. Although law enforcement and efforts at coordination may be taking place, the access of the victim to services is unlikely to take place. Their contribution to the legal economy and to GDP is lost to themselves and the wider economy. Victims suffer losses to their quality of life.

In services. Victims are entitled to specialised services. Law enforcement is ongoing, while access to health and welfare services starts. Victims are unlikely to be in employment. Victims suffer losses to their quality of life.

Post-trafficking. When victims return to social and economic life, the effects of the harms of trafficking linger in their bodies and minds; and continue to reverberate in their lives for many years. Although use of specialised services and law enforcement is likely to cease, victims of trafficking tend to have higher utilisation of health and welfare services for many years. They tend to have a lower contribution to the economy. Victims of trafficking continue to suffer diminished quality of life for years after the trafficking has ceased.

3 Costs for whom?

The cost of trafficking in human beings is borne by the public. Here, this means all who live in the EU. The people (inhabitants, workers, citizens, employers) pay taxes and insurance premiums to fund services that without the existence of trafficking would not be needed; collectively suffer from the diverted and thereby lost economic output; and are willing to pay to avoid the lost quality of life of fellow human beings.

While the study follows individual victims and traffickers, the losses are to EU society. Data collection is assisted by identifying the journey of victims of trafficking, exploited and registered in the EU, and traffickers, who exploited their victims in the EU and are held to account in the EU. The main focus, however, is on the institutions whose resources are depleted because of these crimes**. Trafficking is a drain on the resources of everyone, except the traffickers who extract great profits from this criminal exploitation.**

Costs for both EU-28 and EU-27 are provided. The data is centred on 2016[7], when the United Kingdom was a Member State of the EU. The costs for the EU-27 are less than for the EU-28. The costs are also provided as an average per victim.

(7) Where the data sources were able to provide data only for other reference year (see, for example EU agencies), this is indicated.

4 Counting victims

The cost per victim is the core unit of measurement. The victims under consideration are those who are registered (identified and presumed) as victims of trafficking in human beings in the EU.

There were 11 832 victims of trafficking registered in 2016 in the EU-28 (8 027 in EU-27). The data source on registered victims is the European Commission (2018a) *Data Report*[8].

The actual number of victims is likely to be significantly higher than is the number reported. The estimate of the numbers of non-registered victims is uncertain. In this Study, the cost is per registered victim. **This means that the cost of trafficking in the EU measured here is an underestimate.**

The estimate concerns the victims that register with the authorities in one year. The costs associated with the cohort of victims that register in one year extends beyond that one year, since **some of the harms are long-lasting and generate additional costs for many years.** The cost per victim includes these costs over their life time. In order to report an annual figure, these life-time costs are attributed to the victim in the year of their registration.

The costs are centred on 2016. This is the most recent year for which data is provided by the European Commission *Data Report*. Information is provided for both EU-28 and EU-27.

The registered victims can be distinguished by the form of exploitation (sexual, labour, other), sex (female, male) and age (adult, child). See Table S4.

Table S4 Registered victims of trafficking in human beings, EU-28/27, 2016, by form of exploitation (sexual, labour, other), sex (female, male) and age (adult, child)

Type of institution	EU-28	EU-27
All registered victims	11 832	8 027
Form of exploitation		
Sexual	56%	64%
Labour	25%	14%
Other	19%	22%
Sex of victim		
Female	69%	77%
Male	31%	23%
Age of victim		
Child	23%	20%
Adult	77%	80%

Source: European Commission 2018 Data Report, Table 3.4.2, 3.5.2, 3.5.3.

[8] European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

5 The costs

In each section, the costs are provided per victim (lifetime) and for the EU-28 (EU-27) (for one year, 2016). The cost for the EU-28/27 are obtained by multiplying the cost per victim by the number of registered victims in 2016 in the EU-28/27.

5.1 Coordination and prevention

The cost of coordination and prevention activities at EU and Member State (MS) level was, per victim, EUR 2 059 for EU-28 (EUR 2 949 for EU-27), totalling EUR 24 356 744 for the EU-28 (EUR 23 670 826 for EU-27). See Table S5.1.

The costs of coordination and prevention included in the analysis are: projects funded by the European Commission, the activities of the 10 EU agencies committed to work together against trafficking in human beings, the cost to Member States of National Rapporteurs and equivalent mechanisms and other activities such as training, awareness raising, by Member States.

Data were obtained through a specialised survey of EU agencies and National Rapporteurs and equivalent mechanisms, and from Commission documents.

Table S5.1 Cost of coordination and prevention, per victim, for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	2 059	24 356 744	2 949	23 670 826

Sources: EC publications and websites, surveys of EU agencies and National Rapporteurs and equivalent mechanisms.

5.2 Law enforcement

The cost of law enforcement per victim was EUR 93 293 for EU-28 (EUR 105 827 for EU-27), and totals EUR 1 103 841 971 in the EU-28 (EUR 849 476 554 in EU-27) in 2016. See Table S5.2.

The law enforcement costs included in the analysis are for the criminal justice system, which is made up, among others, of the police, prosecution, courts.

The number of cases processed by the police, by prosecutors and by courts was taken from the European Commission *Data Report*[9]. Data on costs were provided by the National Rapporteurs and equivalent mechanisms in a specialised survey.

Table S5.2 Costs of law enforcement per victim, for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	93 293	1 103 841 971	105 827	849 476 554

Sources: National Rapporteurs and equivalent mechanisms.

(9) European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

5.3 Specialised services

Specialised services costs per victim were EUR 9 614 in the EU-28 (EUR 11 355 in EU-27), and totals EUR 113 750 742 in the EU-28 (EUR 91 149 042 in EU-27) in 2016. See Table S5.3.

Victims of trafficking receive specialised services in the phase when they are registered with the authorities. The main costs included here are those for accommodation and some support services such as counselling.

Data were provided by the National Rapporteur or equivalent mechanisms in a specialised survey.

Table S5.3 Cost of specialised services, per victim, for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Specialised services	9 614	113 750 742	11 355	91 149 042

Source: National Rapporteurs and equivalent mechanisms.

5.4 Health services and social protection

The cost of the additional use of health services and social protection per victim was EUR 20 749 in the EU-28 (EUR 21 785 in EU-27), and totals EUR 245 496 731 in the EU-28 (EUR 174 862 479 in EU-27) in 2016. See Table S5.4.

Victims of trafficking were more likely to use health services and social protection than other people because of the long-term damage to their physical and mental health while in trafficking. These hurts and increased use of these services last for several years after trafficking is over.

The cost of health services and social protection is investigated as the increased use of these services as compared to their use by an average person in the EU. These are the costs of actual use; not the cost of meeting needs. Needs are likely to be larger than use; but these are not included.

Data are sourced from Eurostat (for unit costs of these services), the review of scientific literature (for the extent to which victims of trafficking suffer violence) and analysis of quantitative data sets (for the implications of these forms of violence for use of services).

Table S5.4 Cost of increased use of health services and social protection, per victim, for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Increased use of health services and social protection	20 749	245 496 731	21 785	174 862 479

Sources: Eurostat; Review of scientific literature

5.5 Lost economic output

The cost of the lost economic output per victim was EUR 59 537 in the EU-28 (EUR 59 795 in EU-27), and totals EUR 704 449 058 in the EU-28 (EUR 479 973 675 in EU-27) in 2016. See Table S5.5.

Economic output is lost when the victim is not participating in the legal economy while in trafficking and in services, and when the victim has reduced participation post-trafficking as a consequence of long-term harms to health.

Data is provided by Eurostat on the measurement of the economy; by the review of scientific literature on the duration in trafficking and its violence; by the National Rapporteurs and equivalent mechanisms on the duration in services; and by health and crime surveys on the extent to which experience of violence reduces employment.

In trafficking. 100% of economic output is lost to the victim and to the legal economy. Data on the duration is found in the review of scientific literature.

In services. 100% of the potential economic output is lost while the victim is in specialised services and helping law enforcement. Data on duration is provided by the National Rapporteurs and equivalent mechanisms.

Post-trafficking. Some potential economic output is lost for several years since victims have suffered long term hurts to their physical and mental health that interferes with their capacity for employment. Data on the duration and percentage of economic output lost for victims of physical violence, sexual violence and threats is found from surveys; then re-profiled to victims of trafficking using the data from the review of scientific literature.

Table S5.5 Cost of lost economic output for victims of trafficking, per victim, for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Lost economic output	59 537	704 449 058	59 795	479 973 675

Sources: Eurostat; Review of scientific literature; survey of National Rapporteurs and equivalent mechanisms; health and crime surveys.

5.6 Lost quality of life

The cost of the lost quality of life per victim was EUR 127 504 in the EU-28 (EUR 135 751 in EU-27), and totals EUR 1 508 629 186 in the EU-28 (EUR 1 089 672 262 in EU-27) in 2016. See Table S5.6.

Victims of trafficking are subject to physical, sexual and mental injuries that reduce the quality of life. A value is placed on these losses in the quality of life. The approach here broadly follows the health-oriented framework of the Global Burden of Disease (GBD), in which losses are expressed as Disability Adjusted Life Years (DALYs).

The loss of quality of life for physical violence, sexual violence and threats is estimated from its association with a 'limiting mental health condition' and its duration post-trafficking; as well as loss of quality of life due to physical injuries and emotional harms experienced during trafficking. We use data from health and crime surveys for our estimates. Global Burden of Disease disability weights are used.

Table S5.6 Cost of lost quality of life, per victim, for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Lost quality of life	127 504	1 508 629 186	135 751	1 089 672 262

Sources: Review of scientific literature; Survey; GBD

6 Adding it up

The cost of trafficking in human beings is EUR 312 756 per victim (over their life-time) in the EU-28 (EUR 337 462 per victim, EU-27), and a total of EUR 3 700 524 433 for the EU-28 (EUR 2 708 804 838, EU-27) in one year, as shown in Table S6.1. The total cost is based on the number of victims registered with the authorities in Member States of the EU in 2016, it would have been higher if victims not registered with the authorities had been included.

The cost of trafficking (per victim and for EU-28/27) is spread across the use of services (40% for EU-28, 42% for EU-27) (coordination and prevention, specialised services, law enforcement, health services and social protection), lost economic output (19% for EU-28, 18% for EU-27), and lost quality of life (41% for EU-28, 40% for EU-27), as shown in Table S6.1.

Per victim in the EU-28, coordination and prevention cost EUR 2 059; law enforcement cost EUR 93 293; specialised victim services cost EUR 9 614; health services and social protection cost EUR 20 749; lost economic output cost EUR 59 537; and, lost quality of life cost EUR 127 504. Per victim in the EU-27, coordination and prevention cost EUR 2 949; law enforcement cost EUR 105 827; specialised victim services cost EUR 11 355; health services and social protection cost EUR 21 785; lost economic output cost EUR 59 795; and, lost quality of life cost EUR 135 751.

For the EU-28 as a whole, coordination and prevention cost EUR 24 356 744; law enforcement cost EUR 1 103 841 971; specialised victim services cost EUR 113 750 742; health services and social protection cost EUR 245 496 731; lost economic output cost EUR 704 449 058 and, lost quality of life cost EUR 1 508 629 186. For the EU-27 as a whole, coordination and prevention cost EUR 23 670 826; law enforcement cost EUR 849 476 554; specialised victim services cost EUR 91 149 042; health services and social protection cost EUR 174 862 479; lost economic output cost EUR 479 973 675; and, reduced quality of life cost EUR 1 089 672 262.

Table S6.1 The costs of trafficking in human beings per victim and total, EU-28/27, by services (coordination, specialised services, law enforcement, health services and social protection), lost economic output, and reduced quality of life, EUR.

Type of institution	EU-28 per victim	EU-28 total	%	EU-27 per victim	EU-27 total	%
Total cost	312 756	3 700 524 433	100	337 462	2 708 804 838	100
Service costs						
Total service costs	125 714	1 487 446 188	40	141 917	1 139 158 901	42
Coordination and prevention	*2 059*	*24 356 744*	*1*	*2 949*	*23 670 826*	*1*
Law enforcement	*93 293*	*1 103 841 971*	*30*	*105 827*	*849 476 554*	*31*
Specialised victim services	*9 614*	*113 750 742*	*3*	*11 355*	*91 149 042*	*3*
Health and social protection	*20 749*	*245 496 731*	*7*	*21 785*	*174 862 479*	*6*
Lost economic output costs						
Lost economic output	59 537	704 449 058	19	59 795	479 973 675	18
Lost quality of life costs						
Lost quality of life	127 504	1 508 629 186	41	135 751	1 089 672 262	40

The cost of trafficking is spread across the different phases of trafficking: in trafficking (33% for EU-28, 35% for EU-27), in services (16% for EU-28, 15% for EU-27), and post-trafficking (51% for both EU-28 and EU-27), as shown in Table S6.2. About half (51%) of the cost of trafficking in human beings occurs after the period in trafficking and in services are over. **The effects of trafficking on victims have significant duration.**

Table S6.2 The costs of trafficking in human beings per victim and total EU-28/28 by phase of trafficking

	EU-28			EU-27		
	Cost per victim	Total	%	Cost per victim	Total	%
Total cost	312 756	3 700 524 433	100	337 462	2 708 804 838	100
In trafficking			**33**			**35**
Coordination and prevention	1 482	17 536 856		2 212	17 753 120	
Law enforcement	67 171	794 766 219		79 371	637 107 415	
Lost economic output (in trafficking)	25 656	303 564 219		26 929	216 158 756	
Lost quality of life	7 823	92 563 901		8 361	67 111 096	
In services			**16**			**15**
Coordination and prevention	576	6 819 888		737	5 917 707	
Specialised services	9 614	113 750 742		11 355	91 149 042	
Law enforcement	26 122	309 075 752		26 457	212 369 138	
Health services and social protection	523	6 193 725		464	3 724 762	
Lost economic output (in services)	9 912	117 280 374		8 314	66 737 989	
Lost quality of life	3 019	35 726 418		2 714	21 781 671	
Post-trafficking			**51**			**51**
Health services and social protection	20 226	239 303 006		21 321	171 137 717	
Lost economic output (post-trafficking)	23 969	283 604 465		24 552	197 076 930	
Lost quality of life	116 662	1 380 338 868		124 677	1 000 779 496	

The cost of trafficking varies by the form of exploitation (labour, sexual, other), the sex (male/female) of the victim and the age (adult/child) of the victim, as shown in Table S6.3.

There are higher costs for victims of sexual exploitation. For EU-28 the costs are EUR 353 893 for sexual exploitation, EUR 219 382 for labour exploitation, and EUR 314 370 for other exploitation; for EU-27 the costs are EUR 364 474 for sexual exploitation, EUR 232 923 for labour exploitation, and EUR 325 405 for other exploitation. **This is driven by the larger costs to health associated with sexual violence** (rather than physical violence or threat), which has implications not only for utilisation of health services and social protection, but also for lost economic output and lost quality of life). **There are higher costs for female rather than male victims** (for EU-28 EUR 337 999 for females, EUR 256 184 for males; for EU-27 EUR 353 027 for females, EUR 286 769 for males). This is driven by the larger costs associated with sexual exploitation, which is disproportionately experienced by women. The larger costs associated with sexual exploitation are, as noted above, linked to greater utilisation of health services and social protection, greater lost economic output and greater lost quality of life. **There are higher costs for child rather than adult victims** (for EU-28 EUR 394 132 for children, EUR 288 256 for adults; for EU-27 EUR 460 391 for children, EUR 306 373 for adults). This is due to greater utilisation of health services and greater lost quality of life.

Table S6.3 Cost of trafficking in human beings per victim, for EU-28/27, by form of exploitation (sexual, labour, other), sex of victim (female, male), age of victim (child, adult), EUR

	EU-28		EU-27	
	Per victim average	Total	Per victim average	Total
Total cost	312 756	3 700 524 433	337 462	2 708 804 838
Form of exploitation				
Sexual	353 893	2 344 864 387	364 474	1 872 407 197
Labour	219 382	648 931 571	232 923	261 754 074
Other	314 370	706 728 577	325 405	574 644 878
Sex of victim				
Female	337 999	2 765 284 348	353 027	2 168 738 120
Male	256 184	935 244 432	286 769	540 052 406
Age of victim				
Child	394 132	1 079 118 210	460 391	746 384 419
Adult	288 256	2 621 410 571	306 373	1 962 406 108

7 Methodology

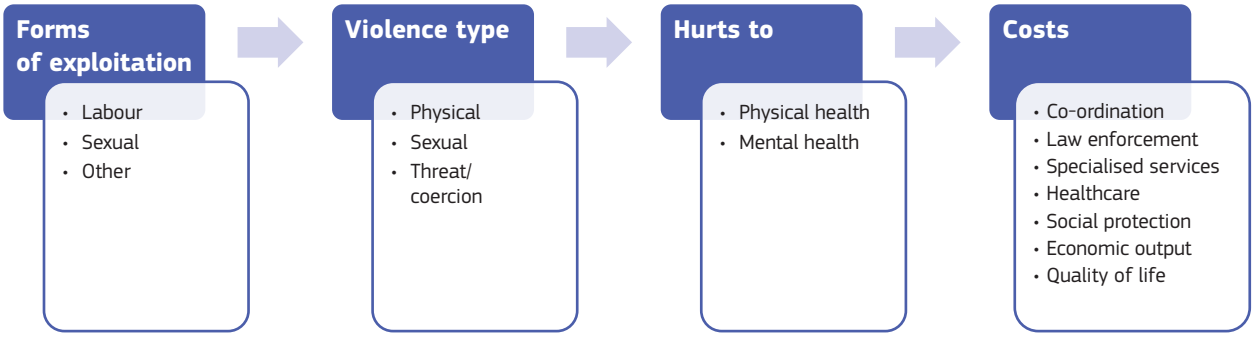
Approach

The Study adopts and builds on the existing scientific methodology for costing.

The approach taken to estimates is conservative. Where there are doubts about the quality of data, costs are not included. The cost is thus an underestimate.

The Study identified the victims of trafficking. For some costs (coordination, law enforcement and specialised services), it was possible to investigate the costs generated by trafficking directly. For the other costs, the Study investigated costs by following the victim's journey from forms of exploitation, to types of violence experienced, to hurts to physical and mental health, and then to the costs generated, for example by increased use of services. See Figure S7.

Figure S7 From forms of trafficking, to types of violence, to types of hurts, to types of costs



Data Sources

Several sources of data are used: administrative statistics on registered victims of trafficking in human beings in Member States; published scientific literature; original analysis of quantitative data sets; original collection of information across the EU; Eurostat held information; European Commission documents; and other scientific studies.

Data on the number, age, sex, and form of trafficking of registered victims of trafficking is extracted from the European Commission (2018a) *Data Collection on Trafficking in Human Beings in the EU* (European Commission *Data Report*)[10]. Data is fundamentally centred around registered victims in 2016. Where data is provided for a different year, this is indicated.

The scientific literature on trafficking in human beings that contained quantitative information was systematically reviewed. This was used to provide a profile of the extent to which victims of trafficking suffered physical violence, sexual violence and threats, disaggregated by the form of trafficking.

Surveys of populations that share similarities with victims of trafficking were analysed to provide additional information on how harms from physical violence, sexual violence and threats had consequences for use of health and welfare services, for the extent of employment, and for quality of life including physical injuries, substance dependence and long-term mental health. This included surveys of crime, mental health and physical health, as well as of victims of trafficking. The datasets were analysed to quantify the extent to which people who had experienced each type of violence were more likely to experience each harm outcome. The analyses used regression models that adjusted for a range of other factors that could explain the association. Information from these surveys on the implications of specific types of harms was then applied proportionately to victims of trafficking.

(10) European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

The National Rapporteurs and equivalent mechanisms provided data on the extent of utilisation and cost of specialised services and law enforcement and on their costs, via specially designed questionnaires.

Data on the contribution and cost of EU agencies was collected from their websites and reports, and via a specially designed questionnaire, emails and interview.

Eurostat data on services and costs of health, social protection, law enforcement and economic output were obtained from their website and deployed in the analysis.

European Commission documents provided information on funding and benchmarks for key values and on the EU legal and policy framework.

Other scientific studies, such as the Global Burden of Disease programme, were used.

The United Kingdom left the European Union on 31 January 2020. The reference period for this study is 2016, mainly centred around registered victims of trafficking in human beings in 2016, while the UK was a Member State. The study therefore includes information on the United Kingdom.

Note that due to rounding there may be slight discrepancies in figures and percentages may not always sum exactly 100.0%

MAIN REPORT

1 Introduction

The purpose of the Study is to measure the cost of trafficking in human beings in the EU.

Trafficking in human beings is a particularly serious crime, driven by profits and involves a chain of actors who are knowingly or unknowingly involved. "It brings high profits to the perpetrators, who abuse people's vulnerabilities and exploit the demand for the services provided by the victims. It results in long-term harm to its victims, our societies and economies." [11]It is a grave violation of fundamental rights that causes immense harm to the victims. It has an economic, social and human cost. Trafficking is a cost to the wider economy and society in its use of public services, in diverting resources away from the legal economy, and in its effects on the quality of life.

Measuring the cost of trafficking in human beings in a monetary form is done in order to improve the quality of decision-making where cost-benefit analysis is relevant to financial decisions. Translating trafficking in human beings into a cost is relevant to public policy concerning developing the European area of 'justice, freedom and security'.

Costing enables the scale of the harm of trafficking in human beings to be made more visible to policy makers by using the orthodox language of monetary value.

Trafficking in human beings is prohibited by the EU Charter of Fundamental Rights (Article 5.3). It is defined by the Treaty on the Functioning of the European Union, as a particularly serious form of crime (Article 83), with links to immigration policy (Article 79). Trafficking in human beings is driven by profits and involves a chain of actors who are knowingly or unknowingly involved.

The crime of trafficking in human beings[12]

Art. 2.1 of Directive 2011/36/EU (hereinafter, the Anti-Trafficking Directive) includes three constitutive elements of this crime: **acts, means and purpose. The act** is linked to the establishment of control over a person; it consists in the recruitment, transportation, transfer, harbouring or reception of persons, including the exchange or transfer of control over them. **The means** are the way in which control is attained: the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person. **The purpose** is the exploitation of the trafficked person. The Anti-Trafficking Directive contains minimum rules concerning the definition of criminal offences, **including a non-exhaustive list of forms of exploitation**: prostitution and other forms of sexual exploitation, forced labour or services, including begging, slavery and similar practices, the exploitation of criminal activities and the removal of organs. Other forms of exploitation can take place.

Consent: A victim may have consented to being trafficked but this consent is irrelevant when it has been obtained by the means listed in the Anti-Trafficking Directive: threat, use of force or coercion, fraud, deception, abuse of power or taking advantage of a person's vulnerability. This is also the case when a person who has control over the victim has received benefits to surrender her to traffickers. In the case of a child, trafficking is punishable even if none of the above-mentioned means has been used to obtain his or her consent.

(11) European Commission (2018b) *Second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_com-2018-777-report_en.pdf

(12) European Commission (2018e) *Key concepts in a nutshell.* https://ec.europa.eu/anti-trafficking/eu-policy/working-together-to-address-trafficking-in-human-beings-concepts-in-a-nutshell_en

The EU has a comprehensive legal and policy framework to address trafficking in human beings, anchored in the EU Anti-Trafficking Directive (Directive 2011/36/EU)[13] with coordination of the Union strategy against trafficking in human beings. The Directive is the fundamental EU legislative act addressing trafficking in human beings. It establishes provisions on victim's protection, assistance and support and also on prevention and the prosecution of the crime. It is victim centred, gender-specific, and child-sensitive. It is complemented by the European Commission Strategy 2012-2016[14] and the 2017 Communication[15] stepping up EU action to address trafficking in human beings.

The Commission put forward a list of concrete actions to better prevent trafficking in human beings in its 2017 Communication[16]. The Commission identifies priorities for action by the EU and Member States including the disruption of the business model of traffickers and the trafficking chain, including by increasing prosecutions and convictions and encouraging the criminalisation of the use of services exacted from victims of trafficking; to provide better access to and realise the rights for victim and to intensify a coordinated and consolidated response, both within and outside the EU. Cross-cutting priorities include improving the knowledge base on trafficking in human beings and providing EU funding for anti-trafficking initiatives and objectives.

The wider aim of this Study is to contribute to the prevention and combating of trafficking in human beings, as laid out in the EU Directive 2011/36/EU on Preventing and Combating Trafficking in Human Beings and Protecting its Victims[17]. The Study contributes to 'widening the knowledge base and improving the understanding of trafficking in human beings as a complex phenomenon'. Thus, it is one of the actions listed in the Commission Communication on 'Reporting on the follow-up to the EU Strategy towards the Eradication of trafficking in human beings and identifying further concrete actions'. The Study builds on the work of the Commission, including as identified in its reviews of progress[18].

The Study reviews the literature on the cost of trafficking in human beings and takes account of relevant methodologies in overlapping and adjacent fields in the EU, EU Member States and in other relevant entities. The Study follows the standard scientific procedures on costing. It draws on multiple data sources including administrative statistics on registered victims of trafficking, systematic review of scientific literature, original analysis of quantitative data, original collection of data across the EU, and Eurostat held statistics.

The number of registered victims of trafficking in human beings is based on administrative data reported to the European Commission. The cost of trafficking in human beings is shown for the EU-28[19] and EU-27. It is presented per registered victim of trafficking in 2016, for the EU, and disaggregated by form of trafficking, the sex (female/male) of the victim and the age (adult/child) of the victim.

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(13) *Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA* https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

(14) European Commission (2012) *The EU Strategy towards the Eradication of Trafficking in Human Beings 2012–2016*. Brussels: EC. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0286&from=EN

(15) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf

(16) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf

(17) *Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA* https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

(18) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf
European Commission (2016c) *First Report on the progress made in the fight against trafficking in human beings*. https://ec.europa.eu/anti-trafficking/eu-policy/first-report-progress-made-fight-against-trafficking-human-beings-2016_en
European Commission (2018b) *Second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims*. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_com-2018-777-report_en.pdf
European Commission (2018c) *Accompanying document to the second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims*. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_swd-2018-473-commission-staff-working-document_en.pdf

(19) The United Kingdom left the European Union on 31 January 2020. The reference period for this study is 2016, while the UK was a Member State. The study therefore includes information on the United Kingdom.

Following a chapter on methodology, the findings of the Study are presented in chapters on the costs of: coordination and prevention; law enforcement; specialised victim services; health services and social protection, lost economic output; lost quality of life; and, their summary and disaggregation. Technical matters are reported in the Appendices and references in the Bibliography.

2 Methodology

2.1 Introduction

The Study adopts and builds on the existing scientific methodology for costing. It is part of a field of analysis that has been developing in the overlapping fields of public expenditure, violence and coercion, health, crime and gender equality. The approach to translating trafficking in human beings into a cost to economy and society taken here follows orthodox principles and practices. The methodology is developed to adapt to the specific contours of trafficking in human beings in the EU.

The *Better Regulation: Guidelines and Toolbox* (European Commission, 2015a)[20] is the Study's primary authority on technical design decisions. Where the *Guidelines* refer analysts to other sources for design guidance, such as OECD, we have drawn on those. Where further or more precise guidance was needed, decisions have drawn on the European Institute for Gender Equality (EIGE)'s report *Estimating the costs of gender-based violence in the European Union*[21] and The Global Burden of Disease (GBD) project.[22]

The approach taken to estimates is conservative. Where there are doubts about the quality of data, costs are not included. The cost is thus an underestimate.

This section addresses: previous studies/methodology; the included costs; for whom the costs are relevant; how victims are counted; the hurts and harms of trafficking; disaggregation; definitions; sources of data; date of study; geographical limits; and benchmarking against EU statistics.

2.2 Studies of costing

This Study is situated within EU practices on costing both in general (EU, 2015a)[23] and in the adjacent field of gender-based violence (EIGE 2014)[24]. It is informed by international costing practices in adjacent and over-lapping fields.

The European Commission's Agency, the European Institute for Gender Equality (EIGE) produced a costing in a field adjacent to trafficking in human beings, that of gender-based violence (EIGE 2014[25]). This Study identified the best and most appropriate methodologies available to cost gender-based violence. Using criteria based on quality and the exclusion of non-OECD countries, ten studies were identified for and subjected to detailed analysis. These

(20) European Commission (2015a) *Better Regulation: Guidelines and Toolkit*. https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

(21) European Institute for Gender Equality (EIGE) (2014) *Estimating the costs of gender-based violence in the European Union* https://eige.europa.eu/publications/estimating-costs-gender-based-violence-european-union-report

(22) Institute for Health Metrics and Evaluation (2013) *The Global Burden of Disease: Generating Evidence, Guiding Policy*. Seattle, WA: IHME, https://www.healthdata.org/sites/default/files/files/policy_report/2013/GBD_GeneratingEvidence/IHME_GBD_GeneratingEvidence_FullReport.pdf

(23) European Commission (2015a) *Better Regulation: Guidelines and Toolkit*. https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

(24) European Institute for Gender Equality (EIGE) (2014) *Estimating the costs of gender-based violence in the European Union* https://eige.europa.eu/publications/estimating-costs-gender-based-violence-european-union-report

(25) European Institute for Gender Equality (EIGE) (2014) *Estimating the costs of gender-based violence in the European Union* https://eige.europa.eu/publications/estimating-costs-gender-based-violence-european-union-report

were: Access Economics (2004a; 2004b)[26]; Envall and Eriksson (2006)[27]; Helwig-Larson et al (2010)[28]; National Center for Injury Prevention and Control (2003)[29]; Nectoux et al (2010)[30]; Piipsa et al (2001)[31]; Stern et al (2013)[32]; Villagomez (2010)[33]; Walby (2004)[34]; and Zhang et al (2012)[35]. The methodology used in EIGE (2014)[36] is used to inform and guide the present Study.

Costing methodologies have been developing in adjacent and overlapping fields, including crime (Brand and Price 2000; Cohen 2001; Dolan et al 2005; Dubourg and Hamed 2005; Heeks et al 2018; UNODC 2008)[37], domestic abuse (Oliver et al 2019)[38], child maltreatment (Conti et al., 2017)[39], sexual violence (Minnesota Department of Health 2007)[40], modern slavery (Reed et at., 2018)[41]. These methodologies build on developments in the measurement of violence and coercion in fields of gender and crime (Walby and Towers et al 2017)[42], and health, such as the Global Burden of Disease (GBD) project (Global Burden of Disease 2019; Salomon et al., 2015[43]).

This Study draws on the advances in methodology in several of these areas, as appropriate. For example, it utilises estimates for lost quality adjusted life years (QALYs) for the mental disorder 'depression' from the Global Burden of Disease project[44].

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(26) Access Economics (2004a) *The Cost of Domestic Violence to the Australian Economy: Part 1, Australia, Australian Government's Office of the Status of Women.* https://www.dss.gov.au/sites/default/files/documents/05_2012/cost_of_dv_to_australian_economy_i_1.pdf
Access Economics (2004b) *The Cost of Domestic Violence to the Australian Economy: Part 2, Australia, Australian Government's Office of the Status of Women.* http://www.dss.gov.au/sites/default/files/documents/05_2012/cost_of_dv_to_australian_economy_ii_2.pdf

(27) Envall, E., and Eriksson, A. (2006) *Costs of violence against women* (English Summary). https://www2.unwomen.org/-/media/files/un%20women/grb/resources/costs%20of%20violence%20against%20women.pdf?vs=5226

(28) Helweg-Larsen, K., Kruse, M., Sørensen, J. and Brønnum-Hansen, H. (2010) *The cost of violence - Economic and personal dimensions of violence against women in Denmark.* Denmark, National Institute of Public Health, University of Southern Denmark & Rockwool Fund Research Unit, http://www.si-folkesundhed.dk/Udgivelser/B%C3%B8ger%20og%20rapporter/2010/Voldens_pris.aspx

(29) National Center for Injury Prevention and Control (2003) *Costs of Intimate Partner Violence Against Women in the United States*, Atlanta (GA) Center for Disease Control and Prevention, http://www.cdc.gov/violenceprevention/pub/ipv_cost.html

(30) Nectoux, M., Mugnier, C., Baffert, S., Albagly, M. and Thélot, B. (2010) 'Évaluation économique des violences conjugales en France (An Economic Evaluation of Intimate Partner Violence in France).' *Santé Publique* 22(4): 405 - 416

(31) Piispa, M. and Heiskanen, M. (2001) *The Price of Violence: The Costs of Men's Violence against Women in Finland.* Finland, Statistics Finland and Council for Equality.

(32) Stern, S., Fliedner, J., Schwab, S. and Iten, R. (2013) *Costs of Intimate Partner Violence: Summary* Federal Office for Gender Equality (FOGE), Berne.

(33) Villagómez, E. (2010) *The economic and social costs of domestic violence against women in Andalucía*, Spain, Almenara Estudios Económicos y Sociales, http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.30/2010/8.e.pdf

(34) Walby, S. (2004) *The Cost of Domestic Violence, London, Department of Trade and Industry, Women and Equality Unit.* https://openaccess.city.ac.uk/id/eprint/21695/

(35) Zhang, T., Hoddenbagh, J., McDonald, S. and Scrim, K. (2012) *An Estimation of the Economic Impact of Spousal Violence in Canada 2009*, Department of Justice Canada, Ottawa, https://www.justice.gc.ca/eng/rp-pr/cj-jp/fv-vf/rr12_7/index.html

(36) European Institute for Gender Equality (EIGE) (2014) *Estimating the costs of gender-based violence in the European Union* https://eige.europa.eu/publications/estimating-costs-gender-based-violence-european-union-report

(37) Brand, S. and Price, R. (2000) *The Economic and Social Costs of Crime, Home Office Research Study 2017.* London: Home Office. Cohen, M. A. (2001) 'Measuring the costs and benefits of crime and justice'. Volume 4: *Measurement and Analysis of Crime and Justice* pp. 263-316 Criminal Justice 2000. National Institute of Justice (July 2000) NCJ 182411.
Dolan, P., Loomes, G., Peasgood, T., and Tsuchiya, A. (2005) 'Estimating the intangible victim costs of violent crime', *British Journal of Criminology*, 45(6): 958–976.
Dubourg, R., and Hamed, J. (2005). *The Economic and Social Costs of Crime against Individuals and Households 2003/04.* Online Report 30/05. London: Home Office.
Heeks, M., Reed, S., Tafsiri, M., and Prince, S. (2018) *The Economic and Social Costs of Crime.* 2nd edn. Research Report 99. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf
United Nations Office on Drugs and Crime (UNODC) (2008) 'An Introduction to Human Trafficking: Vulnerability, Impact and Action.' Background Paper. Vienna: UNODC. https://www.unodc.org/documents/human-trafficking/An_Introduction_to_Human_Trafficking_-_Background_Paper.pdf

(38) Oliver, R., Barnaby, A., Roe, S., Wlasny, M. (2019) *The economic and social costs of domestic abuse.* Home Office https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/772180/horr107.pdf

(39) Conti, G., Morris, S., Melnychuk, M. and Pizzo, E. (2017) *The Economic Cost of Child Maltreatment in the UK: A Preliminary Study.* London: NSPCC. https://learning.nspcc.org.uk/research-resources/2017/economic-cost-child-maltreatment/

(40) Minnesota Department of Health (2007) *Costs of Sexual Violence in Minnesota.* http://stmedia.startribune.com/documents/costofsexualviolence.pdf

(41) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery.* London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf .

(42) Walby, S., Towers, J. and Francis, B. (2016) 'Is violent crime increasing or decreasing? A new methodology to measure repeat attacks making visible the significance of gender and domestic relations.' *British Journal of Criminology*, 56(6): 1203-1234 https://academic.oup.com/bjc/article/56/6/1203/2415172

(43) Global Burden of Disease (GBD) (2019) 'Disease, Injuries and Risk Factors in Child and Adolescent Health 1990 – 2017'. *JAMA Pediatr.* 2019; 173(6):e190337. Doi: 10.1001/jamapediatrics.2019.0337
Salomon, J., Juanita, A., Haagsma, A, Davis, A., Maertens de Noordhout, C., Polinder, S,. Havelaar, A. H., Cassini, A., Devleesschauwer, B., Kretzschmar, M., Speybroeck, N., Murray, C. J. L. and Vos, T. (2015) 'Disability weights for the Global Burden of Disease 2013 study.' *Lancet Global Health*, 3(11): e712–e723

(44) Global Burden of Disease (GBD) (2019) 'Disease, Injuries and Risk Factors in Child and Adolescent Health 1990 – 2017'. *JAMA Pediatr.* 2019; 173(6):e190337. Doi: 10.1001/jamapediatrics.2019.0337
Salomon, J., Juanita, A., Haagsma, A, Davis, A., Maertens de Noordhout, C., Polinder, S,. Havelaar, A. H., Cassini, A., Devleesschauwer, B., Kretzschmar, M., Speybroeck, N., Murray, C. J. L. and Vos, T. (2015) 'Disability weights for the Global Burden of Disease 2013 study.' *Lancet Global Health*, 3(11): e712–e723

For the purposes of the study, participants to the EU Civil Society Platform against Trafficking in human beings[45] have been consulted for their input on available studies and reports they drafted or to which they have contributed.

This Study offers a further step in the development of the costing of violence and coercion by building on advances in the field. For example, as compared with previous studies, including that of Reed et al (2018)[46], this Study draws on the findings of health surveys to deepen the analysis of the long-term harms of the sexual violence that is suffered by many victims of trafficking, especially those trafficked for sexual exploitation who are disproportionately women, thereby enabling a meaningful gender disaggregation of the costs.

2.3 What costs?

2.3.1 Introduction

The costs of trafficking in human beings are grouped into four types: coordination and prevention; use of services (law enforcement, specialised, health and social protection); lost economic output; and losses to the quality of life. Three phases are distinguished: in trafficking; in specialised services; and, post-trafficking.

2.3.2 Types of cost

Coordination and prevention. Governments and agencies use resources to coordinate their efforts and to prevent trafficking, including by improving the knowledge base and fund anti-trafficking action.

Law enforcement. Law enforcement, for the perspective of this study, includes the criminal justice system (police, prosecution, courts, prisons), the civil legal system (regulating environments prone to trafficking) and other relevant authorities (e.g. labour inspectors).

Specialised services. Victims of trafficking are legally entitled to specialised services[47] when there are reasonable grounds to indicate that they have been trafficked. For the purposes of the study, this is those people who are registered as identified or presumed victims. The specialised services include accommodation, medical and psychological assistance, legal assistance, education, training, job placement, reintegration assistance, and return assistance.

Health services and social protection. Health services include a wide range of services, since there are many different ways in which the health of the victim is damaged, with long term, as well as immediate, need for assistance. Social protection, or welfare, includes the cash transfers to support someone who is unable to be fully employed, including by reason of sickness or disability.

Lost economic output. The loss of employment in the legal economy, either fully or partially, with the consequence of lost wages, profits and taxes.

Lost quality of life. The public's willingness to pay to avoid pain and suffering is routinely included in governmental cost-benefit analysis even though it is 'intangible'. This is calculated as reduced quality of life adjusted for quality of health.

(45) The Platform was launched in 2013 as a key action of the EU Strategy towards the eradication of trafficking in human beings 2012-2016 (Priority D, Action 3) and currently brings together over 100 participants from across the EU and beyond.

(46) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery*. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf.

(47) Articles 11,12,13,14,15 and 16 of European Union (2011) *EU Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA*. https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

2.3.3 Phases over time

The three phases – in trafficking, in services, and post-trafficking – have different implications for costs.

In trafficking. While being trafficked, many victims suffer harms of physical violence, sexual violence, and threats. Access to services is unlikely to take place. Their contribution to the legal economy and to GDP is lost to themselves and the wider economy. Victims suffer losses to their quality of life.

In services. Victims are entitled to specialised services when they register. Law enforcement is engaged. Access to health and social protection services starts. Victims are unlikely to be in employment. Victims suffer losses to their quality of life.

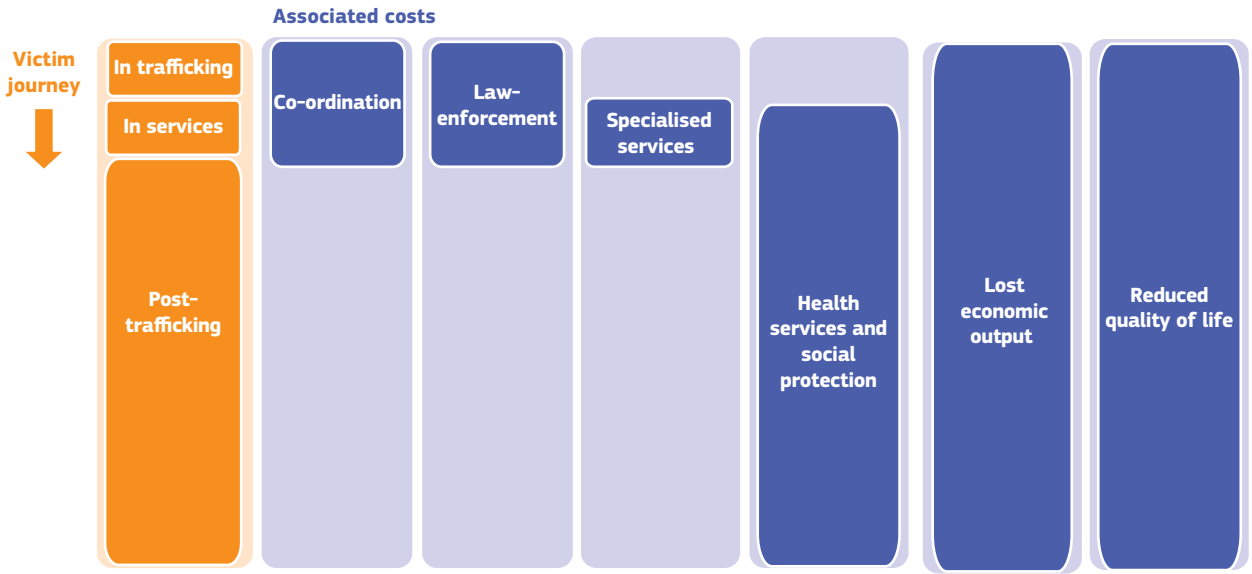
Post-trafficking. When victims return to social and economic life, the effects of the harms of trafficking linger in their bodies and minds; and continue to reverberate for many years. Although use of specialised services and law enforcement is likely to cease, victims of trafficking tend to have higher utilisation of health and welfare services for many years. They tend to have a lower contribution to the economy. Victims of trafficking continue to suffer diminished quality of life due to reduced mental and physical health for years after the trafficking has ceased.

2.3.4 Combining types of costs and phases

The way that different types of costs to economy and society are generated at different phases of trafficking is summarised in Figure 2.3.4.

In each section of the report, the costs are provided **per victim (lifetime) and for the EU for one year (2016).** Where possible, these are **disaggregated by form of exploitation (sexual, labour, other), sex of victim (female, male), and age of victim (adult, child). The costs are anchored wherever possible in 2016.** Where it was not possible to find data for 2016, this is indicated in the study. These costs include those for coordination and prevention, law enforcement, specialised victim services that were incurred in 2016[48]. They also include the costs of health services and social protection, lost economic output, and reduced quality of life over the lifetime of a victim who registered in 2016.

Figure 2.3.4 Costs generated along the victim's journey



(48) Where it was not possible to centre costs in 2016, it is indicated in the study.

2.4 Costs for whom?

The cost due to the existence of trafficking in human beings is borne by the public. Here, this means all who live in the EU. The people (inhabitants, citizens, workers, employers) pay taxes and insurance premiums to fund services **that without the existence of the phenomenon would not be needed; collectively suffer from the diverted and thereby lost economic output; and are willing to pay to avoid the lost quality of life of fellow human beings.**

While the study follows individual victims and traffickers, **the losses are to EU society.** Data collection is assisted by identifying the 'journey' of the victims of trafficking, exploited and registered in the EU, and the traffickers, who exploited their victims in the EU and are held to account in the EU. The main focus, however, is on the institutions whose resources are depleted because of these crimes. **Trafficking is a drain on the resources of everyone, except the traffickers who extract great profits from this criminal exploitation.**

All the costs generated by trafficking in the EU are included, even if the victims of trafficking are citizens of other states.

2.5 Counting victims

The cost per victim is the core unit of measurement. The victims under consideration are those who registered in 2016 as victims of trafficking in human beings in the EU (identified or presumed)[49]. The data source is the European Commission (2018a) *Data collection on trafficking in human being in the EU* (referred to henceforth as the 'European Commission *Data Report*').[50]

The data concerns victims of trafficking who are registered (identified and presumed) by the relevant national authorities. For their assistance and support[51], Article 11(4) of the Anti-trafficking Directive foresees that "Member States shall take the necessary measures to establish appropriate mechanisms aimed at the early identification, assistance to and support for victims, in cooperation with relevant support organisations." The 2012-2016 EU Strategy notes that "these mechanisms should describe procedures to better identify, refer, protect and assist victims and include all relevant public authorities and civil society. The development of criteria for the identification of victims should be included, to be used by all those involved."[52] It also further specifies that, since under the Anti-trafficking Directive victims should receive appropriate protection and assistance on the basis of individual risk and needs assessments, "carrying out the assessments should be part of the remit of the national referral mechanisms"[53]. [54]

(49) According to the European Commission's data collection guidance document: The relevant formal authority to identify victims of trafficking in human beings in some countries is the police. In other countries, the status of 'victim' could be granted by other authorities such as the immigration service, the state agency for social welfare or mandated NGOs. The term 'identified victim' is used for this category of victims of trafficking in human beings and can be defined as a person who has been formally identified as a victim of trafficking in human beings by the relevant formal authority in a Member State. But in some cases, victims will not report to the relevant formal authority, such as in cases where the victim does not report the crime to the police or does not want to cooperate with the police. The victim may need assistance and support and for this reason contact victim service providers. Also, in these cases, the victim could fulfil the constituent elements of the crime of trafficking in human beings and therefore be considered a victim of trafficking in human beings according to the legal definitions. In different studies this category of victims is either called 'presumed' or 'potential' victims of trafficking in human beings. Article 11 of the Directive 2011/36/EU introduces the 'reasonable-grounds indication' for believing that the person might have been subjected to trafficking in human beings.

(50) European Commission (2018a) *Data collection on trafficking in human beings in the EU.* Brussels: European Commission.

(51) For an overview on the rights victims of trafficking in human beings, the Commission has published 'The EU rights of victims of trafficking' in all official EU languages. This document gives a practical and comprehensive overview of victims' rights, based on the Charter of Fundamental Rights of the European Union, EU legislation and the case law of the European Court of Human Rights.

(52) European Commission (2012) *The EU Strategy towards the Eradication of Trafficking in Human Beings 2012–2016.* Brussels: EC. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0286&from=EN

(53) European Commission (2012) *The EU Strategy towards the Eradication of Trafficking in Human Beings 2012–2016.* Brussels: EC. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0286&from=EN

(54) The Staff Working Document accompanying the European Commission's Second report on the progress made in the fight against trafficking in human beings (SWD(2018) 473 final) indicated that "Member States report on having set up either formalised or non-formalised national referral mechanisms. In some cases, ongoing efforts are reported to improve functioning and effectiveness, including with respect to: specialised victims support services for children; revision of the mechanism; formal procedures guiding service provision by national authorities and civil society organisations". The role of formal and informal NRM is to contribute to ensuring access to and realisation of the rights of victims of trafficking, making sure that victims are referred to actors which provide appropriate assistance and support. A formal or informal NRM (or a similar coordination mechanism) has to, in other words, effectively facilitate the links between all relevant actors in different referral phases. As recalled in the 2017 Commission Communication: "identifying victims efficiently and at an early stage is the first step towards making sure they are treated as 'rights holders', have access to their rights and can exercise them effectively, which includes receiving appropriate assistance and protection" [Study on reviewing the Functioning of Member States' National and Transnational Referral Mechanisms]

There are further victims who are not registered with the authorities. **The actual number of victims is likely to be significantly higher than is the number reported. The estimate of the numbers of non-registered victims is uncertain. In this Study, the cost is per registered victim. This means that the cost of trafficking in the EU measured here is an underestimate.**

If it were to be possible to include a reliable estimate of the number of non-registered victims, then the costs would increase. They would include additional costs for use of health services and social protection, lost economic output, and lost quality of life. There would not be additional costs for coordination and prevention (because the amount of expenditure does not depend on the number of victims), law enforcement or specialised victim services (because non-registered victims do not use law enforcement or specialised victim services). Proposed methodologies to measure the number of non-registered victims include: multiple systems estimation (Bales, Hesketh and Silverman 2015; Chan, Silverman and Vincent 2019)[55]; and the use of surveys and other studies and data sources (UNODC)[56]. The systems analysis utilises data on those victims who register with more than one authority and subjects it to statistical procedures to estimate a larger population of victims. Some surveys have been carried out, especially in countries from which victims of trafficking have been recruited and to which they return; but obtaining samples that are representative of the population remains challenging.

Data on the number and distribution of victims of trafficking in human beings in the EU is drawn from the tables in the European Commission *Data Report*. In addition, information on Bulgaria was based on the information that had been provided to the European Commission website by national authorities[57].

The European Commission Data Report contains information on trafficking in human beings, including about victims. It is a result of a coordinated approach by the European Commission in cooperation with the National Rapporteur or equivalent mechanisms (NREMs) in each Member State and relevant stakeholders including civil society and statistical institutes, with the support of Eurostat.

The costs are disaggregated by form of exploitation (sexual, labour and other), sex of victim (female/male), and age of victim when registered (adult/child). The distribution of registered victims across these categories is summarised in Table 2.5.

A more detailed version of Table 2.5 (with an account of how missing data were addressed) is provided in Appendix 2.

Table 2.5 Registered victims of trafficking in human beings, EU-28/27, 2016, by form of exploitation (sexual, labour, other), sex (female, male) and age (adult, child)

	EU-28	EU-27
All registered victims	11 832	8 027
Form of exploitation		
Sexual	56%	64%
Labour	25%	14%
Other	19%	22%
Sex of victim		
Female	69%	77%
Male	31%	23%
Age of victim		
Adult	77%	80%
Child	23%	20%

Source: European Commission 2018 Data Report, Table 3.4.2

(55) Bales, K., Hesketh, O., Silverman, B. (2015) 'Modern Slavery in the UK: How many victims?' *Significance* Vol. 13, Issue 3 https://rss.onlinelibrary.wiley.com/doi/full/10.1111/j.1740-9713.2015.00824.x

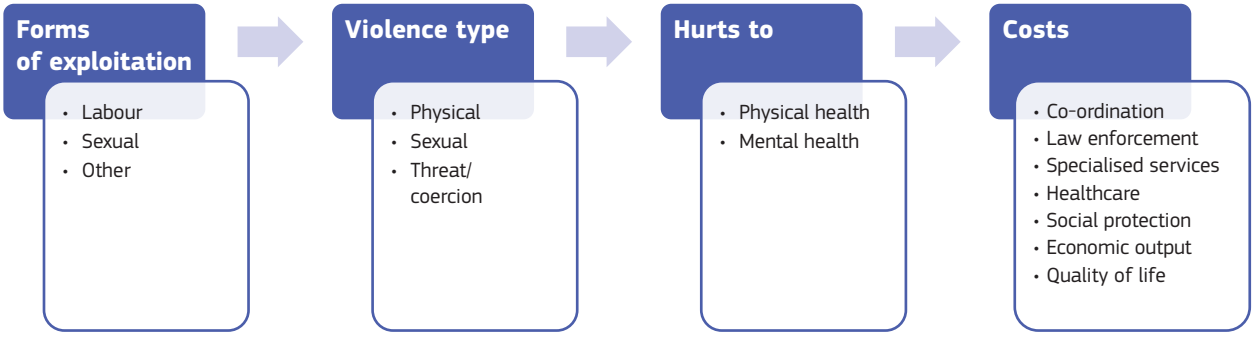
(56) United Nations Office on Drugs and Crime (UNODC) (2008) 'An Introduction to Human Trafficking: Vulnerability, Impact and Action.' Background Paper. Vienna: UNODC. https://www.unodc.org/documents/human-trafficking/An_Introduction_to_Human_Trafficking_-_Background_Paper.pdf

(57) European Commission Website: *Together Against Trafficking in Human Beings: Member States* https://ec.europa.eu/anti-trafficking/member-states_en

2.6 The hurts and harms of trafficking

Victims of trafficking are classified at registration by the main form of exploitation that they faced while trafficked: for sexual exploitation, labour exploitation, and other exploitation. The majority of people in the 'other' form of trafficking faced domestic servitude. People in all forms of trafficking suffer **various types of violence and coercion, which can be summarised into three types: physical violence, sexual violence and threats.** These types of violence and coercion **generate hurts to physical health and to mental health**. These hurts to health **generate costs to society: law enforcement, specialised services, health services and social protection, lost economic output, and losses to quality of life, in addition to costs associated with the administration and co-ordination of trafficking prevention work**. See Figure 2.6.

Figure 2.6 From forms of trafficking, to types of violence, to types of hurts, to types of costs



It is possible to identify some costs directly, for example the utilisation of specialised services for victims of trafficking. In this instance, the user of these services is clearly identified as a victim of trafficking. For some other costs, where the status of the user of services as a current or former victim of trafficking is not clearly identified, the route is more complicated, following through the increased likelihood of victims of trafficking to have suffered violence, leading to increased likelihood of hurts to physical and/or mental health, leading to increased use of health services, lost economic output and lost quality of life throughout their life. For these latter costs, we build the analysis in several stages.

Data on the extent to which victims of different forms of exploitation (sexual, labour, other) suffer different types of hurts (physical violence, sexual violence, threats) was drawn from a systematic review of the scientific literature.[58]

The systematic review methodology is an established practice that facilitates both replicability and comprehensiveness of the review of the literature, assisted by explicit criteria for inclusion and exclusion from the review. Electronic searches in six databases (PsychInfo; MEDLINE; EMBASE; CINAHL; CENTRAL; PILOTS)[59] were undertaken using pre-specified search terms, specified in the review protocol. These data bases together provide access to globally relevant research findings. A total of 1 718 references were screened at title and abstract stage to determine whether they met the inclusion criteria. If it was not clear from the title and abstract whether the paper met the inclusion criteria for the review, it was included for full text screening. Full text screening involved the full papers being read and a decision being made as to whether the papers met the inclusion criteria. Electronic searches were supplemented by hand searching, reference list screening and citation tracking using Web of Science and Google Scholar. Data were extracted on the extent to which victims of trafficking experienced physical violence, sexual violence and threats/coercion from papers that met the inclusion criteria.

The data in these studies is pooled, according to strict rules, in order to discover the average figure for key items of interest. To allow comparability between studies, only those using cross-sectional quantitative survey designs and samples of victims who were no longer in trafficking were included in the studies that were subjected to

(58) The study cannot capture all specificities. For example, the Staff Working Document accompanying the Second Progress report (2018) of the European Commission indicates in the specific case of Roma girls that they are "often trafficked for multiple forms of exploitation at the same time, such as: forced marriage, domestic servitude, sexual exploitation (and/or abuse)". The information is limited, so it would not be possible to further elaborate on the impact on hurts and harms in such context.

(59) EMBASE - Excerpta Medica Database; MEDLINE - Medical Literature Analysis and Retrieval System Online; PsycINFO – Psychological Information Database; CINAHL - Cumulative Index to Nursing and Allied Health Literature; PILOTS - Published International Literature on Traumatic Stress.

meta-analysis. The following studies contributed to the meta-analysis of the prevalence of violence by form of exploitation: Gezie et al. (2019)[60]; Joarder and Miller (2014)[61]; Kiss et al. (2015b)[62]; Le (2014)[63]; Lederer and Wetzel (2014)[64]; Oram et al. (2016)[65]; Pocock et al. (2016)[66]; Stöckl et al. (2017)[67]; and Zimmerman et al. (2008)[68]. The samples of victims of trafficking were drawn from across the world. These were combined, pooled, into a review sample for meta-analysis, to search for the average or central tendency.

Table 2.6.1 presents the findings from the meta-analysis on the prevalence of violence (physical violence, sexual violence and threats) among victims of trafficking, by form of exploitation (sexual, labour, other). Trafficking for the purposes of sexual exploitation was considered by definition to involve sexual violence. The data showed that rates of violence are high among victims of trafficking and vary by form of exploitation.

For further information on this systematic review of scientific literature, see Appendix 2.2.

Table 2.6.1 Prevalence of different types of violence (physical violence, sexual violence, threat) in victims of trafficking by form of exploitation (sexual, labour, other) from review of scientific literature

Form of exploitation	Experienced physical violence (%)	Experienced sexual violence (%)	Experienced threat/coercion (%)
Sexual	68	100	84
Labour	48	30	59
Other	69	67	73

Source: systematic review of scientific literature

The next step was to apply these findings on the experience of violence (physical violence, sexual violence, threats) among those trafficked for different forms of exploitation (sexual, labour, other) to data on the distribution of registered victims by sex (female, male) and age (adult, child). The extent to which victims of different forms of exploitation (sexual, labour, other) were female or male, adults or children was drawn from data on registered victims, reported in the European Commission (2018a) *Data Report*[69]. This information on the sex and age of registered victims (from the European Commission *Data Report*) was combined with the information on the extent to which victims are subject to forms of violence (from the review of scientific literature). The rate of violence (disaggregated by form) discovered in the surveys that were systematically reviewed were applied to the distribution of victims by sex and age discovered in the administrative statistics on registered victims. This is reported in Table 2.6.2.

Certain assumptions are made in combining the data from the two populations of victims of trafficking. It is assumed that there are similarities between victims of trafficking discovered by the scientific surveys and registered victims of trafficking discovered in administrative data. It assumes that the experience of violence in different forms of exploitation is similar in both populations; and that the consequences of this violence for health are similar in both populations.

(60) Gezie, L. D., Worku, A., Kebede, Y., and Gebeyehu, A. (2019) 'Sexual violence at each stage of human trafficking cycle and associated factors: a retrospective cohort study on Ethiopian female returnees via three major trafficking corridors.' *British Medical Journal* Open Access, 9: e024515.

(61) Joarder, M., Munim, A., and Miller, P, W. (2014) 'The Experiences of Migrants Trafficked from Bangladesh', *The ANNALS of the American Academy of Political and Social Science*, 653 (1): 141–161.

(62) Kiss, L., Yun, K., Pocock, N., and Zimmerman, C. (2015a) 'Exploitation, Violence, and Suicide Risk Among Child and Adolescent Survivors of Human Trafficking in the Greater Mekong Subregion', *JAMA Pediatrics*, 169 (9): e152278.

(63) Le, P., (2014) *Human Trafficking and Psychosocial Well-Being: A Mixed-Methods Study of Returned Survivors of Trafficking in Vietnam'* Doctoral Dissertation, UCLA.

(64) Lederer, L. J., and Wetzel, C. A. (2014) 'The Health Consequences of Sex Trafficking and Their Implications for Identifying Victims in Healthcare Facilities', *Annals of Health Law*, 23: 31.

(65) Oram, S., Abas, M., Bick, D., Boyle, A., French, R., Jakobowitz, S,. Khondoker, M., Stanley, N., Trevillion, K., Howard, L.M. and Zimmerman, C. (2016) 'Human trafficking and health: a survey of male and female survivors in England.' *American Journal of Public Health*. 106(6):1073-1078.

(66) Pocock, N. S., Kiss, L., Oram, S., and Zimmerman, C. (2016) 'Labour Trafficking among Men and Boys in the Greater Mekong Subregion: Exploitation, Violence, Occupational Health Risks and Injuries', *PLOS ONE* 11 (12): e0168500

(67) Stöckl, H., Kiss, L., Koehler, J., Thuy Dong, D., and Zimmerman, C. (2017) 'Trafficking of Vietnamese Women and Girls for Marriage in China.' *Global Health Research and Policy*, 2 (1): 28.

(68) Zimmerman, C., Hossain, M., Yun, K., Gajdadziev, V., Guzun, N., Tchomarova, M., Ciarrocchi, R.A., et al. (2008) 'The Health of Trafficked Women: A Survey of Women Entering Posttrafficking Services in Europe.' *American Journal of Public Health*, 98 (1): 55–59.

(69) European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

Table 2.6.2 Prevalence of different types of violence (physical violence, sexual violence, threat) by form of exploitation (sexual, labour, other), by sex (female/male) and by age (adult/child) in registered victims of trafficking

	Experienced physical violence (%)		Experienced sexual violence (%)		Experienced threat/coercion (%)	
	EU-28	EU-27	EU-28	EU-27	EU-28	EU-27
All victims	63	65	76	83	76	78
Form of exploitation						
Sexual	68		100		84	
Labour	48		30		59	
Other	69		67		73	
Sex of victim						
Female	67	67	90	91	80	81
Male	55	59	46	55	65	68
Age of victim						
Adult	63	67	75	85	75	79
Child	63	65	77	82	76	78

Sources: systematic review of scientific literature; European Commission Data Report, Table 3.4.2

The combining of data from these two sources (*Data Report* and the review of scientific literature) enables the application of findings about the experiences of victims of violence (physical, sexual, threat) to victims of trafficking (subject to different forms of exploitation – sexual, labour, other). It allows the application of findings from a range of further data sources about the implications of violence (physical, sexual, threat) for victims to the analysis of victims of trafficking. Drawing on data from multiple sources in this way is important for the Study to overcome the challenge of there being few quantitative studies of the victims of trafficking, in particular the lack of studies on the long-term damage that continues in the years post-trafficking. This methodology allows us to combine data from various sources and apply it to the estimation of the costs of trafficking.

The next step is to estimate the extent to which victims of trafficking (disaggregated by form of exploitation: sexual, labour, other) have greater experience of hurts (disaggregated by: physical violence, sexual violence, threat) than the general population. We use findings from surveys of the general population on the extent to which victims of violence (physical, sexual, threat) suffer hurts to health (physical and mental). We use findings from surveys of the general population on the extent to which those with hurts to health (physical and mental) have increased use of services, lost economic output, and lost quality of life. This is linked back to victims of trafficking (disaggregated by form of exploitation: sexual, labour, other). This is summarised as a 'multiplier', which compares victims of trafficking with the average person in their use of services (health and social protection), lost economic output (wages, GDP per capita), and lost quality of life (QALYs). This is reported in section 6 on health services and social protection, section 7 on lost economic output, and section 8 on lost quality of life. In section 9, this is added up as the extra costs that trafficking produces for society and economy.

2.7 Disaggregation

The EU legal and policy framework is gender specific and child sensitive. The majority of the victims of trafficking consistently have been female (women and girls), the most widespread form of trafficking has been for sexual exploitation, with 95% of the victims being women and girls. The European Commission recognises trafficking in human beings as a form of violence against women. One in four registered victims of trafficking in human beings in the EU is a child trafficked into and within the EU, and often within their own Member State. The Study disaggregates costs by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (adult, child).

The form of exploitation is the most important driver of the variations in costs between victims. This is because prevalence and nature of violence varied by trafficking form, as well as the duration of time trafficked. Information on this is found in the review of scientific literature.

The age of the victim makes a difference to the costs, but data is not always available. The Study investigates the extent to which specific costs for children can be included on a case by case basis for each of the areas of cost. This is different from some studies which add a generic multiplier for the additional costs of children (Reed et al 2018)[70]. See Appendix 2.3 for a discussion of this approach. This Study adopts a more conservative strategy on this issue, adding extra costs only on those occasions where there is data to support it.

2.8 Definitions

The definition of the key terms and concepts is taken where possible from the Anti-trafficking Directive. Definitions of statistical categories are taken where possible from Eurostat and European Commission.

The Study is concerned with the harms of trafficking in human beings. Trafficking is defined in Article 2 of the EU Directive 2011/36/EU on Preventing and Combating Trafficking in Human Beings and Protecting its Victims[71]. It includes three constitutive elements of this crime: acts, means and purpose. The act is linked to the establishment of control over a person; it consists in the recruitment, transportation, transfer, harbouring or reception of persons, including the exchange or transfer of control over them. The means are the way in which control is attained: the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person. The purpose is the exploitation of the trafficked person[72].

Exploitation shall include, as a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, including begging, slavery or practices similar to slavery, servitude, or the exploitation of criminal activities, or the removal of organs. The consent of the victim of trafficking in human beings to the exploitation, whether intended or actual, shall be irrelevant where any of the means set forth has been used.

A position of vulnerability means a situation in which the person concerned has no real or acceptable alternative but to submit to the abuse involved.

In some areas, there is a variety of definitions in the literature. Where we report on other studies, we offer both the definition used in that study and the definition preferred in this Study.

An example of competing definitions is that concerning the definition of the experiences of victims of trafficking for purposes of sexual exploitation. In this Study, it is considered that **all victims of trafficking for sexual exploitation are likely to have been subject to sex or other forms of sexual contact without consent, which may be described as sexual violence.** Some of the studies considered in the systematic review consider that some victims of trafficking for sexual exploitation were not subject to sexual violence. While we report on these studies in their own terms, in our quantitative analysis we consider that victims of trafficking for purposes of sexual exploitation have been subject to sexual violence.

The concept of exposure is widely used in the health field, in the sense that a person may be 'exposed' to something that may cause harm to their physical or mental health. In the violence field, the more usual term is that they experienced, or suffered violence, or the person was a victim or survivor of violence. When the fields are merged, as is the case in this costing study, applying the term 'exposure' (from the field of health) can generate confusion, since in the violence field 'exposure' is a vague term and might imply merely witnessing rather than being a victim of violence. In this study, the term 'exposure' will be used when the discussion concerns evidence generated by the health field. But the main Study will primarily use the vocabulary from the violence field.

In tables, the sign ':' means that data is missing.

(70) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery.* London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf

(71) *Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA.* https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

(72) European Commission (2018e) *Key concepts in a nutshell.* https://ec.europa.eu/anti-trafficking/eu-policy/working-together-to-address-trafficking-in-human-beings-concepts-in-a-nutshell_en

2.9 Sources of data

The data strategy for costing trafficking (and other matters) can be divided into two kinds: top down and bottom up. The top down seeks the total cost of the resource being utilised and the proportion of that cost that is used up by trafficking. The bottom up follows the journey of the victim (or trafficker) and seeks to identify the resources used, then seeks the unit cost of the resources, then aggregates them. Both strategies have challenging data requirements in the field of trafficking in human beings. We investigate the subject from both directions: top down and bottom up. The decision to use one rather than the other depends on the assessment of the quality of the data after it had been obtained. Some of the data that we collected but did not use for quality reasons is reported in the appendices.

In some studies, expert judgement is used where scientific or administrative data is not available. In this study, we seek to substitute scientific and administrative data for popular and expert judgement, wherever possible.

Several sources of data are used: European Commission (2018a) *Data Report*[73]; a systematic review of published scientific literature; original analysis of quantitative data sets; original collection of information across the EU from participants to the EU Civil Society Platform against Trafficking in Human beings, National Rapporteurs and equivalent mechanisms, EU agencies; and information and documents from the European Commission; Global Burden of Disease data, and Eurostat held information. These are summarised in Table 2.9.

Information on the number and distribution of victims of trafficking registered in the EU are obtained from the European Commission *Data Report.* Data from Bulgaria was based on the information that had been provided to the European Commission website by national authorities[74].

The scientific literature on trafficking in human beings that contained quantitative information was systematically reviewed. This was used to provide a profile of the extent to which victims of trafficking suffered physical violence, sexual violence and threats, disaggregated by the form of trafficking. These data are global in scope.

Surveys of populations that share similarities with victims of trafficking were analysed to provide additional information on how harms from physical violence, sexual violence and threats had consequences for use of health and welfare services, for the extent of employment, and for quality of life.

The National Rapporteurs and equivalent mechanisms provided data on the extent of utilisation of specialised services and law enforcement in their Member State and on their costs, via a specially designed questionnaire. EU agencies provided data on the extent of their contribution and its cost, via email and interview.

Eurostat data on services and costs of health, social protection, law enforcement and economic output were obtained from their website and deployed in the analysis.

European Commission documents provided information on funding and benchmarks for key values.

Some further information was obtained from previous studies, bibliographic searches, and from experts appointed to the Study.

(73) European Commission (2018a) *Data collection on trafficking in human beings in the EU.* Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

(74) European Commission Website: *Together Against Trafficking in Human Beings: Member States* https://ec.europa.eu/anti-trafficking/member-states_en

Table 2.9 Sources of data used in the Study

Data	Content	Source
Registered victims	Number and distribution of victims of trafficking in human beings registered in the EU in 2016.	European Commission *Data Report* and Commission website.
Systematic review of published scientific literature	Quantitative information on the extent to which victims of trafficking in human beings suffered physical violence, sexual violence and threats, disaggregated by the form of trafficking. Estimates of the duration adult victims spent in trafficking, by form of exploitation. Global reach.	Databases of scientific literature including EMBASE, MEDLINE, PsycINFO, CINAHL, PILOTS.
Original quantitative analysis of survey datasets	APMS: quantitative information on the long-term mental health and extra usage of health and welfare services generated by exposure to physical and sexual violence and threat/coercion.	Adult Psychiatric Morbidity Survey (APMS)
	CSEW: detailed quantitative information on the physical and emotional hurts experienced by victims of physical and sexual violence and threats in the last year.	Crime Survey for England and Wales (CSEW).
	Protect: specialised data on victims of trafficking.	Provider Responses, Treatment and care for Trafficked people (Protect)
	ALSPAC: longitudinal evidence of trajectory of harms over time.	Avon Longitudinal Study of Parents and Children (ALSPAC)
Original collection of information across the EU	National Rapporteurs and equivalent mechanisms provided data on the extent of utilisation of specialised services and law enforcement and on their costs. EU agencies provided data on the extent of their contribution and its cost. EU Civil Society Platform against Trafficking in human beings provided information on available studies and reports.	National Rapporteurs and equivalent mechanisms via questionnaire, EU agencies via questionnaire, email and interview, EU Civil Society Platform against Trafficking in Human Beings via coordination by European Commission.
Eurostat held information	Quantitative information on EU services and costs of health, social protection, law enforcement and economic output.	Eurostat website.
European Commission Documents	Key benchmark values.	European Commission reports
Other	Specialised research findings, including disability weights (DALY/QALY) produced by the Global Burden of Disease collaboration.	Library; experts.

2.10 Date

The Study is centred on 2016. Where, occasionally, information was unavailable for 2016 and data from other years was used, this is indicated in the report.

The year 2016 is the most recent one for which data on registered victims of trafficking is provided by the European Commission (2018) *Data Report*[75]. There are no adjustments regarding the number of victims in different years, since European Commission (2018)[76] found that there were no discernible trends.

The estimates concern the victims that registered with the authorities in one year. The costs associated with the cohort of victims that register in one year extends beyond that one year, since some of the harms are long-lasting and generate additional costs for many years. The cost per victim includes these costs over their lifetime. In order to report an annual figure, these life-time costs are attributed to the victim in the year of their registration. Some costs occur in one year, while others extend over several years. Co-ordination, law enforcement, and specialised service: costs incurred in one year. Lost economic output, health services and social protection, and reduced quality of life: lifetime costs for victims registered in one year.

(75) European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

(76) European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

Future costs. There are divergent practices as to whether a discount is applied to the value of future costs and benefits. The Global Burden of Disease (Murray et al, 2018)[77] project does not apply a discount, partly on the grounds that these values are real to people in practice and partly on the grounds that the complexity introduced by discounting was detrimental to the overall comprehensibility and thus legitimacy and value of cost-benefit analysis. This Study follows this practice of not discounting since the Study uses values estimated by the GBD project for its estimates for the lost quality of life. A discussion of the various approaches to discounting is presented in Appendix 2. A sensitivity analysis is conducted as to the implications of discounting is offered at relevant places in this report.

2.11 EU-28/27

The findings are for the EU, not Member States.

For some costs, data has been collected at Member State level in order to generate the EU estimates.

Information is provided for both EU-28 and EU-27. The United Kingdom left the European Union on 31 January 2020. The reference period for this study is 2016, while the UK was a Member State. The study therefore includes information on the United Kingdom.

2.12 EU benchmarks

The data are benchmarked against the EU. Data for these purposes are provided by European Commission (2009, 2015a, 2018a)[78]; and Eurostat[79], from their website, with further clarifications by email.

2.13 Approach to data quality and technical adjustments

2.13.1 Introduction

The Study **has generally taken a conservative approach when there are choices in methods and data**. We made decisions based on data quality. When there are alternative methods, we investigated the options. We report on several unused options in the Appendix. We considered a series of technical procedures that have been used to address uncertainty, including confidence intervals and sensitivity analysis. These were applied to specific components of the cost, rather than to the study overall. We considered the approach to the future, and whether to discount.

(77) Murray, C. J. L. et al. (2018) 'Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017', *Lancet*, 392: 1923-94.

(78) European Commission (2009) *Impact Assessment Guidelines*
European Commission (2015a) *Better Regulation: Guidelines and Toolkit*. https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en
European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

(79) Eurostat (2011) *Manual on sources and methods for the compilation of COFOG Statistics*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/5917333/KS-RA-11-013-EN.PDF/2eb9714a-ee4b-49fe-baab-e9af5ca457b1
Eurostat (2013) *European System of Accounts 2010*. Luxembourg: Publications Office of the European Union.
Eurostat (2016a) *European system of integrated social protection statistics – ESSPROS*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/7766647/KS-GQ-16-010-EN-N.pdf/3fe2216e-13b0-4ba1-b84f-a7d5b091235f
Eurostat (2016b) *HEDIC - Health Expenditures by Diseases and Conditions*. Luxembourg: Publications Office of the European Union. doi:10.2785/434142.
Eurostat (2018) *Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments 2018 edition*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec
Eurostat (2019a) *Manual on sources and methods for the compilation of COFOG statistics – Classification of the Functions of Government*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/10142242/KS-GQ-19-010-EN-N.pdf/ed64a194-81db-112b-074b-b7a9eb946c32
Eurostat (2019b) '[Hlth_sha11_hphf] - Expenditure for Selected Health Care Providers by Health Care Financing Schemes.' https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hphf&lang=en.
Eurostat (2019c) '[Tps00173] - Labour Costs Annual Data - NACE Rev. 2 - EUR.' https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00173&plugin=1..

2.13.2 Data quality

Where there was a choice between equivalent approaches, the decision was generally made to cost conservatively. Where data were deemed uncertain in terms of their validity or how representative they were, the decision was generally made to exclude.

We do, however, note the observation of Lopez et al (2006) from the Global Burden of Disease project that "including uncertain results (with quantified uncertainty to the extent possible) is far preferable than leaving blank cells in tables intended to provide policy makers with an overall assessment of the burden of disease in populations." [80]

2.13.3 Uncertainty intervals

Uncertainty is intrinsic to estimates. Uncertainty can arise from measurement error, biases, modelling and extrapolation.

Confidence intervals are provided for those estimates for which they are appropriate. These are reported in the Appendices.

Epidemiological studies report confidence intervals around estimates, to heed uncertainty introduced by sampling error, as noted by Lopez et al from the GBD[81]. Estimates in the costing of trafficking are subject to a wide range of uncertainty because they draw on multiple data sources and methodological choices.

2.13.4 Discounting

Discounting is a practice through which the present is systematically valued more than the future, by reducing the value of the future year by year by a given percentage. This is a controversial practice. The Global Burden of Disease project rejects discounting. Some orthodox economists apply it routinely.

Lopez *et al.* note that some have argued 'that discounting should not be applied to future health gains or losses because health is not commensurable with money and cannot be reinvested elsewhere.' In particular, that epidemiologists and demographers, who tend to focus on measuring or estimating years of life or health without "valuing" either, rarely use discounting. Since 2010, the GBD project no longer applies discounts.[82] Earlier estimates which had included discounting 'sparked substantial controversy... Discounting counted years of healthy life saved in the present as more valuable than years of life saved in the future. Also controversial was the use of expert judgment to estimate disability weights (estimations of the severity of non-fatal conditions). As a result of this feedback and consultation with a network of philosophers, ethicists, and economists, GBD no longer uses age weighting and discounting. Also, GBD 2010 updated its methods for determining disability weights and used data gathered from thousands of respondents from different countries around the world.'

This Study does not apply discounting, preferring to leave decisions as to the relative value of the future and the present to policy makers, and following the practices of the GBD on which we draw. However, we offer a sensitivity analysis to show the effects on key estimates.

2.13.5 Sensitivity analysis

Alongside uncertainty analysis (which seek to quantify the limitations of available data), sensitivity analysis examines how outputs vary when input quantities are systematically varied. These include considering the impact of costing design decisions, such as whether to discount, the choice of 'Value of a Life Year' (VOLY), and assumptions about the nature of trafficking (for example, whether it necessarily always involves threat). Where such decisions have

(80) Lopez, A. D., Mathers, C. D., Ezzati, M., Jamison, D. T. and Murray, C. J. L. (2006) *Global Burden of Disease and Risk Factors Washington (DC): The International Bank for Reconstruction and Development / The World Bank*; New York: Oxford University Press; 2006

(81) Lopez, A. D., Mathers, C. D., Ezzati, M., Jamison, D. T. and Murray, C. J. L. (2006) *Global Burden of Disease and Risk Factors Washington (DC): The International Bank for Reconstruction and Development / The World Bank*; New York: Oxford University Press; 2006

(82) Institute for Health Metrics and Evaluation (2013) *The Global Burden of Disease: Generating Evidence*, Guiding Policy. Seattle, WA: IHME. https://www.healthdata.org/sites/default/files/files/policy_report/2013/GBD_GeneratingEvidence/IHME_GBD_GeneratingEvidence_FullReport.pdf

been made, the impact of those decisions have been tested through costing alternative options and comparing the results. These are reported for key decisions in the Appendices.

Many choices had to made to produce a cost of trafficking in human beings. In Appendices Section 2.7 a series of sensitivity analyses are presented which investigate the impact of particular design choices on costs. They show that while there is a lot of uncertainty, most choices made were conservative. Mostly, the impact of having made a different (also defensible) decision would have been to increase the estimated costs. Approaches that would have meant an increase in costs include: assuming that all trafficking victims experience threat or coercion; that victims experienced physical injuries more than once; using higher disability weights; using an estimate of the number of trafficking victims that included the unregistered; applying a child multiplier more often or a higher child multiplier; including costs for more than one year; and applying inflation. Design and adjustment choices that would have meant a decrease in costs included counting the costs of experiencing just one type of violence and discounting. Other sensitivity analyses in Appendices Section 2.7 consider the uncertainty around estimates by presenting a range in costs.

3 Coordination and prevention

3.1 What is coordination and prevention?

Coordination, prevention and improving knowledge make interventions more effective, assisting the development of coherence, in which the activities of multiple bodies can contribute to wider goals. The 2017 Communication stipulates that prevention is a cornerstone of EU anti-trafficking action and sets out key actions, including intensify coordination within and outside the EU, including with national authorities, EU agencies, civil society, non-EU countries and all other relevant organisations and bodies. Coordination and prevention are Commission priorities, including via European Commission funded projects, with EU agencies (Justice and Home Affairs and Eurofound) and National Rapporteurs and equivalent mechanisms. Both the EU level and Member States level entities mobilise resources for these tasks.

Coordination of activities makes them more coherent and enables cooperation among multiple bodies. One of the five priorities of the 2012-2016 EU Strategy is 'coherence and coordination: enhanced coordination and cooperation among key actors and policy coherence'[83]. Coordination concerns the several entities involved in developing and implementing policy at multiple levels and sites. EU level include the European Commission itself, and other EU institutions, including the European Parliament and the Council, the ten European Union Agencies. It includes based on the EU Anti-trafficking Directive the coordination of the Union strategy against trafficking in human beings. There are National Rapporteurs and equivalent mechanisms (NREM), which are coordinated in an EU Network. All Member States have appointed National Rapporteurs and equivalent mechanisms (NREMs) as required by the EU Anti-trafficking Directive (Article 19). The EU Network of NREMs was established following the Council Conclusions in June 2009. The tasks of such mechanisms include the carrying out of assessments of trends in trafficking in human beings, the measuring of results of anti-trafficking actions, including the gathering of statistics in close cooperation with relevant civil society organisations active in this field, and reporting.[84] As a key action of the 2012-2016 EU Strategy, an EU Civil Society Platform against Trafficking in Human Beings was launched in 2013, bringing together around 100 participant CSOs from the EU and selected non-EU Member States.[85] In some Member States, there are various further governmental, non-governmental organisations and international organisations.

The prevention of trafficking in human beings is a key goal of the EU Anti-trafficking Directive, in addition to improving the protection of victims and prosecution of perpetrators. The 2012-2016 EU Strategy towards the eradication of

(83) European Commission (2012) *The EU Strategy towards the Eradication of Trafficking in Human Beings 2012–2016.* Brussels: EC. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0286&from=EN

(84) European Union Network of National Rapporteurs and equivalent mechanisms on Trafficking in Human Beings. https://ec.europa.eu/anti-trafficking/national-rapporteurs-andor-equivalent-mechanisms_en

(85) European Union Civil Society Platform and ePlatform against trafficking in human beings. https://ec.europa.eu/anti-trafficking/media-outreach-els/eu-civil-society-e-platform_en

trafficking in human beings included activities to coordinate efforts, raise awareness, train relevant professionals and improve knowledge in order to prevent trafficking. Prevention includes 'understanding and reducing demand' and 'awareness raising activities' and training. Prevention includes activities that are not directly concerned with assisting existing victims and pursuing the prosecution of traffickers. It concerns activities that intervene in the 'trafficking chain'[86] at multiple earlier stages. According to the European Commission`s "User report"[87] (2016) "demand encompasses all those individuals, groups or legal persons, that are driven by the objective of exploiting victims in order to make a profit on many levels, those who directly use and abuse the victims, as well as those who act as promoters or facilitators and generally those who create and contribute to creating an enabling environment for this. Businesses using trafficking victims and taking profits from trafficking are not restricted to criminal organisations and trafficking often involves a chain of legitimate businesses. Profit-takers range from relatives of victims, to informal or formal recruitment agencies, labour market intermediaries supplying labour in specific sectors or sub-contractors in global supply chains, as well as travel agencies and transport enterprises, as well as information and communication technologies companies. Another source of demand is consumers, who may be individuals purchasing products manufactured by victims but with no knowledge of how they have been produced, or knowing users of victims of trafficking, who ignore obvious signs of trafficking and labour/sexual exploitation, such as very low prices or signs of violence and intimidation."

Improving knowledge is a further strategic priority for the EU[88]. This includes developing the routine system for data collection and improving knowledge on the changing configuration of the multiple dimensions of trafficking.

The European Commission each year funds projects to support its work to prevent trafficking in human beings. Between 2004 and 2015, 321 projects were funded (see European Commission 2016 *Comprehensive Policy Review of Anti-Trafficking Projects funded by the European Commission*)[89]. Some projects have been to assist countries around the world to develop their own systems to combat trafficking, including criminal justice, assistance to victims, and coordination. Other projects focus on developing specific aspects of EU policy and practice. Ensuring that funding matches EU anti-trafficking objectives is a cross-cutting priority of the 2017 Commission Communication.

EU agencies are distinct bodies from the EU institutions – separate legal entities set up to perform specific tasks under EU law[90]. There are ten EU Agencies that are committed to work together addressing trafficking in human beings and cooperate in the coordination framework to prevent trafficking, assist victims and bring offenders to justice. In Home Affairs, these are: Europol, Eurojust, Frontex, CEPOL, EASO, euI-LISA, ECMCDDA. EIGE, and FRA. A further agency is Eurofound. The head of these 10 EU agencies signed a joint commitment to cooperate in anti-trafficking work[91].

3.2 Data sources and methods

Data on expenditure was found for the European Commission's funded projects, the activities of the EU Agencies, and the National Rapporteurs and equivalent mechanisms.

Data on the extent and distribution of spending by the European Commission on projects, 2004-2015 was obtained from the *Comprehensive Review* in 2016 (European Commission 2016)[92], which reported on this Commission

(86) Walby, S. et al. (2021*) Trafficking Chains* Bristol: Policy Press.

(87) European Commission (2016h) *Report From The Commission To The European Parliament And The Council assessing the impact of existing national law, establishing as a criminal offence the use of services which are the objects of exploitation of trafficking in human beings, on the prevention of trafficking in human beings, in accordance with Article 23 (2) of the Directive 2011/36/EU.* https://ec.europa.eu/anti-trafficking/sites/antitrafficking/files/report_on_impact_of_national_legislation_related_to_thb_en.pdf

(88) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf

(89) European Commission (2016e) *Study on comprehensive policy review of anti-trafficking projects funded by the European Commission HOME/2014/ISFP/PR/THBX/0052*. https://ec.europa.eu/anti-trafficking/sites/antitrafficking/files/study_on_comprehensive_policy_review.pdf

(90) European Commission Website: *Agencies and other bodies*. https://europa.eu/european-union/about-eu/agencies_en

(91) European Commission (2018d) Joint statement of commitment to working together against trafficking in human beings. https://ec.europa.eu/anti-trafficking/sites/antitrafficking/files/eu_agencies_joint_statement_of_commitment_to_working_together_to_address_thb_.pdf

(92) European Commission (2016e) *Study on comprehensive policy review of anti-trafficking projects funded by the European Commission* HOME/2014/ISFP/PR/THBX/0052. https://ec.europa.eu/anti-trafficking/sites/antitrafficking/files/study_on_comprehensive_policy_review.pdf

spending in relation to the five major aspects of the 2012-2016 EU Strategy. Further data has been made available by the Commission to the Study team on recent funding on projects via DG HOME funding instruments. The expenditure for 2016 is generated from materials from the Commission. See Section 3.3 and Table 3.3 and in Appendix 3.1 and Tables A3.1.1 .

Information on the resources used by EU Agencies was obtained from websites, by email, interview and by questionnaires. These later concerned their activities against trafficking in human beings and resources allocated in this context, including trips for meetings, operational and funding support, conferences and trainings, salaries of staff working on trafficking in human beings or an estimate on those. See Section 3.4, Tables 3.4.1 and 3.4.2; and also Appendix 3.2, Table A3.2.

Information on the National Rapporteurs and equivalent mechanisms was obtained by a questionnaire addressed to them via the European Commission with regard to their budget for 2016 or if that was not feasible an estimate on resources (such as salary of staff employed per year, usual mission costs per year, trips for meetings, operational support, conferences and trainings). See Section 3.5 and Table 3.5. The information on the additional activities of Member States was not robust enough to include in the estimates.

3.3 European Commission projects

European Commission expenditure on DG Home Affairs funded (Internal Security Fund-Police and Asylum, Migration and Integration Fund) projects, concerning both national programmes and Union grants, relevant to trafficking in 2016 was EUR 13 561 231 (see Table 3.3). These projects were relevant to trafficking, but some were not exclusively concerned with this issue and addressed trafficking related issues in a range of contexts.

Table 3.3 European Commission spending on projects related to trafficking in human beings, EUR

Year	European Commission spending on projects
2016	13 561 231

Sources: data extracted and summed up from European Commission documents

3.4 EU agencies

Ten EU Agencies work together against trafficking in human beings. These are 9 JHA Agencies plus Eurofound (see Table 3.4.1).

The estimated expenditure by these EU Agencies on anti-trafficking activities was EUR 2 514 402 (see Table 3.4.2). Although information is sought for the year 2016, sometimes the data is a different year within the period 2014-2019. This information was obtained from their websites and published reports, by emailed requests to the Agencies for data.

Table 3.4.1 EU agencies – selected activities with relevance for cost calculations

EU Agency	Activities
EU Law Enforcement Agency	Europol's mission is to support its Member States in preventing and combating all forms of serious international and organised crime, including Trafficking in Human Beings. Europol's vision is to ensure an effective EU response to crime in the EU, by acting as the principal information hub, delivering agile operational support and providing European policing solutions in conjunction with our network of partners. Specifically, Analysis Project (AP) Phoenix is Europol's operational project dealing with trafficking in human beings within the European Serious Organised Crime Centre. AP Phoenix is specifically mandated to support competent authorities of the EU Member States, as well as EU bodies and associated non-EU countries and international organisations, in preventing and combating all forms of exploitation, including sexual and labour exploitation, forced criminality, forced begging, forced marriages, child trafficking and human organ trafficking.
EU Agency for Criminal Justice Cooperation	Eurojust's role of the is to combat organised crime involving more than one EU country by; coordinating investigations and prosecutions, resolve conflicts of jurisdiction, facilitating EU legal instruments such as European Arrest Warrants. They co-ordinate meetings, provide funding and expert input into joint investigation teams. Their budget includes funding of Joint Investigation Teams to pursue trafficking in human beings across national borders.
European Border and Coast Guard Agency	Frontex, the European Border and Coast Guard Agency, trains border guards across Europe on how to detect potential victims of trafficking and refer them to national authorities. The agency also organises operations targeting this crime. Frontex produced a guide on how to identify and interview vulnerable children at borders. They attend and hold regular meetings, joint action days, awareness sessions, training events, workshops, seminars and conferences on trafficking in human beings.
European Agency for Law Enforcement	CEPOL conducted trainings and webinars related to the following aspects of trafficking in human beings; "child trafficking"; "financial investigations"; "multidisciplinary approaches"; "labour exploitation"; "document fraud" and "intelligence". In addition, they incurred mission costs.
European Asylum Support Office	EASO fosters convergence on THB and international protection among MS authorities and enhance cooperation with CSO organisations through practical cooperation, including common training, practical tools and common country of origin information.
	Practical cooperation activities are conducted in the framework of the EASO Vulnerability Experts Network. A training module has been developed and sessions are regularly delivered. EASO gathers country of origin information on THB where trafficking networks are known to be very active. EASO conducts activities in neighbouring countries and beyond as part of the external dimension activities of the Agency. It also has launched communication campaigns and other activities for the provision of information.
European Union Large Scale IT Systems for Freedom, Security and Justice	EU-LISA highlights tackling the trafficking in human beings in its current strategy. The Agency is currently responsible for the operational management of several Large-Scale IT Systems (namely SIS II, VIS and Eurodac), for the development of new Large-Scale IT Systems (EES, ETIAS, ECRIS-TCN) and of the new information architecture for border management and internal security, which will add additional tools and safeguards against human trafficking and identity theft.
	Eu-LISA is also responsible for collecting statistics and preparing annual Reports, that are essential to define trends, support further analytical work and facilitate a well-informed decision-making process.
	They engage in several ongoing activities with other European Agencies, such as CEPOL, Europol, FRONTEX and EASO, which have an impact on Trafficking in Human Beings.
European Monitoring Centre for Drugs and Drug Addiction	EMCDDA produce editions of the European Drug Markets Report, which also explores the links between drug trafficking and trafficking in human beings. To address knowledge gaps identified during the analysis, a researcher has been commissioned to examine the extent and nature of these links.
European Institute on Gender Equality	EIGE produced a comprehensive report on "Gender-specific measures in anti-trafficking actions". EIGE staff attend meetings on THB and working days were spent by staff in preparation for this.
European Foundation for the improvement of living and working conditions	EUROFOUND produced a report on "Regulation of labour market intermediaries and the role of social partners in preventing trafficking of labour".
Fundamental Rights Agency	FRA spends on Missions, including training missions, on research and publications, on Conferences and on Salary costs in relation to trafficking in human beings.

Source: EU agencies websites and email communication

Table 3.4.2 EU home affairs agencies, estimated spending on coordination and prevention, EUR

EU Agency	Spending
Total spend by EU agencies	**2 514 402**
Europol	1 166 793
Eurojust	210 000
Frontex	215 500
CEPOL	150 234
EASO	268 925
EU-LISA	:
EMCDDA	73 850
EIGE	64 100
EUROFOUND	60 000
FRA	305 000

Sources: EU agencies published reports (including Eurojust 2016, EIGE 2016), websites, email communication and questionnaire

3.5 National Rapporteurs and equivalent mechanisms

The Member State level costs of the National Rapporteurs and equivalent mechanisms is estimated at EUR 8 281 111 for EU-28 and EUR 7 595 193 for EU-27. See Table 3.5. Data were provided by National Rapporteurs and equivalent mechanisms in 17 Member States, and estimated for the EU. The estimates for the EU and per victim are an average from these 17 Member States weighted by the extent to which that Member States had registered victims.

Table 3.5 Cost of National Rapporteurs and equivalent mechanisms, EUR

EU Member State	Cost of NREMs	Number of registered victims	Cost per victim
EU-28	8 281 111	11 832	700
EU-27	7 595 193	8 027	946

Source: National Rapporteurs and equivalent mechanisms questionnaire

3.6 Summary of costs of coordination and prevention

The cost for coordination and prevention of trafficking in human beings was EUR 24 356 744 for EU-28 (EUR 23 670 826 for EU-27). See Table 3.6.1. These are the costs for: European Commission funded projects; EU Agencies spending on trafficking; and National Rapporteurs and equivalent mechanisms in Member States. These are expenditures at both Member States and the EU level. On average, per victim, this is EUR 2 059 for EU-28 (EUR 2 949 for EU-27). The cost per victim was obtained by dividing the total expenditure by the number of registered victims (EU-28: 11 832; EU-27: 8 027).

Table 3.6.1 Cost of coordination and prevention, by type of expenditure, per victim, for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	2 059	24 356 744	2 949	23 670 826
European Commission Funded Projects	1 146	13 561 231	1 689	13 561 231
10 EU agencies who signed the joint statement of commitment working together against trafficking in human beings	213	2 514 402	313	2 514 402
National Rapporteurs and equivalent mechanisms	700	8 281 111	946	7 595 193

Source: NREM questionnaire and data provided by European Commission

The cost of coordination and prevention can be attributed to the different forms of exploitation, form of exploitation (sexual, labour, other), sex of victim (female, male), and age of victim (adult, child), as shown in Table 3.6.2. This distribution of costs simply follows the number of registered victims in each category and so the average cost per victim is estimated to be the same for each category.

Table 3.6.2 Cost of coordination and prevention, per victim, for EU-28/27, by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (child, adult), EUR

	EU-28		EU-27	
	Per victim average	Total	Per victim average	Total
Total cost	2 059	24 356 744	2 949	23 670 826
Form of exploitation				
Sexual	2 059	13 639 777	2 949	15 149 329
Labour	2 059	6 089 186	2 949	3 313 916
Other	2 059	4 627 781	2 949	5 207 582
Sex of victim				
Female	2 059	16 806 153	2 949	18 226 536
Male	2 059	7 550 591	2 949	5 444 290
Age of victim				
Child	2 059	5 602 051	2 949	4 734 165
Adult	2 059	18 754 693	2 949	18 936 661

4 Law enforcement

4.1 What law enforcement services?

Law enforcement includes the activities of the criminal justice system and the non-criminal civil legal system regulation.

Trafficking in human beings is a complex crime, which is penalised by Member States bound by the Anti-trafficking Directive[93] that has been transposed into domestic legislation. For the purposes of this study, the criminal justice system is composed of police, prosecution, and courts. The effective prosecution and sanctioning of traffickers that potentially reduces their impunity and reduces trafficking is the purpose of Criminal Justice Service (CJS) activity in this context. The identification of who is criminally liable, in the context of trafficking chains where not all beneficiaries are knowingly behaving illegally, adds further complexity. In some instances, it might appear that the same action is more likely to be treated as a crime to be pursued by the criminal justice system in some Member States than in others. The work of the police involves interviewing victims, identifying suspects, gathering evidence, and putting a case together to hand over to prosecutors. The work of the police is challenging since trafficking can be a form of organised crime involving several actors in a complex web of activities. The cross-border component of some instances of trafficking adds further challenges due to the apparently greater mobility of offenders than agents of law enforcement over national boundaries. The work of the prosecutors and courts is also complex, since cases can involve multiple victims and multiple perpetrators across multiple legal jurisdictions. In order to address trafficking cases that cross borders, there are sometimes specialised Joint Investigation Teams between national authorities, supported and funded by Europol and Eurojust. Effectiveness in holding traffickers to account and bringing them to justice is increased where there is greater harmonisation in legal instruments and greater coordination of the multiple actors in the criminal justice system to produce a coherent response to this transnational crime. Trafficking is a priority

(93) European Commission (2016b) *Assessing the extent to which Member States have taken the necessary measures in order to comply with Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims in accordance with Article 23 (1).* https://ec.europa.eu/anti-trafficking/sites/antitrafficking/files/report_on_member_states_compliance_with_directive_2011-36_en.pdf

crime area in the EU Policy Cycle for organised and serious international crime for the period of 2018-2021[94]. Trafficking in human beings has links with other crimes.[95]

The civil legal system/regulation is here taken to mean all the non-criminal forms of regulation of the activities relevant to trafficking in human beings. In some Member States, much of this is described as 'administrative' law. Many of these activities might be regarded as 'preventive' in the sense that they seek to create an environment that reduces the risk of trafficking occurring. The regulatory activities include the work of: licensing premises for risky activities, labour inspectors, health and safety inspectors, zoning laws. It includes the work of public officials who are variously accountable at local, city, regional, or national, EU or international levels.

The expenditure of the European agencies supporting national law enforcement efforts, includes as Europol (EU police coordination), Eurojust (coordination of judges and judicial processes), and Cepol (training of police).

4.2 Data sources and methods

The costs of the Law Enforcement were estimated using several methods.

The Study offers an **estimate of the cost of law enforcement based on an estimate of the cost of the criminal justice system for trafficking in human beings using data provided by National Rapporteurs and equivalent mechanisms in a questionnaire**. The questionnaire was devised by the research team and sent by the European Commission to the National Rapporteurs and equivalent mechanisms in each of the EU Member States. The responses were sent to the Commission and forwarded to the Study team for analysis. This may be referred to as a 'bottom up' method, since the data concerns detailed costs for units of activity, which are then aggregated. National Rapporteurs and equivalent mechanisms provided data via a questionnaire about the costs per day and the number of days used per trafficking case by the police, by prosecutors and by courts. The 'case' is the unit for which costs were requested. For the police this is the same as the number of victims registered with the authorities, for the prosecutors, this is the number of prosecutions, for the courts, this is the number of court judgments. These costs are reported in Section 4.3 and Tables 4.3.2, 4.3.3 and 4.3.4.

A robust estimate of the cost of civil legal expenditure in the EU was not possible from the existing data (See Appendix 4.3).

The expenditure of the European agencies involved, including Europol, Eurojust, and Cepol, are included in Section 3 on coordination, rather than this section on law enforcement.

The cost for law enforcement is an underestimate because of its limitation to the cost of criminal justice only. If it had been possible to include the cost of the civil legal system, it would have been higher.

4.3 Criminal justice system

4.3.1 Introduction

The costs of law enforcement were estimated using the responses of National Rapporteurs and equivalent mechanisms to a questionnaire. The data concerned for the number of days the relevant CJS professionals (police, prosecutors, judiciary) spent on 'a case' and the cost per day for this. Nine Member States (Belgium, Spain, France, Cyprus, Hungary, Austria, Portugal, Slovakia and the UK) provided the full set of data on the police, three Member

(94) European Union Policy Cycle – EMPACT https://www.europol.europa.eu/empact

(95) See, the European Commission's Second Progress report and its accompanying Staff Working documents describing links with drug trafficking, document fraud, currency falsification, property crimes, migrant smuggling, arms and illegal tobacco trafficking (European Commission (2018b) *Second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_com-2018-777-report_en.pdf;
European Commission (2018c) *Accompanying document to the second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_swd-2018-473-commission-staff-working-document_en.pdf

States (Cyprus, Lithuania and the UK) provided full data on prosecution, and three Member States (Cyprus, Romania, Spain) provided full data on courts. In other cases, partial or no data were provided (see Appendix A4.1 for detail on the data provided). Averages were produced for the EU-28/27 using the available data, weighted so that it reflects the number of victims in the countries reporting data.

4.3.2 Police

The data on the cost of a police investigation were an average cost per day and the average number of days a police officer worked on a case (utilising a 220-day working year). Nine Member States provided data.

For each of the Member States that provided data, an average cost per case was calculated, then a cost for that Member State that took into account the number of registered victims in that country in 2016. The cost per case was the cost per day multiplied by the number of days. The cost for that Member State was the cost per case multiplied by the number of cases. For the police, the number of cases was taken to be the same as the number of registered victims.

An average cost per case in EU-27 was calculated by adding together the total costs of police for the eight EU-27 Member States providing data and dividing the total by the number of registered victims in those Member States that provided data. **This produced a cost per victim of EUR 77 711 for EU-27.** The cost per victim was multiplied by the number of registered victims in EU-27 to produce a total cost of police for EU-27 of EUR 623 789 396.

The UK cost of police (EUR 215 636 960) was added to the EU-27 total to produce a cost of police for EU-28 of EUR 839 426 356. **The total was divided by the number of registered victims in EU-28 (11 832) to produce a cost per victim of EUR 70 945 for EU-28.**

Table 4.3.2 Cost of police

EU Member State	Cost per victim (EUR)	Number of registered victims	Cost of police (EUR)
EU-28	70 945	11 832	839 426 356
EU-27	77 711	8 027	623 789 396

Sources: column 2 National Rapporteurs and equivalent mechanisms; column 3 Data Report Table 3.2.2; column 4, our calculations.

4.3.3 Prosecution

The data on the cost of a prosecution were an average cost per day and the average number of days a prosecutor spends on a case (utilising a 220-day working year). Three Member States provided data.

For each of the Member States that provided data, an average cost per case was calculated, then a cost for that Member State that took into account the number of registered victims in that country in 2016. The cost per case was the cost per day multiplied by the number of days. The cost for that Member State was the cost per case multiplied by the number of cases. For prosecutions, the number of cases was the number of prosecutions.

An average cost per case in EU-27 was calculated by adding together the total costs of prosecutions for the two EU-27 Member States providing data and dividing the total by the number of prosecutions in those Member States that provided data. This produced a cost per prosecution for EU-27 of EUR 56 379 for EU-27. The cost per prosecution was multiplied by the number of prosecutions in EU-27 (2 735) to produce a total cost of prosecutions for EU-27 of EUR 154 196 901. **The total cost of prosecutions was divided by the number of registered victims in EU-27 (8 027) to produce a cost per victim of EUR 56 379 for EU-27.**

The UK cost of prosecutions (EUR 38 517 104) was added to the EU-27 total to produce a cost of prosecutions for EU-28 of EUR 192 714 005. **The total cost of prosecutions was divided by the number of registered victims (11 832) to produce a cost per victim of EUR 66 752 for EU-28.**

Table 4.3.3 Prosecution costs

EU Member State	Cost per prosecution (EUR)	Cost per Victim (EUR)	Number of registered victims	Number of prosecutions	Cost of prosecutions (EUR)
EU-28	66 752	16 288	11 832	2 887	192 714 005
EU-27	56 379	19 210	8 027	2 735	154 196 901

Sources: column 1 National Rapporteurs and equivalent mechanisms; column 4 Data Report Table 3.2.2; column 5 Data Report Table 4.2.3 and Table 5.2.; columns 3, 6, our calculations.

4.3.4 Courts

The data on the cost of a conviction were an average cost per day and the average number of days a court would spend on a trafficking case (utilising a 220-day working year). Three Member States provided data.

For each of the Member States that provided data, an average cost per case was calculated, then a cost for that Member State that took into account the number of registered victims in that country in 2016. The cost per case was the cost per day multiplied by the number of days. The cost for that Member State was the cost per case multiplied by the number of cases. For courts, the number of cases was the number of convictions.

An average cost per case in EU-27 was calculated by adding together the total costs of courts for the three EU-27 Member States providing data and dividing the total by the number of convictions in those Member States that provided data. This produced a cost per conviction for EU-27 of EUR 52 838. The cost per conviction was multiplied by the number of convictions in EU-27 (1 353) to produce a total cost of courts for EU-27 of EUR 71 490 256. **The total cost of courts was divided by the number of registered victims (8 027) to produce a cost per victim of EUR 8 906 for EU-27.**

As court costs were not available for the UK, the cost per conviction was EUR 52 838 for EU-28 and EU-27. The cost per conviction was multiplied by the number of convictions for EU-28 (1 357) to produce a total cost of courts for EU-28 of EUR 71 701 610. **The total cost of courts was divided by the number of registered victims (11 832) to produce a cost per victim of EUR 6 060 for EU-28.**

Table 4.3.4 Court costs

EU Member State	Cost per conviction (EUR)	Cost per victim (EUR)	Number of registered victims	Number of court judgments	Number of convictions	Cost of courts (EUR)
EU-28	52 838	6 060	11 832	1 697	1 357	71 701 610
EU-27	52 838	8 906	8 027	1 601	1 353	71 490 256

Sources: column 1 National Rapporteurs and equivalent mechanisms; column 4 Data Report Table 3.2.2; column 5 Data Report Table 4.2.6; column 6 Data Report Table 4.2.5; columns 3, 7, our calculations.

4.4 Summary of costs of law enforcement

The cost of law enforcement for trafficking in human beings was EUR 1 103 841 971 for EU-28 (EUR 849 476 554 for EU-27). See Table 4.4.1.

The cost per victim for EU-28 for police is EUR 70 945 (EUR 77 711 for EU-27), for prosecution is EUR 16 288 (EUR 19 210 for EU-27), and for courts is EUR 6 060 (EUR 8 906 for EU-27).

The costs are disaggregated by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (adult, child). See Table 4.4.2. These costs are proportionate to the number of registered victims in each category since the cost per victim is the same in each category (see European Commission *Data Report*).

Table 4.4.1 Criminal justice system (police, prosecution, court) costs, per victim and for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	93 293	1 103 841 971	105 827	849 476 554
Police	70 945	839 426 356	77 711	623 789 396
Prosecution	16 288	192 714 005	19 210	154 196 901
Court	6 060	71 701 610	8 906	71 490 256

Source: National Rapporteurs and equivalent mechanisms; European Commission Data Report

Table 4.4.2 Cost of law enforcement per victim and for EU-28/27, by form of exploitation (sexual, labour, other), sex of victim (female, male), and age of victim (child, adult), EUR

	EU-28		EU-27	
	Per victim average	Total	Per victim average	Total
Total	93 293	1 103 841 971	105 827	849 476 554
Form of exploitation				
Sexual	93 293	618 151 504	105 827	543 664 994
Labour	93 293	275 960 493	105 827	118 926 718
Other	93 293	209 729 974	105 827	186 884 842
Sex of victim				
Female	93 293	761 650 960	105 827	654 096 946
Male	93 293	342 191 011	105 827	195 379 607
Age of victim				
Child	93 293	253 883 653	105 827	169 895 311
Adult	93 293	849 958 318	105 827	679 581 243

5 Specialised services

5.1 What specialised services?

Victims of trafficking receive specialised services. This includes somewhere to stay and services to help them recuperate. These services to which they are legally entitled under the Directive[96], are organised at the level of Member States. The Anti-Trafficking Directive Article 11, paragraph 5, requires Member States to provide victims of trafficking with support "at least standards of living capable of ensuring victims' subsistence through measures such as the provision of appropriate and safe accommodation and material assistance, as well as necessary medical treatment including psychological assistance, counselling and information, and translation and interpretation services where appropriate". The kinds of assistance include: "Accommodation, Medical and Psychological Assistance, Legal Assistance, Education, Training (vocational and business), Job placement, (re)integration Assistance, Return Assistance and Others". Children should receive additional services, Article 14, including "access to education" and a guardian where parents are not available to ensure the child's best interests[97].

(96) See Articles 11-16 of *Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA*. https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

(97) *Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA*. https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

The EU legal and policy framework is victim centred, gender specific, child sensitive and anchored in human rights. Providing access to services for victims of trafficking is an EU priority identified in the 2017 Commission Communication. There are formal and informal referral mechanisms to assist victims to access appropriate assistance

These specialised services are provided for varying durations. There is a minimum number of days under the Council of Europe Convention[98], for which victims should be offered assistance, which most EU Member States exceed.

5.2 Data sources and methods

Several sources of data on expenditure on specialised services were investigated. This included: a questionnaire to National Rapporteurs and equivalent mechanisms as to expenditure on specialised services, and national tenders to commission such services, engagement with the European Union Civil Society Platform against Trafficking in human beings[99]; the European Commission *Data Report*[100], a review of the reports of the Council of Europe Group of Experts on Action against Trafficking in Human Beings[101], a search and review of other literature[102], and interviews and engagement with relevant European experts actors including WAVE[103]. Although there is much concern with the services offered to the victims, and much qualitative information from many ad hoc studies, these data were rarely available in a comparable quantitative form across Member States.

The questionnaire answered by the National Rapporteurs and equivalent mechanisms delivered the most relevant and comparable data, so this is the source of the estimates below. The questionnaire was devised by the research team and sent by the European Commission to the National Rapporteurs and equivalent mechanisms in each of the EU Member States. The responses were sent to the European Commission and forwarded to the Study team for analysis. Around half Member States provided data. This is presented in Section 5.3 and Table 5.3 below.

Information on the coordination of these services is presented in Section 3 on coordination.

5.3 Accommodation and associated specialised services

Data on the cost of the accommodation and some additional services were provided by National Rapporteurs and equivalent mechanisms in 14 out of 28 Member States. This is a cost per day and the number of days that these services are used. In instances where the National Rapporteur or equivalent mechanisms provided more detailed

(98) Council of Europe, Group of Experts on Action against Trafficking in Human Beings (GRETA) *Country Monitoring Reports for all EU-28 Member States*. https://www.coe.int/en/web/anti-human-trafficking/country-monitoring-work

(99) European Commission Website: *Together Against Trafficking in Human Beings: Member States* https://ec.europa.eu/anti-trafficking/member-states_en

(100) European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

(101) Council of Europe, Group of Experts on Action against Trafficking in Human Beings (GRETA) *Country Monitoring Reports for all EU-28 Member States* https://www.coe.int/en/web/anti-human-trafficking/country-monitoring-work

(102) European Institute for Gender Equality (EIGE) (2012) *Review of the Implementation of the Beijing Platform for Action in the European Member States: Violence against Women – Victim Support*. European Institute for Gender Equality: Vilnius. https://eige.europa.eu/publications/effectiveness-institutional-mechanisms-advancement-gender-equality-report
European Institute for Gender Equality (EIGE) (2018): *Gender-specific measures in anti-trafficking actions*. https://eige.europa.eu/publications/gender-specific-measures-anti-trafficking-actions-report
European Union Agency for Fundamental Rights (FRA) (2019a) *Children deprived of parental care found in an EU member state other than their own: A guide to enhance child protection focusing on victims of trafficking* https://fra.europa.eu/sites/default/files/fra_uploads/fra-2019-children-deprived-of-parental-care_en.pdf
Women Against Violence Europe (2018) *Country Report 2017. The Situation of Women's Specialist Support Services in Europe*. http://fileserver.wave-network.org/researchreports/WAVE_CR_2017_180702_web.pdf
US Department of State (2019) *Trafficking in Persons Report 2019*. US Department of State, Washington. https://www.state.gov/wp-content/uploads/2019/06/2019-Trafficking-in-Persons-Report.pdf
Lietonen, A., and Ollus, N.,(2017) *The costs of assisting victims of trafficking in human beings: a pilot study of services provided in Latvia, Estonia and Lithuania*. European Institute for Crime Prevention and Control
Lee Maass K., Trapp, A. C., Konrad, R., (2019) 'Optimizing placement of residential shelters for Human Trafficking Survivors.' *Socio-Economic Planning Sciences* https://www.sciencedirect.com/science/article/abs/pii/S0038012119301132?via%3Dihub
Nicholson, A., Schwarz, K., Landman, T., and Griffith, A. (2019) *The Modern Slavery (Victim Support) Bill: A Cost-Benefit Analysis*. Nottingham: University of Nottingham Rights Lab https://www.nottingham.ac.uk/research/beacons-of-excellence/rights-lab/mseu/mseu-resources/2019/august/the-modern-slavery-victim-support-bill-a-cost-benefit-analysis.pdf

(103) Women Against Violence Europe (2018) *Country Report 2017. The Situation of Women's Specialist Support Services in Europe*. http://fileserver.wave-network.org/researchreports/WAVE_CR_2017_180702_web.pdf

information an average was taken (Appendix 5 and Table A5.1). The number of victims registered in each Member State was derived from the European Commission Data Report.

For each Member State providing data, the cost per day was multiplied by the number of days duration to produce an average cost per victim in that Member State. This was multiplied by the number of victims in the Member State (from the *Data Report*) to produce a cost per Member State.

The costs for the EU-27 (per victim and for EU-27 as a whole) were calculated in a way that provided greater weight to the Member State with more victims. The costs for each Member State were added up and then divided by the number of victims in that Member State to produce an average cost per victim in each Member State that provided data. This was multiplied by the number of victims in the EU-27 to produce total cost of services for EU-27. To provide costs for EU-28, the cost of services in the UK were added to the total cost of services in EU-27. This total was then divided by the number of victims in EU-28 to produce an average cost per victim for EU-28.

In other words, the costs for victims in each of the 13 Member States from EU-27 (EU-28 without the UK) were added together (EUR 34 168 116) and divided by the number of registered victims in those 13 Member States (3 009) to provide an average cost per victim for EU-27 of EUR 11 355. This was multiplied by the number of registered victims (8 027) to provide total cost of services for EU-27 of EUR 91 149 042. The cost of services in the UK (EUR 22 601 700) was then added to the EU-27 total to provide the total cost for EU-28: EUR 113 750 742. The total was divided by the number of victims (11 832) to provide an average cost per victim in EU-28 of EUR 9 614.

The cost per day and average number of days for EU-27 were calculated in the same way so that Member States with a higher number of victims contributed a greater proportion to the average. For EU-28, we took account for the UK contributing around one third to the victim population and EU-27 accounting for two thirds and applied these proportions to the calculation of the average cost per day and number of days for EU-27.

Table 5.3 Accommodation and associated specialised service costs

EU Member State	Cost per victim (EUR)	Number of registered victims	Cost of services (EUR)
EU-28	9 614	11 832	113 750 742
EU-27	11 355	8 027	91 149 042

Sources: columns 1 National Rapporteurs and equivalent mechanisms; column 2 Data Report Table 3.2.2; column 3, our calculations

5.4 Summary of costs of specialised services

The cost of specialised services per victim is EUR 9 614 (EUR 11 355 for EU-27). The total cost of specialised services for the EU-28 is EUR 113 750 742 (EUR 91 149 042 for EU-27). See Table 5.4.1.

Table 5.4.1 Cost of specialised services per victim and for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Specialised services	9 614	113 750 742	11 355	91 149 042

The costs are disaggregated by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (adult, child). See Table 5.4.2. These costs are proportionate to the number of registered victims in each category since the cost per victim is the same in each (see European Commission *Data Report*).

Table 5.4.2 Cost of specialised services per victim and for EU-28/27 by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (child, adult), EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	9 614	113 750 742	11 355	91 149 042
Form of exploitation				
Sexual	9 614	63 700 415	11 355	58 335 387
Labour	9 614	28 437 685	11 355	12 760 866
Other	9 614	21 612 641	11 355	20 052 789
Sex of victim				
Female	9 614	78 488 012	11 355	70 184 762
Male	9 614	35 262 730	11 355	20 964 280
Age of victim				
Adult	9 614	26 162 671	11 355	18 229 808
Child	9 614	87 588 071	11 355	72 919 234

Source: National Rapporteurs and equivalent mechanisms; European Commission Data Report

6 Health services and social protection

6.1 What health services and social protection services?

Trafficking hurts the health of victims leading to increased use of health services and social protection. The extent of the hurts varies with the extent to which the victim has been **subject to physical violence, sexual violence and threats. The hurts are to both physical and mental health. The hurts are both immediate and long-term.**

Trafficking in human beings involves physical violence, sexual violence and threats that harm physical and mental health. The literature reviewed identifies numerous forms of harms to health (Gezie et al. (2019)[104]; Joarder and Miller (2014)[105]; Kiss et al. (2015b)[106]; Le (2014)[107]; Lederer and Wetzel (2014)[108]; Oram et al. (2016)[109]; Pocock et al. (2016)[110]; Stöckl et al. (2017)[111]; and Zimmerman et al. (2008)[112]). The harms to physical health include bruises, cuts, broken bones, and internal injuries. The harms to mental health include depression, anxiety and post-traumatic stress disorder (PTSD). For example, Oram et al. (2015, 2016)[113] in a survey of victims of trafficking, found headaches, back pain, dizziness, memory problems, depression, anxiety, PTSD, unwanted pregnancy.

(104) Gezie, L. D., Worku, A., Kebede, Y., and Gebeyehu, A. (2019) 'Sexual violence at each stage of human trafficking cycle and associated factors: a retrospective cohort study on Ethiopian female returnees via three major trafficking corridors.' *British Medical Journal* Open Access, 9: e024515.

(105) Joarder, M., Munim, A., and Miller, P. W. (2014) 'The Experiences of Migrants Trafficked from Bangladesh.' *The ANNALS of the American Academy of Political and Social Science*, 653 (1): 141–161.

(106) Kiss, L., Yun, K., Pocock, N., and Zimmerman, C. (2015a) 'Exploitation, Violence, and Suicide Risk Among Child and Adolescent Survivors of Human Trafficking in the Greater Mekong Subregion', *JAMA Pediatrics,* 169 (9): e152278.

(107) Le, P., (2014) *Human Trafficking and Psychosocial Well-Being: A Mixed-Methods Study of Returned Survivors of Trafficking in Vietnam.* Doctoral Dissertation, UCLA.

(108) Lederer, L. J., and Wetzel, C. A. (2014) 'The Health Consequences of Sex Trafficking and Their Implications for Identifying Victims in Healthcare Facilities', *Annals of Health Law*, 23: 31.

(109) Oram, S., Abas, M., Bick, D., Boyle, A., French, R., Jakobowitz, S,. Khondoker, M., Stanley, N., Trevillion, K., Howard, L.M. and Zimmerman, C. (2016) 'Human trafficking and health: a survey of male and female survivors in England.' *American Journal of Public Health.* 106(6):1073-1078.

(110) Pocock, N. S., Kiss, L., Oram, S., and Zimmerman, C. (2016) 'Labour Trafficking among Men and Boys in the Greater Mekong Subregion: Exploitation, Violence, Occupational Health Risks and Injuries', *PLOS ONE* 11 (12): e0168500

(111) Stöckl, H., Kiss, L., Koehler, J., Thuy Dong, D., and Zimmerman, C. (2017) 'Trafficking of Vietnamese Women and Girls for Marriage in China.' *Global Health Research and Policy*, 2 (1): 28.

(112) Zimmerman, C., Hossain, M., Yun, K., Gajdadziev, V., Guzun, N., Tchomarova, M., Ciarrocchi, R.A., et al. (2008) 'The Health of Trafficked Women: A Survey of Women Entering Posttrafficking Services in Europe.' *American Journal of Public Health*, 98 (1): 55–59.

(113) Oram, S., Abas, M., Bick, D., Boyle, A., Borschmann, R., Dewey, M., Domoney, J., Dimitrova, S., French, R., Geradam, C., Hemmings, S., Howard, L., Jakobowitz, S. Khondoker, M., Broadbent, M., Ottisova, L., Ross, C., Stanley, N., Westwood, J. and Zimmerman, C. (2015) *PROTECT: Provider Responses Treatment and Care*

Victims of trafficking receive health services and social protection services, largely in the post-trafficking phase. It is not common for victims to be provided with health care while they are in trafficking. This additional use of these public services is the consequence of the long-term harms to health that trafficking causes. Healing from harms to health, especially mental health, can take many years. The harms can reverberate not only in a person's body and mind, but also in their social and economic situation. This has implications for their capacity for employment and for their use of social protection services, including welfare and sickness benefits.

Using services, and not simply the need, is the basis of this analysis. It concerns the **likely additional use of health and social protection services**. It does not address the needs for health and social protection services, which are likely to be larger.

Health services includes primary health care, emergency departments, outpatient clinics and inpatient units. It involves the time of healthcare professionals, other staff, the use of equipment and buildings, and the cost of medicine. Professionals include doctors, nurses, pharmacists, health care assistants and professions allied to medicine.

Social protection services, also called welfare, include cash transfers to support the income of those less able to be employed as a result of hurts to health. They include disability benefits, sickness benefits, and income support.

The additional use of health services by victims of trafficking in the post-trafficking period is largely hidden and invisible. Unlike the 'in service' period when victims are visible and identified, in the post trafficking period they are unlikely to be so identified. This is a largely hidden cost to society and economy.

Victims of trafficking are entitled to assistance, support and protection by law. The cost generated by perpetrators (traffickers, user and exploiters of victims) is borne by public health systems, by taxes, by insurance, and thus by the public.

6.2 Data sources and methods

Data on the cost of health services and social protection services in the EU-28/27 are obtained from Eurostat. The cost of health and social protection services for an average person in the EU was derived from these data. Victims of trafficking are likely to use these services more than the average person. The extent to which victims were more likely to use these services was estimated from analysis of data from the systematic review of research literature and analysis of data sets on trafficking (PROTECT), health (APMS, ALSPAC) and crime (CSEW).

The categories of health service and social protection services most likely to be used by victims of trafficking were identified within Eurostat data bases[114].

Unlike the cost of specialised services and law enforcement, where victims of trafficking are clearly identified recipients of services, the additional use of health and social protection services is made by victims of trafficking over many years and they are not directly visible. This means that calculations involve extra steps, to discover the additional use of these services by people who have suffered a similar bundle of harms.

for Trafficked People. Final Report for the Department of Health Policy Research Programme Optimising Identification, Referral and Care of Trafficked People with the NHS (115/0006). London: King's College London. https://www.kcl.ac.uk/ioppn/depts/hspr/research/CEPH/wmh/assets/PROTECT-Report.pdf
Oram, S., Abas, M., Bick, D., Boyle, A., French, R., Jakobowitz, S,. Khondoker, M., Stanley, N., Trevillion, K., Howard, L.M. and Zimmerman, C. (2016) 'Human trafficking and health: a survey of male and female survivors in England.' *American Journal of Public Health.* 106(6):1073-1078.

(114) Eurostat (2011) M*anual on sources and methods for the compilation of COFOG Statistics.* Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/5917333/KS-RA-11-013-EN.PDF/2eb9714a-ee4b-49fe-baab-e9af5ca457b1
Eurostat (2013) *European System of Accounts 2010.* Luxembourg: Publications Office of the European Union.
Eurostat (2016a) *European system of integrated social protection statistics – ESSPROS.* Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/7766647/KS-GQ-16-010-EN-N.pdf/3fe2216e-13b0-4ba1-b84f-a7d5b091235f
Eurostat (2019a) *Manual on sources and methods for the compilation of COFOG statistics – Classification of the Functions of Government.* Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/10142242/KS-GQ-19-010-EN-N.pdf/ed64a194-81db-112b-074b-b7a9eb946c32
Eurostat (2019b) '[Hlth_sha11_hphf] - Expenditure for Selected Health Care Providers by Health Care Financing Schemes.' https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha11_hphf&lang=en.

The cost of health and social protection services is investigated as the increased use of these services as compared to their use by an average person in the EU, in one year. This is multiplied by the number of years during which this additional use takes place.

The analysis takes place in several steps: the identification of hurts to physical and mental health; generating estimates of multipliers and duration of the increased use of health services and social protection; the cost of health services and social protection for the average person; adding up.

6.3 Identification of hurts

The first step is to **identify the violence (physical violence, sexual violence, threat and coercion) and harms (to mental health, physical health, and ability to work) generated by trafficking.** This was discovered by a systematic review of the quantitative scientific studies of trafficking. These are disaggregated by form of trafficking, sex of victim and age of victim. These are shown in Table 6.3.

Table 6.3 Percentage of trafficking victims that experienced physical violence, sexual violence and threat

EU Member State	EU-28	EU-27
Physical violence	63	65
Sexual violence	76	83
Threats	76	78

Source: systematic review

6.4 Identifying the extra use of health and social protection services linked to experience of violence

6.4.1 Survey sources

The second step is to identify the extra usage of health and social protection services that are generated by experience of physical and sexual violence and threat/coercion.

The data is from a general population mental health survey (the Adult Psychiatric Morbidity Survey, APMS). The approach is supported by analysis of data from a general population crime survey (the Crime Survey for England and Wales, CSEW), PROTECT (Provider Responses, Treatment and Care for Trafficked people) and the Avon Longitudinal Study of Parents and Children (ALSPAC) data sets. CSEW provides detailed data on physical and emotional harms attributed to experience of violence in the last year, PROTECT provides specialised data on prevalence of violence and mental health conditions in victims of trafficking, and ALSPAC provides longitudinal evidence of the trajectory of harms over time.

6.4.2 Evidence of the immediate impact of violence

Data were analysed to provide evidence of the causal impact of violence on health. Participants in a general population survey reporting an incident of physical violence, sexual violence or threat were asked whether they had experienced physical injuries as a direct result. Table 6.4.2.1 shows that for most people exposed to an incident of physical (60%) or sexual violence (56%) physical injuries were a direct consequence. Bruising, black eyes, cuts and scratches were the most commonly reported.

Table 6.4.2.1 Percentage of victims of physical violence, sexual violence and threats receiving physical injury

Physical injury	Physical violence (%)	Sexual violence (%)	Threats (%)
Any	60	56	<1
Minor bruising or black eye	32	14	<1
Severe bruising	15	8	<1
Scratches	12	6	0
Cuts	16	4	0
Puncture or stab wounds	<1	<1	0
Broken/cracked/fractured bones	3	<1	<1
Nose bleed	2	<1	0
Broken nose	2	<1	0
Broken/lost tooth	1	<1	0
Chipped teeth	1	0	0
Dislocation of joints	<1	0	0
Concussion or loss of consciousness	3	1	0
Facial/head injuries (no mention of bruising)	1	1	0
Internal injuries	<1	1	0
Eye/facial injuries caused by acid, paint, sand, etc. being thrown in face	<1	1	0
Other	2	1	<1

Source: CSEW

Survey participants were asked about the long-term emotional impact directly attributable to incidents of violence. Table 6.4.2.2 shows that long-term emotional impact was experienced by one in three victims of sexual violence, and one in six victims of physical violence and threat.

Each incident was also directly attributed by participants to increased use of health services, for example half (48%) of the victims of sexual violence received medical attention as a result.

Table 6.4.2.2 Physical and emotional harms and health service use due to experience of physical violence, sexual violence and threats

Violence experienced	Experienced long-term emotional harm (%)	Received medical attention (%)	Visited A&E within 24 hours (%)
Physical violence	14	18	12
Sexual violence	35	48	14
Threats	18	1	<1

Source: CSEW

6.4.3 Evidence of the long-term impact of violence

Data from a longitudinal cohort of mothers (ALSPAC) were analysed to establish whether the impact of violence on health and socioeconomic outcomes persisted. Table 6.4.3.1 shows that mothers exposed to intimate partner violence during pregnancy were more likely to not be employed and experience depression than mothers not exposed to IPV. When relying on non-overlapping confidence intervals to indicate significant differences, none of these outcomes remained elevated beyond 11 years. However, a visual comparison of observed rates indicates that differences between these groups persist long term: with those exposed to IPV in pregnancy being nearly twice as likely as other women to be depressed and not employed two decades after exposure. It is important to note that these results have not been adjusted: it is possible that these patterns could be explained by confounding factors.

Table 6.4.3.1 Long-term outcomes in mothers exposed and not exposed to intimate partner violence during or soon after pregnancy

Violence experienced	Prevalence in mothers exposed to violence [a] (%)	Prevalence in mothers not exposed to violence (%)	Ratio [b]
Not employed at 32 weeks' gestation	73.6	57.7	1.27
Not employed at 10 years post-birth	4.2	1.4	2.95
Not employed at 21 years post-birth	19.5	10.7	1.78
Depressed during pregnancy	56.6	20.9	2.71
Depressed at 10 years post birth	25.0	14.3	1.74
Depression medication at 18 years post birth	19.0	10.7	1.76

Source: ALSPAC.
[a] Percentages based on mean values from the 1000 simulations.
[B] Ratio calculated as the mean of the ratios from each of the 1000 simulations.

Further evidence of the long-term impact of violence on health and social outcomes was produced by analysing the association between experience of violence in childhood with health and socioeconomic outcomes in adulthood. A cross-sectional general population mental health survey dataset (APMS) was used. Table 6.4.3.2. shows that participants reporting different types of violence before age 16 were more likely to have a mental health condition and use health services decades later. For physical violence and threat effects were statistically significant at least 37 years later, and at least 19 years later for sexual violence. Adverse socioeconomic outcomes were also more likely, although this varied with type of violence. The analysis adjusted for other factors; and is detailed in Appendix 6.

Table 6.4.3.2 Limiting health conditions, health service use, social protection and unemployment associated with experience of violence in childhood: adjusted multipliers and duration

Violence	Adjusted multipliers								Min. duration (Years)
	Limiting mental health condition	Limiting physical health condition	Any limiting health condition	Health Service use	Disability benefit receipt	Income support	Unemployed or unable to work due to sickness	Employed	
Sex/ sexual contact w/o consent	1.3	[1.0]	[1.1]	1.1	1.2	[1.0]	[1.1]	[1.0]	19
Physical violence	1.6	1.3	1.3	1.1	[0.8]	1.5	[1.2]	[1.0]	37
Threat	1.7	[1.2]	1.4	1.1	[1.8]	1.7	1.5	0.9	37

Source: APMS. Square brackets indicate the rate was not significantly different from those not exposed to violence at the 95% level.

Other evidence from the scientific literature also indicates that exposure to (i.e. suffering) violence has long term causal impacts on victim's physical and mental health, as well as social and economic outcomes (Loxton et al., 2017)[115]. These patterns support our extrapolation of the adverse associations with exposure to violence established from our analysis of general population survey data to the long-term consequences of trafficking on the lives of victims post-trafficking, including their needs for healthcare and social protection.

6.4.4 Generating multipliers and estimating duration of effects

For each type of violence (physical, sexual, threat) the increased use of health and welfare services is discovered from the survey in any one year and the number of years for which this occurs. This is moderated by controlling for demographics, experience of other violence, and for socio-economic position.

[115] Loxton, D., Dolja-Gore X., Anderson A. E., Townsend N. (2017) 'Intimate partner violence adversely impacts health over 16 years and across generations: A longitudinal cohort study'. *PLoS One*. Jun 5;12(6):e0178138.

The increased use of services (health, social protection) as compared to the average person in Europe in any one year is multiplied by the number of years for which the additional services are used (while controlling for other factors that might affect this increased use).

The process for estimating the duration for which rates of service use were elevated in people exposed to violence is detailed in Appendix 6, alongside detailed explanation for how the multipliers were derived. Analysis of general population mental health survey data indicated that elevated rates of health conditions, and increased use of health conditions, healthcare, social protection and unemployment were evident at least 2.7 years after exposure to threat/coercion, 10.6 years after exposure to physical violence, and 17.0 years after exposure to sexual violence.

Table 6.4.4 Limiting health conditions, health service use, social protection and unemployment associated with experience of violence in adulthood: adjusted multipliers and duration

Violence	Adjusted multipliers [a]								Min. duration (Years)
	Limiting mental health condition	Limiting physical health condition	Any limiting health condition	Health Service use	Disability benefit receipt	Income support	Unemployed or unable to work due to sickness	Employed	
Sex without consent	1.6	1.4	1.5	1.2	1.7	1.1	1.5	[0.9][b]	17.0[c]
Sex/ sexual contact w/o consent	1.6	1.2	1.4	1.2	2	1.1	1.5	[0.9]	17.0
Physical violence	1.6	1.3	1.4	1.1	1.2	1.2	1.2	[1.0]	10.6
Threat/ coercion	1.7	1.3	1.4	1.1	[1.0]	1.3	[1.7]	1.1	2.7

Source: APMS

[a] Multipliers were generated after adjustment for demographics (age, sex, ethnic group), socioeconomics (tenure, employment status, problem debt), and other forms of violence. Details provide in Appendix A, Tables 3 to 35.

[B] Square brackets indicate rate in those exposed to violence was not significantly different at the 95% level to those not exposed to violence.

[c] Too few participants reported sex without consent in the past year for this to be estimated, therefore the duration estimate for sex/ sexual contact without consent is used here.

The increased use of services (health, welfare) as compared to the average person in Europe in any one year is multiplied by the number of years for which the additional services are used (while controlling for other factors that might affect this increased use).

6.4.5 Longer duration of effects in children

Values for the size and duration of effects associated with violence were produced using data on adults. The analysis presented in Table 6.4.4 suggest that the consequences of violence in childhood endure for longer than the consequences of violence in adulthood. While not clear in Table 6.4.4, the scientific literature also indicates that the size of the effect associated with violence will be greater for children than for adults. To capture this increased cost a very conservative multiplier of 1.3 was applied to children (those aged 17 or less when registered). While some average duration of effects were found to be 3.7 times longer in children than adults, a much more conservative multiplier of 1.3 was applied due to uncertainty about these rates. Children constitute between a fifth and a quarter of victims of trafficking registered in 2016.

6.5 Cost of healthcare and social protection in the EU

6.5.1 Introduction

The third step is to cost the extra usage of health and welfare generated by physical, sexual, and mental harms. The cost of the average person's use of health and welfare services in EU is found from data on the Eurostat website.

This section outlines relevant Eurostat data for health and social protection which were used to estimate the per inhabitant expenditure on healthcare and welfare in EU-28 and EU-27 for 2016. These costs were used along

with the findings from the systematic review of exposure to violence among trafficking victims (Section 2.6, Table 2.6.1; Appendix 2.2 Tables A2.2.1, A2.2.2, A2.2.3, A2.2.4) and the analysis of APMS data (Section 6.4.3, Table 6.4.3.2, 6.4.4; Appendix 6.1) to arrive at the total estimated cost of the increased use of health and social protection among victims of trafficking.

6.5.2 Healthcare

Two sources of information on healthcare expenditure are available on the Eurostat database: that based in general government expenditure by function as classified according to the international Classification of the Functions of Government (COFOG)[116], and that based on healthcare expenditure as classified by the International Classification for Health Accounts (ICHA)[117].

The COFOG classification classifies annual government finance statistics on the basis of the European System of Accounts (ESA2010) transmission programme. This information is classified by ten main categories, one of which is health. The remaining nine categories are the following: general public services; defence; public order and safety; economic affairs; environmental protection; housing and community affairs; recreation, culture and religion; education; and social protection. The other classification involves healthcare expenditure data being collected using the System of Health Accounts (SHA) and the related set of International Classification for the Health Accounts (ICHA). It is organised around a tri-axial system for the recording of health expenditure specifically, defining healthcare by function, by provider and by financing scheme.

The SHA was based as far as possible on existing classification, and although definitions of government expenditure in the ICHA in the SHA should be compatible with the COFOG, they are not fully compatible and do not perform the same purpose.[118] The SHA deals with specific activities that relate only to healthcare and aims to provide an exhaustive overview of healthcare expenditure specifically, while the 'health' function of the COFOG is only one of ten categories of government expenditure and only includes transactions related to healthcare that are government funded. The SHA however, also includes non-government expenditure on healthcare, such as that funded through voluntary insurance schemes, non-profit institutions and out-of-pocket spending. The definition of healthcare between the COFOG and the ICHA also differs, especially in relation to social care. The sources used for compilation of data based on the COFOG and the ICHA also differ; the COFOG is restricted to government administrative sources while the SHA can also use other public and private information sources.

Due to its more wide-ranging nature and the fact that the extent of government expenditure varies greatly among EU Member States due to differences in healthcare financing schemes, for the purposes of the Study, the total expenditure on healthcare is derived using the ICHA classification as part of SHA.

Total healthcare expenditure using the ICHA classification also includes preventative care, such as educational programmes, immunisation programmes and preparing for disaster and emergency response programmes. Preventative care costs are shared among the population and do not relate specifically to individuals' use of healthcare. Including preventative care in total healthcare expenditure would mean that once the multiplier derived from analysis of APMS data is applied, costs of preventative care would also be inflated for victims. As the ICHA classification allows for disaggregation of expenditure by function, it is possible to separate the expenditure on preventative care. This is the approach taken in the study to provide a more accurate estimate of total expenditure on healthcare.

Table 6.5.2 provides the total expenditure on healthcare, with preventative care excluded. The per inhabitant expenditure on healthcare (excluding preventative care) is EUR 2 808 for EU-28 (EUR 2 727 for EU-27). The per inhabitant cost is used alongside the multiplier of increased healthcare use derived from analysis of APMS data to arrive at a cost of healthcare utilisation for victims of trafficking.

(116) Eurostat (2011) *Manual on sources and methods for the compilation of COFOG Statistics.* Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/5917333/KS-RA-11-013-EN.PDF/2eb9714a-ee4b-49fe-baab-e9af5ca457b1

(117) Organisation for Economic Co-operation and Development (OECD), Eurostat, World Health Organisation (2011), *A System of Health Accounts*, OECD Publishing. https://www.who.int/health-accounts/methodology/sha2011.pdf

(118) Eurostat (2011) *Manual on sources and methods for the compilation of COFOG Statistics.* Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/5917333/KS-RA-11-013-EN.PDF/2eb9714a-ee4b-49fe-baab-e9af5ca457b1

Table 6.5.2 Healthcare expenditure, per inhabitant and for EU-28/27, EUR

	EU-28		EU-27	
	Total	Per inhabitant	Total	Per inhabitant
Healthcare expenditure	1 434 429 630 000	2 808	1 213 824 070 000	2 727

Source: Eurostat 2011[119]
Notes: Variables used: 'Health care expenditure by function [hlth_sha11_hc]'; 'Population change - Demographic balance and crude rates at national level [demo_gind]'. Unit: euro. Data last updated: 24.10.19 for healthcare expenditure and 09.09.19 for population. Data extracted: 29.10.19 for healthcare expenditure and 10.10.19 for population.

6.5.3 Social protection

Victims of trafficking are likely to make use of social protection systems than the average person because of the hurts to their health. This includes benefits related to disability, to sick leave and other income support. The APMS collects data on disability benefits, time off work due to sickness and low-income benefits from their respondents. It is thus possible to use APMS data to compare the extent to which victims of violence (physical, sexual, and threats) are more likely to be in receipt of such benefits than those who have not been victims of violence, and calculate a multiplier for this similar to that for healthcare expenditure.

There are two sources of data on costs of social protection benefits in the Eurostat database: the Classification of the Functions of Government (COFOG); and the European System of integrated Social Protection Statistics (ESSPOS)[120]. Care needs to be taken when using either system (COFOG or ESSPROS) to avoid overlap with the ICHA healthcare expenditure included in the previous section. For example, certain benefits in kind provided to individuals with illnesses could be included in ICHA, ESSPROS and COFOG. To avoid double counting, the ESSPROS classification is used and expenditure limited to cash benefits, thereby excluding benefits in kind. The ICHA notes that "benefits in cash, such as benefits for sickness leave or maternity leave or pensions for disabilities or work accidents, are granted for the purpose of income maintenance and are therefore excluded from the core accounting framework"[121]. Furthermore, the ESSPROS allows a finer grained disaggregation than the COFOG and the inclusion of expenditure on low-income support.

ESPROSS has information on: sickness/healthcare; disability; old age; survivors' benefits; family/children; unemployment; housing; social exclusion not elsewhere classified. The most relevant for the Study, because of the data available from the APMS are expenditure related to sickness/healthcare; disability; and social exclusion not elsewhere classified function (specifically in relation to income support). Table 6.5.3 provides the total expenditure on each of these functions, as well as the per inhabitant expenditure on each of these functions in 2016 for EU-28 and EU-27. It provides the social protection expenditure on cash benefits by type of benefit.

The per inhabitant expenditure on sickness/healthcare cash benefits is EUR 302 for EU-28 (EUR 306 for EU-27). The per inhabitant expenditure on disability cash benefits is EUR 420 for EU-28 (EUR 406 for EU-27). The per inhabitant expenditure on income support cash benefits for EUR 96 EU-28 is (EUR 92 for EU-27). The per inhabitant cost is used alongside the multiplier of increased social protection benefit use derived from analysis of APMS data to arrive at a cost of social protection for victims of trafficking.

(119) At the time of data extraction on 29.10.19, Malta had no data for 2016, so 2015 data were used instead.
(120) Eurostat (2016a) *European system of integrated social protection statistics – ESSPROS*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/7766647/KS-GQ-16-010-EN-N.pdf/3fe2216e-13b0-4ba1-b84f-a7d5b091235f
(121) Eurostat (2016a) *European system of integrated social protection statistics – ESSPROS*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/7766647/KS-GQ-16-010-EN-N.pdf/3fe2216e-13b0-4ba1-b84f-a7d5b091235f

Table 6.5.3 Social protection expenditure by function (sickness/healthcare, disability, income support), per inhabitant and for EU-28/27, EUR

Type of function	EU-28		EU-27	
	Total	Per inhabitant	Total	Per inhabitant
Sickness/ healthcare	154 216 680 000	302	136 417 400 000	306
Disability	214 429 800 000	420	180 757 360 000	406
Income support	49 064 450 000	96	41 130 420 000	92

Notes: Variables used: 'tables by benefits – sickness/healthcare function [spr_exp_fsi]'; 'tables by benefits – disability function [spr_exp_fdi]; 'tables by benefits – social exclusion n.e.c function [spr_exp_fxp]'; 'Population change – Demographic balance and crude rates at national level [demo_gind]'.
Data last updated: 28.10.19 for cash benefits and 09.09.19 for population. Data extracted: 30.10.19 for cash benefits and 10.10.19 for population. EU-27 calculated in Excel.

6.6 Increased use of health services and social protection

Increased cost per victim of (physical, sexual, mental) harms in use of health and social protection services is then calculated. This is disaggregated by form of trafficking (sexual, labour, other), sex of the victim (female, male) and age of the victim (child, adult). See tables 6.6.1-6.6.8.

Table 6.6.1 Cost of additional long-term health service use (post-trafficking) in victims registered in 2016, EU-28, EUR

EU-28	Health service costs due to physical violence	Health service costs due to physical violence	Health service costs due to threat/ coercion	Total additional health service costs (without child multiplier)	Average cost per victim (without child multiplier)	Total additional health service costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	22 250 483	86 109 487	6 785 685	115 145 655	9 732	123 039 334	10 399
Form of exploitation							
Sexual	13 408 742	63 257 658	4 218 856	80 885 256	12 207	86 230 962	13 014
Labour	4 225 444	8 472 008	1 322 877	14 020 328	4 740	15 026 007	5 080
Other	4 616 297	14 379 821	1 243 953	20 240 071	9 003	21 782 365	9 689
Sex of victim							
Female	16 280 473	70 024 476	4 988 544	91 293 493	11 159	97 176 418	11 878
Male	5 970 010	16 085 012	1 797 141	23 852 162	6 534	25 862 916	7 084
Age of victim							
Child	5 136 789	19 613 794	1 561 678	26 312 260	9 610	34 205 939	12 493
Adult	17 113 694	66 495 694	5 224 007	88 833 395	9 768	88 833 395	9 768

Source: Adult Psychiatric Morbidity Survey (APMS).

Table 6.6.2 Cost of additional long-term health service use (post-trafficking) in victims registered in 2016, EU-27, EUR

EU-27	Health service costs due to physical violence	Health service costs due to physical violence	Health service costs due to threat/ coercion	Total additional health service costs (without child multiplier)	Average cost per victim (without child multiplier)	Total additional health service costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	15 181 402	61 729 210	4 612 866	81 523 479	10 156	89 144 570	11 106
Form of exploitation							
Sexual	10 396 211	49 045 612	3 271 009	62 712 832	12 207	66 501 314	12 945
Labour	1 605 297	3 218 618	502 577	5 326 492	4 740	5 507 220	4 901
Other	3 626 252	11 295 818	977 165	15 899 235	9 003	17 136 036	9 704
Sex of victim							
Female	12 309 882	53 640 640	3 775 716	69 726 238	11 350	73 913 150	12 032
Male	3 316 838	9 914 503	974 708	14 206 049	7 543	15 231 420	8 088
Age of victim							
Child	3 218 762	13 185 531	969 983	17 374 276	10 717	22 586 559	13 932
Adult	12 407 958	50 369 612	3 780 441	66 558 012	10 391	66 558 012	10 391

Source: APMS.

Table 6.6.3 Cost of additional long-term disability cash transfers (post-trafficking) in victims registered in 2016, EU-28, EUR

EU-28	Disability cash transfer costs due to physical violence	Disability cash transfer costs due to sexual violence	Disability cash transfers due to threat/ coercion	Total additional disability costs (without child multiplier)	Average cost per victim (without child multiplier)	Total additional disability costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	6 654 210	64 399 470	-[a]	71 053 680	6 005	75 915 164	6 416
Form of exploitation							
Sexual	4 010 007	47 309 069	-	51 319 076	7 745	54 710 753	8 257
Labour	1 263 658	6 336 036	-	7 599 694	2 569	8 144 820	2 753
Other	1 380 546	10 754 365	-	12 134 911	5 398	13 059 591	5 809
Sex of victim							
Female	4 868 824	52 369 829	-	57 238 653	6 996	60 923 437	7 447
Male	1 785 386	12 029 641	-	13 815 027	3 784	14 991 727	4 107
Age of victim							
Child	1 536 204	14 668 743	-	16 204 946	5 919	21 066 430	7 694
Adult	5 118 007	49 730 727	-	54 848 734	6 031	54 848 734	6 031

[a] *No statistically significant elevated rate evident at this duration.*

Source: APMS.

Table 6.6.4 Cost of additional long-term disability cash transfers (post-trafficking) in victims registered in 2016, EU-27, EUR

EU-27	Disability cash transfer costs due to physical violence	Disability cash transfer costs due to sexual violence	Disability cash transfers due to threat/ coercion	Total additional disability costs (without child multiplier)	Average cost per victim (without child multiplier)	Total additional disability costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	3 408 070	45 950 712	- [a]	49 358 782	6 149	52 425 335	6 531
Form of exploitation							
Sexual	2 267 184	35 457 507	-	37 724 691	7 343	40 003 640	7 787
Labour	350 080	2 326 899	-	2 676 979	2 382	2 767 809	2 463
Other	790 806	8 166 307	-	8 957 113	5 072	9 653 886	5 467
Sex of victim							
Female	2 684 514	38 779 480	-	41 463 994	6 750	43 950 325	7 154
Male	723 329	7 167 686	-	7 891 016	4 190	8 475 009	4 500
Age of victim							
Child	701 941	9 532 475	-	10 234 416	6 313	13 304 740	8 207
Adult	2 705 902	36 414 692	-	39 120 594	6 108	39 120 594	6 108

[a] *No statistically significant elevated rate evident at this duration.*

Source: APMS.

Table 6.6.5 Cost of additional long-term sickness/healthcare cash transfers (post-trafficking) in victims registered in 2016, EU-28, EUR

EU-28	Sickness cash transfer costs due to physical violence	Sickness cash transfer costs due to sexual violence	Sickness cash transfers due to threat/ coercion	Total additional sickness costs (without child multiplier)	Average cost per victim (without child multiplier)	Total additional sickness costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	4 785 050	23 153 143	5 111 644	33 049 837	2 793	35 316 294	2 985
Form of exploitation							
Sexual	2 883 600	17 008 737	3 178 056	23 070 393	3 482	24 595 116	3 712
Labour	908 698	2 277 956	996 521	4 183 174	1 414	4 483 233	1 516
Other	992 752	3 866 450	937 067	5 796 270	2 578	6 237 945	2 775
Sex of victim							
Female	3 501 177	18 828 200	3 757 861	26 087 238	3 189	27 768 147	3 394
Male	1 283 873	4 324 942	1 353 783	6 962 598	1 907	7 548 147	2 068
Age of victim							
Child	1 104 686	5 273 762	1 176 409	7 554 857	2 759	9 821 314	3 587
Adult	3 680 364	17 879 380	3 935 235	25 494 980	2 803	25 494 980	2 803

Source: APMS.

Table 6.6.6 Cost of additional long-term sickness/healthcare cash transfers (post-trafficking) in victims registered in 2016, EU-27, EUR

EU-27	Sickness cash transfer costs due to physical violence	Sickness cash transfer costs due to sexual violence	Sickness cash transfers due to threat/ coercion	Total additional sickness costs (without child multiplier)	Average cost per victim (without child multiplier)	Total additional sickness costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	3 408 070	17 316 401	3 622 604	24 347 076	3 033	25 518 262	3 179
Form of exploitation							
Sexual	2 235 744	13 187 398	2 464 045	17 887 187	3 482	18 967 752	3 692
Labour	345 225	865 423	378 590	1 589 238	1 414	1 643 161	1 462
Other	779 839	3 037 223	736 097	4 553 158	2 578	4 907 349	2 779
Sex of victim							
Female	2 647 286	14 422 910	2 844 240	19 914 437	3 242	21 109 775	3 436
Male	713 299	2 665 814	734 246	4 113 359	2 184	4 408 487	2 341
Age of victim							
Child	692 207	3 545 329	730 686	4 968 222	3 065	6 458 689	3 984
Adult	2 668 378	13 543 395	2 847 799	19 059 573	2 976	19 059 573	2 976

Source: APMS.

Table 6.6.7 Cost of additional long-term income support cash transfers (post-trafficking) in victims registered in 2016, EU-28, EUR

EU-28	Income support cash transfer costs due to physical violence	Income support cash transfer costs due to sexual violence	Income support cash transfers due to threat/ coercion	Total additional income support costs (without child multipliers)	Average cost per victim (without child multipliers)	Total additional income support costs (with child multipliers)	Average cost per victim (with child multipliers)
Total	1 525 235	7 359 939	1 620 329	10 505 503	888	11 225 939	949
Form of exploitation							
Sexual	919 148	5 406 751	1 007 405	7 333 303	1 107	7 817 961	1 180
Labour	289 647	724 118	315 885	1 329 651	450	1 425 026	482
Other	316 440	1 229 070	297 039	1 842 549	820	1 982 951	882
Sex of victim							
Female	1 116 000	5 985 123	1 191 196	8 292 319	1 014	8 826 629	1 079
Male	409 235	1 374 816	429 133	2 213 183	606	2 399 310	657
Age of victim							
Child	352 119	1 676 428	372 907	2 401 454	877	3 121 890	1 140
Adult	1 173 116	5 683 512	1 247 421	8 104 049	891	8 104 049	891

Source: APMS.

Table 6.6.8 Cost of additional long-term income support cash transfers (post-trafficking) in victims registered in 2016, EU-27, EUR

EU-27	Income support cash transfer costs due to physical violence	Income support cash transfer costs due to sexual violence	Income support cash transfers due to threat/ coercion	Total additional income support costs (without child multipliers)	Average cost per victim (without child multipliers)	Total additional income support costs (with child multipliers)	Average cost per victim (with child multipliers)
Total	1 023 996	5 206 238	1 090 542	7 320 777	912	7 774 312	969
Form of exploitation							
Sexual	681 203	4 017 353	750 865	5 449 421	1 061	5 778 621	1 125
Labour	105 186	263 639	115 367	484 192	431	500 620	445
Other	237 607	925 247	224 310	1 387 164	786	1 495 071	847
Sex of victim							
Female	806 595	4 393 734	866 721	6 067 050	988	6 431 217	1 047
Male	217 333	812 102	223 746	1 253 181	665	1 343 095	713
Age of victim							
Child	210 907	1 080 034	222 661	1 513 602	934	1 967 682	1 214
Adult	813 021	4 125 803	867 806	5 806 630	907	5 806 630	907

Source: APMS.

6.7 Discounting

There are divergent views on the application of 'discounting', which would reduce the value of future benefits as compared to immediate benefits (See Section 2.13 and Appendix 2.6 for further discussion). A sensitivity analysis, addressing discounting, was performed, to see how much difference it would make to the estimates if it were adopted. The Study does not apply discounting.

Discounting is sometimes applied to economic costings. Discounting deliberately reduces the importance of long-term benefits relative to short-term benefits. Discounting is designed to place greater economic value on current or near-future events compared to events in the future. However, some approaches to costing reject discounting. Discounting is rejected by the Global Burden of Disease project. The rejection of discounting assumes that the future matters as much as the present. A middle way is to suggest that the estimation of economic cost should be independent of these considerations, and that the balancing of the relative value of the future and the present should be a separate judgement taken by policy makers. In this Study, we draw on both orthodox economic approaches and the Global Burden of Disease project. Our preferred approach is not to discount. We offer an investigation of the implications of discounting below.

As discussed in Appendix 2.6, while the European Commission's *Better Regulation Guidelines* (2016) advises using a discount rate of 4% in intervention evaluations, the *Guidelines* also advise consistency with the approach adopted by the Global Burden of Disease, being responsive to specific policy context, and being flexible in conducting and heeding sensitivity analysis.

The European Commission *A Guide to Cost-Benefit Analysis of Investment Projects* (European Commission, 2014)[122] states how: 'every discount rate entails a judgement concerning the future and it affects the weight attributed to future benefits or costs. A zero social rate of time preference derives from the assumption that equal weights are given to the utilities occurring at any moment, i.e. that today's and future consumptions are indifferent to the utility point of view. A positive discount rate, on the other hand, indicates a preference for current over future consumption, whereas the opposite is true if the discount rate is negative.'(p301)

A concern with discounting is that interventions with long-term benefits are systematically under-valued relative to interventions where the benefits may only be shorter-term. This issue has been raised by the European Commission in relation to costing energy policies and environmental interventions (European Commission, 2016).[123] This is relevant to costing the benefits associated with trafficking prevention, given the lifetime impact on victims.

To assess the impact of discounting an annual discount of 4% was applied to the health service costs associated with trafficking.[124] Table 6.7.1 shows that if discounting is applied, the estimated per victim long-term costs associated with the mental health of trafficked victims, reduces from EUR 46 271 to EUR 36 414. This is a reduction of 21%.

(122) European Commission (2014a) *A Guide to Cost-Benefit Analysis of Investment Projects* https://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf

(123) European Commission (2016f) *Evaluation of Fiscal Measures in the National Policies and Methodologies to Implement Article 7 of the Energy Efficiency Directive*. https://ec.europa.eu/energy/sites/ener/files/documents/final_report_on_fiscal_measures_used_under_article_7_eed_0.pdf

(124) National Institute for Clinical Evidence (2013) *Guide to the Methods of Technology Appraisal*, National Institute for Clinical Excellence, London. https://www.nice.org.uk/process/pmg9/resources/guide-to-the-methods-of-technology-appraisal-2013-pdf-2007975843781

Table 6.7.1 Costs of long-term mental health harms (post-trafficking) in victims registered in 2016, with and without discounting, EU-28, EUR

EU-28	Total cost of long-term mental health harm a	Average cost per victim	Total cost of long-term mental health harm with discounting	Average cost per victim with discounting	DECREASE in total cost if discounting is applied
Total	547 476 910	46 271	430 853 855	36 414	116 623 055
By form of exploitation					
Sexual	372 957 919	56 288	291 501 256	43 994	81 456 663
Labour	74 708 019	25 256	60 364 488	20 407	14 343 531
Other	99 810 973	44 398	78 988 111	35 136	20 822 861
By sex of victim					
Female	425 596 499	52 020	333 616 686	40 778	91 979 812
Male	121 880 411	33 386	97 237 169	26 635	24 643 243
By age of victim					
Child	152 481 200	55 692	120 050 140	43 847	32 431 059
Adult	394 995 710	43 435	310 803 715	34 177	84 191 995

Source: APMS.

Table 6.7.2 Costs of long-term mental health harms (post-trafficking) in victims registered in 2016, with and without discounting, EU-27, EUR

EU-27	Total cost of long-term mental health harm[a]	Average cost per victim	Total cost of long-term mental health harm with discounting	Average cost per victim with discounting	DECREASE in total cost if discounting is applied
Total	393 527 161	49 025	309 069 501	38 504	84 457 660
By form of exploitation					
Sexual	287 625 129	55 988	224 805 754	43 760	62 819 375
Labour	27 381 428	24 365	22 124 344	19 687	5 257 084
Other	78 520 604	44 464	62 139 403	35 188	16 381 201
By sex of victim					
Female	323 104 717	52 595	253 156 094	41 209	69 948 622
Male	70 422 445	37 394	55 913 407	29 690	14 509 038
By age of victim					
Child	99 573 631	61 420	78 169 166	48 217	21 404 464
Adult	293 953 531	45 892	230 900 335	36 048	63 053 196

[a] *With child multiplier. See Chapter 8 of the main report for details.*

Source: APMS.

These figures on the impact of discounting are offered as a 'sensitivity analysis'. The discounted figure is not included in the estimates.

6.8 Summary of costs of health and social protection services

The increased cost of the use of health services and social protection by victims of trafficking in human beings is shown in Tables 6.8.1 and 6.8.2. The additional cost per victim is EUR 20 749 for EU-28 (EUR 21 785 for EU-27). **The additional cost for the EU-28 is EUR 245 496 731 (EUR 174 862 479 for EU-27).**

These are costs for the lifetime of the victim, the extra costs for several years. They are the costs for one year for the EU, for those victims registered in one year.

Table 6.8.1 Increased cost of health and social protection, per victim and for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	20 749	245 496 731	21 785	174 862 479

The distribution of costs across the health services and social protection (disability cash transfers, sickness/healthcare cash transfers, income support) are shown in Table 6.8.2.

Table 6.8.2 Increased cost of use of health services and social protection, by type of cost, per victim and for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total health services and social protection cost	20 749	245 496 731	21 785	174 862 479
Increased cost for health services	*10 399*	*123 039 334*	*11 106*	*89 144 570*
Increased cost for social protection	*10 350*	*122 457 397*	*10 679*	*85 717 909*
Social protection costs detail				
Disability cash transfers	6 416	75 915 164	6 531	52 425 335
Sickness/healthcare cash transfers	2 985	35 316 294	3 179	25 518 262
Income support	949	11 225 939	969	7 774 312

Sources: Eurostat COFOG, ICHA, APMS, systematic review

The disaggregation of the costs of health services and social protection by form of exploitation (sexual, labour, other), sex of victim (female, male), and age of victim (adult, child) are shown in Table 6.8.3. **Exploitation for purposes of sexual exploitation generates larger costs than other forms of exploitation. The costs are greater for females than males, largely because they are disproportionately exploited for sexual purposes. The costs are slightly greater for children than for adults.**

Table 6.8.3 Costs of increased use of health services and social protection per victim and for EU-28/27, by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (child, adult), EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	20 749	245 496 731	21 785	174 862 479
Form of exploitation				
Sexual	26 163	173 354 792	25 549	131 251 327
Labour	9 831	29 079 086	9 271	10 418 810
Other	19 155	43 062 852	18 796	33 192 342
Sex of victim				
Female	23 797	194 694 631	23 669	145 404 467
Male	13 916	50 802 100	15 642	29 458 011
Age of victim				
Child	24 915	68 215 573	27 336	44 317 670
Adult	19 494	177 281 158	20 381	130 544 809

7 Lost economic output

7.1 What is lost economic output?

Economic output is lost due to trafficking due to the diversion of the labour of victims of trafficking away from the legal economy and due to their lost capacity to be employed because of harms to their physical and mental health.

Trafficking diverts economic resources away from legitimate society and economy.

Lost economic output includes the lost wages of the victim in unrewarded employment, the lost taxes that the victim might otherwise contributed to the state, and the lost profits that legitimate employers cannot make. The lost legal employment is not only a loss for the victim but also for the tax-paying community and for employers. These losses can be summarised as lost Gross Domestic Product (GDP) for the EU and lost GDP per capita (per person) for registered victims of trafficking.

There are differences across three phases of trafficking: first, in trafficking; second, in services; third, post-trafficking. The potential labour of the victim does not contribute to the legal economy when they are in trafficking. The potential labour of the victim is not in the economy when they are in services. The potential of the victim for employment post-trafficking is often reduced for many years because of the long-term harms of trafficking. The losses only concern adult victims, since children are not expected to be in employment. The only exception concerns the part of the analysis that has a long duration, when children will have grown into adults.

Europol (2015: 12) estimates that the average annual income of a trafficker is $70 000. Europol estimates that each year the global profits extracted by trafficking in human beings are more than EUR 29.4 billion[125] and reports estimates of the profits extracted by sexual exploitation in the EU and developed economies reaches EUR 23.5 billion[126] Further information on the profits extracted by trafficker are provided in Appendix 7.1.

Profit from trafficking in human beings is not (and should not be) included in GDP calculations. This is because human beings are not to be treated as goods or capital. National accounts in the EU are produced in line with international standards, stipulated by the United Nations System of National Accounts 1993 (SNA 93), and the European System of Accounts 1995 (ESA 95). Although these accounts include illegal activities, including 'drugs', 'prostitution' and 'smuggling of alcohol and tobacco' (Eurostat 2012), they should not include the proceeds of trafficking of human beings: '[h]uman trafficking and forced prostitution is not estimated, even if two parties (excluding the trafficking individual or forced prostitute) enter into a transaction under mutual agreement, because a human does not fit the definition of a good or a capital item' (Eurostat 2018: 18). A summary history and reasons for the inclusion and exclusion of different kinds of illegal activities in GDP is provided in Appendix 7.2.

Directive 2011/36/EU of the European Parliament and of the Council of 5 April 2011 on preventing and combating trafficking in human beings and protecting its victims, and replacing Council Framework Decision 2002/619/JHA (Anti-trafficking Directive) state that exploitations includes, as a minimum, "the exploitation or the prostitution of others or other forms of sexual exploitation, forced labour or services, including begging, slavery or practices similar to slavery, servitude or exploitation of criminal activities, or the removal of organs". Also, the 'consent' of a victim of human trafficking to the exploitation, whether intended or actual, is irrelevant where means such as the threat or actual use of force or other forms of coercion, abduction, fraud, deception, abuse of power or of a position of vulnerability, or giving or receiving of payment or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation, have been used. The Handbook therefore for the calculations on compiling statistics on illegal economic activities in national accounts and balance of payment[127] recognises the links

(125) Europol (2015) *The THB financial business model* (doc .ref. 766920), The Hague. https://www.europol.europa.eu/publications-documents/trafficking-in-human-beings-financial-business-model

(126) Europol (2015) *The THB financial business model* (doc .ref. 766920), The Hague. https://www.europol.europa.eu/publications-documents/trafficking-in-human-beings-financial-business-model

(127) Eurostat (2018). *Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments 2018 edition*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec

between prostitution and trafficking of human beings, but for the purposes of compiling such statistics, requires to take the lack of consent of the victim to trafficking into account. This is because the rules for inclusion in the measure of GDP require all parties to do so by consent and the victim of trafficking is, by definition, not consenting since they do not have the freedom to consent.

7.2 Data sources and methods

7.2.1 Concept and measurement of lost economic output

There are several different ways to conceptualise and measure lost economic output. The main approaches concern hourly wages, annual earnings, and Gross Domestic Product (GDP) per capita (per person).

For approaches using wages and earnings, there is an issue as to how to address unpaid activities. Reed (et al., 2018) assumes that 64% of victims of crime are in paid work[128]. Zhang et al (2012) specify the losses for a range of activities paid and unpaid[129], and Helweg-Larson et al (2010) focus only on paid activity[130]. However, victims of trafficking are more likely to be of working age than victims of other crimes. It is not clear that any additional accuracy is generated, given current data limitations, by these adjustments.

For approaches using the concept of Gross Domestic Product per capita (GDP pc), the balance of paid and unpaid work is not a complicating issue, since GDP pc is an average for all people in the population unit.

Eurostat offers measures relevant to various concepts of GDP, earnings and labour costs. Eurostat defines these as follows:

Gross Domestic Product (GDP). At current prices GDP is a basic measure of the overall size of a country's economy. As an aggregate measure of production, GDP is equal to the sum of the gross value added of all resident institutional units engaged in production, plus any taxes on products and minus any subsidies on products. Gross value added is the difference between output and intermediate consumption.

GDP is also equal to:

- the sum of the final uses of goods and services (all uses except intermediate consumption) measured in purchasers' prices, minus the value of imports of goods and services;
- the sum of primary incomes distributed by resident producer units.

Earnings are the wage or salary paid to an employee. There are two main types:

- **Gross earnings** are paid in cash directly to an employee before any deductions for income tax and social security contributions paid by the employee. All bonuses, whether or not regularly paid, are included (13th or 14th month, holiday bonuses, profit-sharing, allowances for leave not taken, occasional commissions, etc.).
- **Net earnings** represent the part of remuneration that employees can actually spend and are calculated by deducting social security contributions and income taxes payable by employees from gross earnings and by adding family allowances if there are children in the family.

(128) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery*. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf.

(129) Zhang, T., Hoddenbagh, J., McDonald, S. and Scrim, K. (2012) *An Estimation of the Economic Impact of Spousal Violence in Canada 2009*, Department of Justice Canada, Ottawa, https://www.justice.gc.ca/eng/rp-pr/cj-jp/fv-vf/rr12_7/index.html

(130) Helweg-Larsen et al (2010) cost lost economic output by comparing the income and production of victims and non-victims, adjusted by socioeconomic status and age. No calculation of loss of unpaid labour was included. Helweg-Larsen, Karin, Marie Kruse, Jan Sørensen, and Henrik Brønnum-Hansen. 2010. Helweg-Larsen, K., Kruse, M., Sørensen, J. and Brønnum-Hansen, H. (2010) *The cost of violence - Economic and personal dimensions of violence against women in Denmark*. Denmark, National Institute of Public Health, University of Southern Denmark & Rockwool Fund Research Unit.

Labour costs includes wages and salaries, as well as non-wage costs (employers' social contributions plus taxes minus subsidies).

Eurostat provides data to support these different definitions. Annual gross earnings were considered as opposed to annual net earnings, as the latter depend on an individual employees' circumstances such as family situation (married vs. single), number of workers (in couples) and number of dependent children. The average gross earnings presented are for an average worker. Eurostat provides data for hourly labour costs, as opposed to annual labour costs. To allow for comparability with GDP per capita and annual gross earnings, annual labour costs were calculated using the hourly labour costs (EUR 26 for EU-28)[131], multiplied by an average of 6.45 hours per working day and then 260 working days per year. A summary of the values of the most relevant measures of economic output is provided in Table 7.2.1.

Table 7.2.1 Eurostat data relevant to lost economic output, EUR

	EU-28	EU-27
GDP per capita	29 310	28 160
Annual gross earnings	34 699	32 955
Annual labour costs (compensation of employees plus taxes minus subsidies)	43 602	:

Notes: Variables used: 'main GDP aggregates per capita [nama_10_pc]'; 'annual net earnings – by earning structure 'gross' [earn_nt_net]'; 'labour cost levels by NACE Rev. 2 activity [lc_lci_lev]'.
Data last updated: 06.02.20 for GDP pc, 20.01.20 for annual gross earnings, 18.06.19 for hourly labour costs. Data extracted: 07.02.20 for GDP pc, 11.02.20 for annual gross earnings and hourly labour costs.

The preferred method is GDP per capita. This is because it includes not only wages but also taxes and profits, and intrinsically contains adjustment for the balance of the population in employment or not. The figure for EU-28 GDP per capita of EUR 29 310 is lower than the figures for the annual gross earnings (EUR 34 699) and annual labour costs (EUR 43 602). As such, our calculations for lost economic output are using the most conservative option.

7.3 In trafficking

In phase 1, **in trafficking, 100% of the potential economic output is lost to the victim and to economy and society.** Only adults lose their potential economic output, since children are not expected to be in employment. **The duration in trafficking is estimated for adult victims of trafficking, as child victims of trafficking would not be in employment if they would not have been trafficked**. It is disaggregated by form of exploitation and by sex of victim (female/male).

Data on the duration in trafficking is found in a review of scientific literature. Information on duration in trafficking was extracted from all papers that met the inclusion criteria specified in the systematic review protocol. This was described in Section 2.6 (in the Section on Methodology) and is further detailed in Appendix 2.2.

The following studies contributed to the meta-analysis of the duration estimates of duration in trafficking for adults by type of exploitation: Cwikel et al. (2004)[132]; Gezie et al. (2019)[133]; Kiss et al. (2015a)[134]; Le (2014)[135];

(131) Eurostat does not provide data for EU-27.
(132) Cwikel, J., Chudakov, B., Paikin, M., Agmon, K., and Belmaker, R. H. (2004) 'Trafficked Female Sex Workers Awaiting Deportation: Comparison with Brothel Workers'. *Archives of Women's Mental Health*, 7 (4): 243–249.
(133) Gezie, L. D., Worku, A., Kebede, Y., and Gebeyehu, A. (2019) 'Sexual violence at each stage of human trafficking cycle and associated factors: a retrospective cohort study on Ethiopian female returnees via three major trafficking corridors.' *British Medical Journal* Open Access, 9: e024515.
(134) Kiss, L., Pocock, N., Naisanguansri, V., Suos, S., Dickson, B., Thuy, D., Koehler, J. et al (2015b) 'Health of Men, Women, and Children in Post-Trafficking Services in Cambodia, Thailand, and Vietnam: An Observational Cross-Sectional Study.' *The Lancet Global Health*, 3 (3): e154–e161.
(135) Le, P., (2014) *Human Trafficking and Psychosocial Well-Being: A Mixed-Methods Study of Returned Survivors of Trafficking in Vietnam*. Doctoral Dissertation, UCLA.

Oram et al. (2012)[136]; Oram et al. (2016)[137]; Rimal and Papadopoulos (2016)[138]; Scarsella (2017)[139] Tsutsumi et al. (2008)[140]; and Zimmerman et al. (2008)[141].

Table 7.3.1 provides the pooled point estimate of the duration in trafficking for adult victims in months and the 95% confidence intervals, disaggregated by the form of exploitation. In the Study, only the point estimates are used for costing calculation. The longest duration of trafficking is for victims of trafficking for other forms of exploitation at 16.2 months, followed by victims of trafficking for sexual exploitation at 15.4 months. The duration of trafficking for victims of trafficking for labour exploitation is 7.8 months. While offering a single point estimate, Table 7.3.1 also offers a range, a confidence interval, within which we can be confident 95% of the time.

Table 7.3.1 Duration of trafficking for adult victims, disaggregated by form of exploitation (sexual, labour, other)

Form of exploitation	Duration of trafficking (months)	Duration of trafficking (years)
Sexual	Pooled estimate: 15.4 months 95% CI: 5.8-25.0 months	1.28 years 95% CI: 0.48-2.08 years
Labour	Pooled estimate: 7.8 months 95% CI: 4.8-10.8 months	0.65 years 95% CI: 0.40-0.90 years
Other	Pooled estimate: 16.2 months 95% CI: 3.4-29.1 months	1.35 years 95% CI: 0.28-2.43 years

Source: review of scientific literature

Table 7.3.2 provides the duration of trafficking in months for all adult victims and by the sex of the victim, taking into account the profile of registered victims of trafficking in the EU in 2016.

Table 7.3.2 Duration of trafficking for adult victims, disaggregated by form of exploitation (sexual, labour, other) and sex

EU-27	Duration of trafficking (months)	Duration of trafficking (years)
All victims	**13.7**	**1.14**
Form of exploitation		
Sexual	15.4	1.28
Labour	7.8	0.65
Other	16.2	1.35
Sex of victim		
Female	15.0	1.25
Male	10.4	0.87

Sources: review of scientific literature; Data Report, Tables 3.4.2 and 3.5.2

(136) Oram, S., Ostrovschi, N.V., Gorceag, V.I., Hotineanu, M.A., Gorceag, L., Trigub, C., and Abas, M. (2012) 'Physical Health Symptoms Reported by Trafficked Women Receiving Post-Trafficking Support in Moldova: Prevalence, Severity and Associated Factors.' *Biomedcentral Women's Health* 12 (1): 20.

(137) Oram, S., Abas, M., Bick, D., Boyle, A., French, R., Jakobowitz, S,. Khondoker, M., Stanley, N., Trevillion, K., Howard, L.M. and Zimmerman, C. (2016) 'Human trafficking and health: a survey of male and female survivors in England.' *American Journal of Public Health*. 106(6):1073-1078.

(138) Rimal, R., and Papadopoulos, C. (2016) 'The Mental Health of Sexually Trafficked Female Survivors in Nepal.' *International Journal of Social Psychiatry*, 62 (5): 487–495

(139) Scarsella, G. M. (2017) 'The Relationship Between Trauma and Well-Being: Moral Emotions in Sex-Trafficked Women,' *Clinical Psychology Dissertations*.

(140) Tsutsumi, A., Izutsu, T., Poudyal, A.K., Kato, S., and Marui, E. (2008) 'Mental Health of Female Survivors of Human Trafficking in Nepal', *Social Science & Medicine*, 66 (8): 1841–1847.

(141) Zimmerman, C., Hossain, M., Yun, K., Gajdadziev, V., Guzun, N., Tchomarova, M., Ciarrocchi, R.A., et al. (2008) 'The Health of Trafficked Women: A Survey of Women Entering Posttrafficking Services in Europe.' *American Journal of Public Health*, 98 (1): 55–59.

Table 7.3.3 Lost economic output in trafficking per victim and for EU-28, by form of exploitation (sexual, labour, other), sex of victim (female, male), and age of victim (adult, child)

EU-28	Number of victims[a]	Number of adults[b]	Duration in trafficking (years)	GDP per capita (EUR)	GDP loss per adult victim (EUR)	Total loss (EUR)	Cost per victim (EUR)
Total	11 832	9 094		29 310	33 381	303 564 219	25 656
Form of exploitation							
Sexual	6 626	5 166	1.28	29 310	37 615	194 325 152	29 328
Labour	2 958	2 251	0.65	29 310	19 052	42 880 015	14 496
Other	2 248	1 677	1.35	29 310	39 569	66 359 052	29 518
Sex of victim							
Female	8 181	6 418	1.25	29 310	36 638	235 349 005	28 767
Male	3 651	2 676	0.87	29 310	25 402	68 215 214	18 686
Age of victim							
Child	2 738	0	1.14[c]	0	0	0	0
Adult	9 094	9 094	1.14[c]	29 310	33 413	303 564 219	33 381

[a] *Prevalence of physical violence, sexual violence, and threat among victims of each form of trafficking were estimated by meta-analysis of data from the systematic review. These rates were applied to the number trafficking victims registered in EU-28 in 2016, according to their age and sex profile within form of exploitation.*
[b] *The number of adults was estimated by applying the proportion of adults from the Data Report (77%) to the number of registered victims*
[c] *There was no disaggregation by the age of the victim for the duration in trafficking*

Table 7.3.4 Lost economic output in trafficking per victim and for EU-27, by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (adult, child)

EU-27	Number of victims[a]	Number of adults[b]	Duration in trafficking (years)	GDP per capita (EUR)	GDP loss per adult victim (EUR)	Total loss (EUR)	Cost per victim (EUR)
Total	8 027	6 405		28 160	33 747	216 158 756	26 929
Form of exploitation							
Sexual	5 137	4 101	1.28	28 160	36 139	148 189 382	28 846
Labour	1 124	997	0.65	28 160	18 304	18 243 240	16 234
Other	1 766	1 308	1.35	28 160	38 016	49 726 135	28 158
Sex of victim							
Female	6 143	4 915	1.25	28 160	35 200	174 627 344	28 426
Male	1 883	1 490	0.87	28 160	24 405	41 531 413	22 053
Age of victim							
Child	1 621	0	1.14[c]	28 160	0	0	0
Adult	6 405	6 405	1.14[c]	28 160	32 102	216 158 756	33 747

[a] *Prevalence of physical violence, sexual violence, and threat among victims of each form of trafficking were estimated by meta-analysis of data from the systematic review. These rates were applied to the number trafficking victims registered in EU-27 in 2016, according to their age and sex profile within form of exploitation.*
[b] *The number of adults was estimated by applying the proportion of adults from the Data Report (80%) to the number of registered victims*
[c] *There was no disaggregation by the age of the victim for the duration in trafficking*

7.4 In services

In phase 2, **in services, 100% of the potential economic output is lost while the victim is in specialised services and helping law enforcement**. Data on duration is provided by the National Rapporteurs and equivalent mechanisms, see Table 7.4.1.

Table 7.4.1 Average duration in specialised services for adult victims

EU-28	EU-28	EU-27
Average number of days in services per victim	159	134
Average number of years in services per victim	0.44	0.37

Source: EU National Rapporteurs and equivalent mechanisms

To calculate the average GDP lost per victim of trafficking whilst in services, the average duration in specialised services (0.44 years for EU-28, 0.37 years for EU-27) was multiplied by the average GDP per capita for EU-28 (EUR 29 310) and EU-27 (EUR 28 160). Victims lose 100% of economic output whilst in services and so the total GDP lost for victims in services for EU-28 is EUR 117 280 374 and for EU-27 is EUR 66 737 989. The total lost was divided by the number of registered victims in EU-28 (11 832) and EU-27 (8 027) to provide the average cost per victim for EU-28 (EUR 9 912) and for EU-27 (EUR 8 314).

Table 7.4.2 GDP lost per victim

	EU-28			EU-27		
	Duration in services (years)	GDP per capita (EUR)	GDP lost per victim (EUR)	Duration in services (years)	GDP per capita (EUR)	GDP lost per victim (EUR)
All victims	0.44	29 310	12 896	0.37	28 160	10 419

Sources: columns 2, 5 EU National Rapporteurs and equivalent mechanisms, columns 3, 6 Eurostat

Table 7.4.3 Total cost of GDP lost in services per victim and for EU-28/27

	EU-28			EU-27		
	Estimated number of adults	Total GDP lost (EUR)	Cost per victim (EUR)	Estimated number of adults	Total GDP lost (EUR)	Cost per victim (EUR)
All victims	9 094	117 280 374	9 912	6 405	66 737 989	8 314

Sources: columns 2, 5 Table 7.4.2; columns 3, 6 estimated from 78.8% of registered victims, Data Report, Table 3.5.3

7.5 Post-trafficking

In the third phase, **some economic output potential is lost for several years after trafficking. Child victims are included in the calculation of lost economic output post-trafficking as the post-trafficking effects are estimated to last for multiple years and so likely continue into the adulthood of child victims**. Analysis takes place in two steps.

In Step one, **data on the duration and percentage of economic output lost for victims of physical violence, sexual violence and threats is found in the APMS. This is estimated from the increased likelihood of being unemployed or unable to work due to sickness among victims of physical violence, sexual violence or threat as compared to non-victims** (See Tables 7.5.1, 7.5.2 and 7.5.3).

Table 7.5.1 draws shows that people who have experienced sex or other forms of sexual contact without consent were nearly twice as likely as people who had not experienced this to subsequently be unemployed or unable to work due to sickness (13.5%, cf. 6.9%). The p value for this association indicated that it was statistically significant, and therefore that it was unlikely that the result was due to chance. To check that the association, however, was not due to other characteristics that victims might share the analysis was also carried out with adjustment for people's demographic and socioeconomic characteristics, as well as whether they had experienced physical violence as a child or in adulthood. After such adjustments, the predicted prevalence of being unemployed or unable to work due to sickness was 10.9% in people who had experienced sex/sexual contact without consent. This figure was ratioed to the rate for the whole population, generating a multiplier of 1.5.

Table 7.5.1 Prevalence of being unemployed or unable to work due to sickness by sex/sexual contact without consent, unadjusted and adjusted marginal effect

Sex/sexual contact without consent	Unadjusted				Adjusted			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.9	<0.001	6.2	7.7	7.0	0.002	6.3	7.7
Yes	13.5		10.1	16.9	10.9		8.1	13.8
Multiplier	1.8				1.5			

P value for the logistic regression. Adjusted for age, sex, ethnic group, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table 7.5.2 shows that people who had experienced physical violence, after adjustment for other factors, were about 1.2 times more likely than people who had not experienced physical violence to be unemployed or unable to work due to sickness.

Table 7.5.2 Prevalence of being unemployed or unable to work due to sickness by any physical violence, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Adjusted			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.3	<0.001	5.5	7.1	6.4	<0.001	5.5	7.2
Yes	12.9		11.1	14.7	9.5		8.0	11.0
Multiplier:	1.7				1.2			

P value for the logistic regression. Adjusted for age, sex, ethnic group, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table 7.5.3 shows that people who had experienced threat, after adjustment for other factors, were not significantly more likely than other people to be unemployed or unable to work due to sickness. The approach to estimating duration of effects in people exposed to violence is detailed in Appendix 6. Analysis of general population mental health survey data indicated that elevated rates of some harms were evident at least 2.7 years after exposure to threat/coercion, 10.6 years after exposure to physical violence, and 17.0 years after exposure to sexual violence. These estimates are approximate, making best use of the data available. They provide an estimate of duration since most recent exposure to violence, they do not take account of repetition and thus should be considered underestimates.

Table 7.5.3 Duration and multiplier economic output lost for victims of physical violence, sexual violence and threats

EU-28	Unemployed or unable to work due to sickness	Employed	Minimum duration in years
Physical violence	1.2	[1.0]	10.6
Sex/sexual contact without consent	1.5	[0.9]	17.0
Threat	[1.7]	1.1	2.7

Square brackets indicate the result was not significantly different from those not exposed to violence at the 95% level.

In Step 2, this is re-profiled to victims of trafficking using the data in Table 2.6.1 derived from the review of scientific literature (see Table 7.5.4 and 7.5.5). Table 7.5.4 shows the total lost economic output associated with the experience of physical violence and the experience of sexual violence; these are summed to provide a total. No costs are included for threat as there was insufficient robust evidence to include this. By dividing the total by the number of registered victims, a per victim rate was generated. To take some account of the fact that, on average, impact on child victims will be greater than the impact on adult victims, a multiplier of 1.3 was applied to the proportion who were children when registered. The child multiplier is discussed in Section 6.4.5. Overall, the average lost economic output per victim was estimated at EUR 23 969; this was higher for children than adults, higher for women than men, and higher for those trafficked for sexual exploitation. The values for EU-27 are presented in Table 7.5.5.

Table 7.5.4 Lost economic output for victims of trafficking, post-trafficking, EU-28, EUR

EU-28	Lost economic output due to physical violence	Lost economic output due to sexual violence	Lost economic output due to threat	Total lost economic output (without child multipliers)	Average lost per victim (without child multipliers)	Total lost economic output (with child multipliers)	Average lost per victim (with child multipliers)
Total	76 934 634	188 463 155	-	265 397 788	22 431	283 604 465	23 969
Form of exploitation							
Sexual	46 362 887	138 448 598	-	184 811 486	27 892	197 025 677	29 736
Labour	14 610 154	18 542 223	-	33 152 377	11 208	35 530 397	12 012
Other	15 961 593	31 472 333	-	47 433 926	21 100	51 048 391	22 708
Sex of victim							
Female	56 292 363	153 258 764	-	209 551 127	25 613	223 062 678	27 265
Male	20 642 271	35 204 391	-	55 846 662	15 298	60 541 787	16 584
Age of victim							
Child	17 761 276	42 927 644	-	60 688 921	22 166	78 895 597	28 815
Adult	59 173 357	145 535 510	-	204 708 868	22 510	204 708 868	22 510

Prevalence of physical violence, sexual violence, and threat among victims of each form of trafficking were estimated by meta-analysis of data from the systematic review. These rates were applied to the number trafficking victims registered in EU-28 in 2016, according to their age and sex profile within form of exploitation.

Table 7.5.5 Lost economic output for victims of trafficking, post-trafficking, EU-27, EUR

EU-27	Lost economic output due to physical violence	Lost economic output due to sexual violence	Lost economic output due to threat	Total lost economic output (without child multipliers)	Average lost per victim (without child multipliers)	Total lost economic output (with child multipliers)	Average lost per victim (with child multipliers)
Total	51 913 990	133 651 196	-	185 565 186	23 118	197 076 930	24 552
Form of exploitation							
Sexual	34 535 262	103 130 896	-	137 666 158	26 797	145 982 571	28 416
Labour	5 332 651	6 767 965	-	12 100 616	10 768	12 511 190	11 133
Other	12 046 077	23 752 334	-	35 798 412	20 272	38 583 170	21 849
Sex of victim							
Female	40 892 302	112 793 114	-	153 685 416	25 017	162 923 077	26 521
Male	11 018 234	20 847 769	-	31 866 003	16 921	34 153 853	18 136
Age of victim							
Child	10 692 433	27 725 939	-	38 418 372	23 698	49 943 883	30 807
Adult	41 218 103	105 914 944	-	147 133 047	22 971	147 133 047	22 971

Prevalence of physical violence, sexual violence, and threat among victims of each form of trafficking were estimated by meta-analysis of data from the systematic review. These rates were applied to the number trafficking victims registered in EU-27 in 2016, according to their age and sex profile within form of exploitation.

The total lost economic output post-trafficking per victim and EU-28/27 total is given in Table 7.5.6.

Table 7.5.6 Total lost economic output, post-trafficking per victim and for EU-28/27, EUR

	EU-28		EU-27	
	GDP lost per victim	Total GDP lost	GDP lost per victim	Total GDP lost
All victims	23 969	283 604 465	24 552	197 076 930

7.6 Adding up lost economic output

The total lost economic output per victim and for EU-28/27 for each phase of trafficking was added together to provide the total lost economic output due to trafficking per victim and for EU-28/27. The total cost for EU-28 (EUR 704 449 058) is divided by the total number of victims (11 832) to provide the cost per victim EUR 59 537. The total cost for EU-27 (EUR 479 973 675) is divided by the total number of victims (8 027) to provide the cost per victim EUR 59 795.

The total lost economic output is shown in Table 7.6. This Table draws together estimated lost economic output associated with each stage of trafficking (in trafficking, in specialised services, and post-trafficking), these are summed to produce a total: EUR 59 537 per victim in EU-28 and EUR 59 795 per victim in EU-27.

Table 7.6 Cost of lost economic output per victim and for EU-28/27, by phase of trafficking (in trafficking, in services, post-trafficking), EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
All victims	59 537	704 449 058	59 795	479 973 675
Form of trafficking				
In trafficking (adults)	25 656	303 564 219	26 929	216 158 756
In services (adults)	9 912	117 280 374	8 314	66 737 989
Post-trafficking	23 969	283 604 465	24 552	197 076 930

7.7 Summary of costs of lost economic output

The total lost economic output per victim of trafficking and for EU-28/27 is shown in Table 7.7.1.

Table 7.7.1 Cost of lost economic output per victim and for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Lost economic output	59 537	704 449 058	59 795	479 973 675

The total cost of lost economic output is disaggregated by the form of exploitation and sex of the victim (See Table 7.7.2). Lost economic output was greater: for those trafficked for reasons of sexual exploitation than for other reasons, among women than men, and among adults compared to children. The higher rate in adults is because lost economic output was not considered to apply to children during the period they were in trafficking or services.

Table 7.7.2 Lost economic output per victim and for EU-28/27, by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (child, adult), EUR

	EU-28		EU-27	
	Per victim average	Total	Per victim average	Total
Total	59 538	704 449 058	59 795	479 973 675
Form of exploitation				
Sexual	69 119	457 976 595	65 579	336 896 683
Labour	36 321	107 436 884	36 608	41 139 043
Other	61 846	139 035 579	57 724	101 937 950
Sex of victim				
Female	66 149	541 185 460	63 283	388 761 085
Male	44 722	163 263 597	48 434	91 212 590
Age of victim				
Child	28 815	78 895 597	30 807	49 943 883
Adult	68 787	625 553 461	67 137	430 029 792

8 Lost quality of life

8.1 What is lost quality of life?

Victims of trafficking are subject to physical violence, sexual violence and threats that reduce the length and quality of life. These losses in quality and length of life may be considered 'intangible' in that they do not have a direct monetary value, but they matter to people. In costing studies, a value is placed on these losses in quality and length of life. This is so that these losses can be taken into account when deciding on priorities for public expenditure. The European Commission guides to costing methodology include sections on costing intangibles see European Commission 2015 Better Regulation Guidelines and Toolbox.

Estimating the value that is to be placed on the quality of life involves two kinds of information: the measurement of the severity of the loss; and, the priority the public places on different kinds of loss. The first can be addressed by routine scientific enquiry. The second requires an engagement with public priorities over what is meant by the quality of life. This often involves the notion of the public's 'willingness to pay' to avoid different kinds of harm befalling themselves and others. This is researched by asking people to compare harms, rather than asking people to produce a monetary value themselves, then 'chaining' these comparisons together. Appendix 8 offers a brief summary of this field as relevant to this Study.

Among the various approaches to this valuation is that of the Global Burden of Disease (GBD), which is emerging as the lead approach after a long period of development. The GBD has amassed a body of scientific evidence and information about preferences using a health perspective. This uses a concept of quality adjusted life year (or in reverse, disability adjusted life years). It offers an authoritative valuation for various health states, which can be mobilised in a variety of settings. Placing a monetary value on a life year is a further step to enable the utilisation of QALYs in costing methodology.

We estimate reduction in quality of life, but not reduction in length of life: these cost estimates should therefore be considered conservative.

8.2 Data sources and methods

8.2.1 Introduction

The approach here broadly follows the health-oriented framework of the Global Burden of Disease, in which disability weights are applied to particular injuries and health conditions in order to estimate their impact on Quality Adjusted Life Years (QALYs). This is combined with the benchmark valuations provided by the European Commission.

The EU offer benchmarks to estimate the value of the statistical value of a human life and of the value of a year of life lived without disability (European Commission 2009). The value placed on a statistical life (VOSL) is 1-2 million Euros. We take the midpoint. The value placed on a year of life lived without disability (VOLY) in Europe is EUR 50,000-EUR 100,000. We take the midpoint.

We consider costs resulting from reduced quality of life at two stages in the journey of a victim of trafficking: while in trafficking (Section 8.3) and post-trafficking (Section 8.4).

8.2.2 Physical injuries during trafficking

The systematic review provided estimates of the prevalence of physical violence, sexual violence and threat/coercion by whether victims were trafficked for sexual, labour or other forms of exploitation. The systematic review, however, could not provide estimates of the prevalence of specific physical injuries. Data from a general population crime survey, CSEW, was therefore used to estimate the prevalence of specific physical injuries sustained in typical incidents of physical violence, sexual violence and threat/coercion. By combining these data sources, we were able to estimate the extent of different types of physical injuries among people trafficked for different reasons. Using the disability weights produced by the GBD for each type of physical injury[142], the Value of a Life Year lived in full health (VOLY) as recommended by the European Commission (2009)[143], and estimates of injury duration from a previous study (Reed et al., 2018)[144] we could place a monetary value to these injuries. These stages of analysis are set out in Tables 8.3.1 and 8.3.2. The estimated costs overall, by form of exploitation, and by age and sex of victim are provided Table 8.3.3. These costs for physical injuries sustained during trafficking are conservative because: a) typical incidents of violence reported to the general population survey (CSEW) may be less severe than those experienced during trafficking, and b) because we did not have data on repetition and thus assumed that if a physical injury was experienced it was experienced once only.

8.2.3 Homicides during trafficking

The number of homicides that occur in the EU each year due to trafficking is estimated. By applying estimates of the average number of life years lost by victims of trafficking who were killed (from the scientific literature on domestic homicide) to the value of a year in full health (EUR 75,000), a monetary value was given to the health impact of homicide. It was assumed that there was no variation in the likelihood of homicide by age, sex, or type of exploitation.

8.2.4 Fear, depression and anxiety during trafficking

Analysis of data from the Protect study (Oran et al., 2016) [145] was used to estimate the prevalence of mental health conditions in people recently trafficked for sexual, labour or other forms of exploitation (see Table 8.3.4). Two mental health conditions were considered: depression and post-traumatic stress disorder (PTSD). Probable depressive disorder was identified on the Protect study with a score of 9 or more on the Patient Health Questionnaire-9 (Kroenke et al., 2001).[146] A positive screen was given a disability weight of 0.396, which we linked to the

(142) Global Burden of Disease Study (2017) (GBD 2017) *Disability Weights* http://ghdx.healthdata.org/record/ihme-data/gbd-2017-disability-weights

(143) European Commission (2009) *Annexes to Impact Assessment Guidelines*. https://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/iag_2009_annex_en.pdf

(144) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery*. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf.

(145) Oram, S., Abas, M., Bick, D., Boyle, A., French, R., Jakobowitz, S,. Khondoker, M., Stanley, N., Trevillion, K., Howard, L.M. and Zimmerman, C. (2016) 'Human trafficking and health: a survey of male and female survivors in England.' *American Journal of Public Health*. 106(6):1073-1078.

(146) Kroenke, K., Spitzer, R. L., Williams, J. B. (2001) 'The PHQ-9: validity of a brief depression severity measure.' *Journal of General Internal Medicine*. 2001;16(9):606–613

GBD weight for moderate Major Depressive Disorder. Probable PTSD was identified with a score of 3 or more on the 4-item version of the PTSD Checklist–Civilian (Prins et al., 2004), a positive screen was given a disability weight of 0.133, provided by the GBD for moderate Anxiety Disorder.[147] These prevalence figures were applied to the profile of the trafficked population (age by sex, within form of trafficking), along with the appropriate GBD disability weights and the VOLY. Consistent with the approach taken in Reed et al. (2018), it was assumed that all victims of trafficking experienced fear, and so this was given a prevalence of 100% and a disability weighting of 0.03. Also consistent with Reed et al., fear and other emotional harms were assumed to last for the duration of time in trafficking. Average duration of time in trafficking by form of exploitation is derived from the systematic review.

8.2.5 Mental health harms post-trafficking

Results presented in Section 6.4 provides evidence that exposure to violence can have long-term causal consequences for mental health. Data from the general population Adult Psychiatric Morbidity Survey (APMS) underpinned estimates of the extent and duration of limiting mental health conditions experienced in the years after trafficking. First the survey was used to estimate the prevalence of limiting mental health condition in people exposed to sexual violence, physical violence and threat/coercion compared to the population as a whole. Rates were adjusted for a range of potential confounding factors, including experience of other types of violence. These rates were ratioed to produce an adjusted multiplier. The GBD disability weight used was for mild Major Depressive Disorder (0.145), a lower weight than that used for depression experienced during trafficking.

The approach to estimating duration of effects in people exposed to violence is detailed in Appendix 6, alongside detailed explanation of measures used and how the multipliers were derived. Analysis of general population mental health survey data indicated that elevated rates of limiting mental health conditions were evident at least 2.7 years after exposure to threat/coercion, 10.6 years after exposure to physical violence, and 17.0 years after exposure to sexual violence. These estimates are approximate, making best use of the data available. They provide an estimate of duration since most recent exposure to violence, they do not take account of repetition and thus should be considered underestimates.

The increased rate and the duration of mental health conditions in people exposed to sexual violence, physical violence and threat was applied to the proportion of victims of sexual, labour and other forms of exploitation estimated to have experienced each form of violence (established by the systematic review). These rates were apportioned to the age-by-sex within exploitation form profile of registered victims. A multiplier of 1.3 i applied to child victims: the rationale and derivation of this figure is described in section 6.4. Costs were produced overall, by form of exploitation, and by age and sex of victim by combining this information with the VOLY of EUR 75,000 applied throughout the study.

8.3 Health harms while in trafficking and lost quality of life

8.3.1 Physical injuries

Physical injuries are reported by some victims of violent incidents (but not all). As described in Section 6.4, bruising, black eyes, cuts and scratches were the most common forms of physical injury reported. Table 8.3.1.1 shows that the GBD disability weights for the physical injuries considered range from 0.002 for scratches to 0.11 for concussion/lost consciousness. Estimates of injury duration also varied, from 0.002 years (scratches) to 0.154 years (dislocation of joints).

Tables 8.3.1.2 and 8.3.1.3 set out the costs to quality of life of physical injuries sustained during trafficking in EU-28 and in EU-27. **The largest costs resulted from severe bruising and broken bones.** The total cost for EU-28 is EUR 1 173 454 (EUR 99 per victim) and for EU-27 is EUR 836 370 (EUR 104 per victim). **Per victim costs are highest for those trafficked for sexual exploitation** (EUR 114 in EU-28 and 27) **and lowest for those trafficked for labour exploitation** (EUR 65 in EU-28 and 27**). Per victim costs are higher for female victims** (EUR 108 EU-28; EUR 114 EU-27) than male victims (EUR 79 EU-28; EUR 87 EU-27).

The costs attributed to physical injuries are small. This is may be for the reasons outlined in Section 8.2. Our conservative approach **likely underestimates prevalence and severity of injuries, and because no account was taken of repetition** (it was assumed if an injury was sustained that this occurred just once).

[147] Prins, A., Ouimette, P., Kimerling, R. (2004) 'The Primary Care PTSD Screen (PC-PTSD): development and operating characteristics.' *Prim Care Psychiatry.* 9(1):9–14

Table 8.3.1.1 Prevalence of physical injuries in people in the general population exposed to physical violence, sexual violence and threat/duration and associated disability weights and injury duration

Type of physical injury[a]		Type of violence			Disability weight[b]	Duration[c]	Value of year of life[d]
		Physical	Sexual	Threat	(QALY)	(years)	(EUR)
Bruising/black eye	Prevalence (%):	32	14	1	0.026	0.0288	75 000
	Cost per person exposed to violence (EUR):	18.0	7.9	0.6			
Severe bruising	Prevalence (%):	15	8	1	0.052	0.0575	75 000
	Cost per person exposed to violence (EUR)	33.6	17.9	2.2			
Scratches	Prevalence (%):	12	6	0	0.002	0.006	75 000
	Cost per person exposed to violence (EUR):	0.1	0.1	0.0			
Cuts	Prevalence (%):	16	4	0	0.006	0.024	75 000
	Cost per person exposed to violence (EUR):	1.7	0.4	0.0			
Puncture/stab wounds	Prevalence (%):	1	1	0	0.103	0.0575	75 000
	Cost per person exposed to violence (EUR):	4.4	4.4	0.0			
Broken bones	Prevalence (%):	3	1	1	0.103	0.115	75 000
	Cost per person exposed to violence (EUR):	26.7	8.9	8.9			
Nose bleed	Prevalence (%):	2	1	0	0.006	0.0027	75 000
	Cost per person exposed to violence (EUR):	0.0	0.0	0.0			
Broken nose	Prevalence (%):	2	1	0	0.067	0.059	75 000
	Cost per person exposed to violence (EUR):	5.9	3.0	0.0			
Broken/lost tooth	Prevalence (%):	1	1	0	0.034	0.0192	75 000
	Cost per person exposed to violence (EUR):	0.5	0.5	0.0			
Chipped tooth	Prevalence (%):	1	0	0	0.017	0.0192	75 000
	Cost per person exposed to violence (EUR):	0.2	0.0	0.0			
Dislocation of joints	Prevalence (%):	1	0	0	0.062	0.154	75 000
	Cost per person exposed to violence (EUR):	7.2	0.0	0.0			
Concussion/lost consciousness	Prevalence (%):	3	1	0	0.11	0.0335	75 000
	Cost per person exposed to violence (EUR):	8.3	2.8	0.0			
Facial/head injuries	Prevalence (%):	1	1	0	0.006	0.024	75 000
	Cost per person exposed to violence (EUR):	0.1	0.1	0.0			
Internal injuries	Prevalence (%):	1	1	0	0.052	0.0575	75 000
	Cost per person exposed to violence (EUR):	0.9	0.9	0.0			
Eye/facial injuries due to acid/other	Prevalence (%):	1	1	0	0.054	0.0192	75 000
	Cost per person exposed to violence (EUR):	0.8	0.8	0.0			

[a] The prevalence of each type of physical injury in people exposed to sexual violence, physical violence, and threat/coercion was estimated by analysing data from the Crime Survey for England and Wales.
[b] Disability weights (QALYs) were derived from the Global Burden of Disease (GBD).
[c] Estimates of the duration of injury (and those disability weights not available in the GBD) were drawn from Reed et al. (2018).
[d] The Value of a Life Year in full health was taken as the mid-point of the range recommended in the European Commission (2009) Impact Assessment Guidelines. No inflation has been applied to this rate.

Table 8.3.1.2 shows the breakdown of costs associated with each type of physical injury for EU-28, and Table 8.3.1.3 shows these for EU-27. Costs were highest for severe bruising and broken bones. Costs are also broken down by types of exploitation, sex and age. Per victim costs were higher for female victims than for male, and for those trafficked for reasons of sexual exploitation compared with those trafficked for other reasons.

Table 8.3.1.2 Lost quality of life due to physical injuries during trafficking: per victim and for EU-28, by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (adult, child), EUR

Physical injuries during trafficking	Total costs to quality of life[a]	Average cost per victim (assumes no repetition)[b]
Total cost	**1 173 454**	**99**
Bruising/black eye	215 688	18
Severe bruising	335 314	28
Scratches	1 295	0
Cuts	16 816	1
Puncture/stab wounds	73 274	6
Broken bones	279 389	24
Nose bleed	190	0
Broken nose	71 073	6
Broken/lost tooth	8 077	1
Chipped tooth	1 830	0
Dislocation of joints	53 540	5
Concussion/lost consciousness	86 918	7
Facial/head injuries	1 782	0
Internal injuries	15 440	1
Eye/facial injuries due to acid/other	12 827	1
Form of exploitation		
Sexual	752 635	114
Labour	191 699	65
Other	229 222	102
Sex of victim		
Female	886 579	108
Male	286 976	79
Age of victim		
Child	269 863	99
Adult	903 692	99

[a] Costs were applied to the proportion of victims of trafficking estimated to have experienced each type of injury, to fit the profile of the EU 2016 trafficked population in terms of age by sex within form of exploitation. Disability weights for injuries were drawn from the Global Burden of Disease. Some disability weights (where these were not available in GBD) and all estimates of injury duration drawn from Reed et al (2018). The VOLY (EUR 75,000) was derived from European Commission (2009) Impact Assessment Guidelines.
[b] These costs assume that if a victim sustained a type of injury (e.g. bruising) due to exposure to a type of violence (e.g. sexual violence) that this will have occurred just once while in trafficking.

Table 8.3.1.3 Lost quality of life due to physical injuries during trafficking: per victim and for EU-27, by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (adult, child), EUR

Physical injuries during trafficking	Total costs to quality of life[a]	Average cost per victim (assumes no repetition)[b]
Total cost	**836 370**	**104**
Bruising/black eye	154 051	19
Severe bruising	238 071	30
Scratches	927	0
Cuts	11 950	1
Puncture/stab wounds	52 898	7
Broken bones	199 097	25
Nose bleed	147	0
Broken nose	50 875	6
Broken/lost tooth	5 831	1
Chipped tooth	1 286	0
Dislocation of joints	37 604	5
Concussion/lost consciousness	61 939	8
Facial/head injuries	1 286	0
Internal injuries	11 147	1
Eye/facial injuries due to acid/other	9 260	1
Form of exploitation		
Sexual	583 541	114
Labour	72 829	65
Other	180 061	102
Sex of victim		
Female	673 117	110
Male	163 255	87
Age of victim		
Child	172 627	106
Adult	663 745	104

[a] Costs were applied to the proportion of victims of trafficking estimated to have experienced each type of injury, to fit the profile of the EU 2016 trafficked population in terms of age by sex within form of exploitation. Disability weights for injuries were drawn from the Global Burden of Disease. Some disability weights (where these were not available in GBD) and all estimates of injury duration drawn from Reed et al (2018). The VOLY (EUR 75,000) was derived from European Commission (2009) Impact Assessment Guidelines.
[b] These costs assume that if a victim sustained a type of injury (e.g. bruising) due to exposure to a type of violence (e.g. sexual violence) that this will have occurred just once while in trafficking.

8.3.2 Death due to trafficking

It was estimated that on average two homicides occur in the EU each year due to trafficking. Since there are no published data on the number of homicides of victims of trafficking, an estimate was derived using the ratio of lethal violence (homicide) to non-lethal violence found in other situations. The ratio of homicide to violent crime estimated using crime statistics in one country was applied to the number of registered victims of trafficking in the EU estimated to have suffered physical violence.

The Home Office report[148] on the costs of crime provides the number of homicides and number of violent crimes from the CSEW for 2015/16. The report outlines the number of police recorded homicides as being 570[149], which represents the number of homicide victims. For violent crime (violence with injury and violence without injury), the estimated total number of crimes in England and Wales in 2015/16 was 1,957,830 (1,104,930 crimes of violence with injury and 852,900 crimes of violence without injury)[150]. In this case the number of crimes is not equal to the number of victims, as one victim could have experienced multiple incidences of violence[151]. Although these figures refer to the number of crimes as opposed to the number of victims (which would be lower), it was equated with the number of victims for the purposes of this estimation. **Assuming it to be the number of victims results in an underestimate of the ratio and is therefore a more conservative estimate.**

The number of homicides was divided by the number of violent crimes (assumed to be the number of victims) to give a ratio of 0.00029 victims of homicide per victim of violence. This ratio was applied to the number of registered victims of trafficking in the EU who experienced physical violence. As indicated in Section 2, 63% of victims of trafficking experienced physical violence in EU-28 (65% in EU-27). This means 7 477 victims of trafficking experienced physical violence in EU-28 (5 251 in EU-27). The ratio of 0.00029 victims of homicide per victim of violence was then applied to the number of victims who experienced physical violence, resulting in a total of 2.17 homicides as a result of trafficking for EU-28 (1.52 for EU-27). Both of these estimates were rounded to whole numbers, resulting in 2 homicides as a result of trafficking in both EU-28 and EU-27. See Table 8.3.2.1.

Table 8.3.2.1 Estimated number of homicides as a result of trafficking, EU-28/27

Physical injuries during trafficking	EU-28	EU-27
Number of registered victims	11 832	8 027
Number of victims of trafficking experiencing violence[152]	7 477	5 251
Number of homicides as a result of trafficking after ratio of homicides to violence applied	2.17	1.52
Number of homicides as a result of trafficking rounded to whole number	**2**	**2**

The Global Burden of Disease attributes disability weights to different states. The weight given to death is 1. The value used in this Study for a year of life in full health is EUR 75,000. For duration, an estimate is needed for the number of years lost due to the homicide. Information on the age of people killed during trafficking is not available. However, Oliver et al. estimated number of years of life lost due to domestic homicide.[153] By estimating the difference between the average age when victims were killed against average life expectancy, produced an average loss of 34.6 years for a domestic homicide. In producing a breakdown by age, sex, and form of exploitation, it was assumed that there was no variation in likelihood of homicide between these groups. In addition, no adjustment was made for the greater duration of years lost if the homicide victim was a child.

Table 8.3.2.2 Lost quality of life due to homicide in trafficking

Physical injuries during trafficking	N	Disability weight	Duration (estimated years lost)	VOLY	Total
			(years)	(EUR)	(EUR)
Homicide	2	1.00	34.6	75 000	5 190 000

(148) Heeks, M., Reed, S., Tafsiri, M., and Prince, S. (2018) *The Economic and Social Costs of Crime*. 2nd edn. Research Report 99. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf

(149) Heeks, M., Reed, S., Tafsiri, M., and Prince, S. (2018) *The Economic and Social Costs of Crime*. 2nd edn. Research Report 99. London: Home Office p.21 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf

(150) Heeks, M., Reed, S., Tafsiri, M., and Prince, S. (2018) *The Economic and Social Costs of Crime*. 2nd edn. Research Report 99. London: Home Office p.21 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf

(151) The maximum number of crimes per victim counted in the total estimates was 5, following ONS capping methodology at the time of the publication of the Home Office report.

(152) 63% for EU-38, 65% for EU-27. The percentages have been rounded to the whole nearest whole number, but the calculations of number of victims experiencing violence have been done using the full raw percentage figures.

(153) Oliver, R., Barnaby, A., Roe, S., Wlasny, M. (2019) *The economic and social costs of domestic abuse*. Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/772180/horr107.pdf

Tables 8.3.2.3 and 8.3.2.4 show the lost quality of life costs attributable to homicide in EU-28 and EU-27. It is estimated that two homicides per year are attributable to trafficking. The costs associated with these are divided by the number of registered victims to generate a per victim figure. Because the characteristics of trafficking-related homicide victims are not known, the per victim rate does not vary between groups.

Table 8.3.2.3 Lost quality of life due to homicide: per victim and for EU-28, by form of exploitation, sex and adult/child

EU-28	Number of victims[a]	Total cost (EUR)	Average cost per victim (EUR)
Total	11 832	5 190 000	439
Form of exploitation			
Sexual	6 626	2 906 435	439
Labour	2 958	1 297 500	439
Other	2 248	986 065	439
Sex of victim			
Female	8 181	3 591 459	439
Male	3 651	1 602 789	439
Age of victim			
Child	2 738	1 201 982	439
Adult	9 094	3 992 266	439

Table 8.3.2.4 Lost quality of life due to homicide: per victim of trafficking and EU-27 total, by form of exploitation, sex and adult/child

EU-27	Number of victims[a]	Total cost (EUR)	Average cost per victim (EUR)
Total	8 027	5 190 000	647
Form of exploitation			
Sexual	5 137	3 321 419	647
Labour	1 124	727 228	647
Other	1 766	1 142 602	647
Sex of victim			
Female	6 143	3 974 521	647
Male	1 883	1 218 301	647
Age of victim			
Child	1 621	1 048 787	647
Adult	6 405	4 144 035	647

8.3.3 Harms to emotional health while in trafficking

Trafficking can cause depression and PTSD, which reduce the quality of life.

Analysis of data from the Protect study **identified depression in 57.9% of people with recent experience of having been trafficked for sexual exploitation and PTSD in 62.8%** (Table 8.3.3.1). **Those trafficked for domestic servitude had similar rates.** Because most of the victims registered in the 'other' group were trafficked for domestic exploitation, these groups were treated as equivalent. **Rates of depression and PTSD were lower in those trafficked for labour exploitation. Victims of all forms of exploitation were assumed to have experienced fear.**

Table 8.3.3.1 Prevalence of emotional harms in victims of sexual, labour and other forms of exploitation in trafficking

Emotional harm	Sexual (%)	Labour (%)	Domestic (%)
Fear	100	100	100
Depression	57.9 (22/38)	29.4 (14/51)	53.9 (21/39)
Post-traumatic stress disorder (PTSD)	62.8 (27/43)	31.5 (17/54)	58.5 (24/41)

Source: The Protect Study. Fear was assumed to be experienced by 100%.

Table 8.3.3.2 shows the value of the lost quality of life per victim per year associated with different types of emotional harms. The average loss per person experiencing the emotional harm per year was estimated as: DALY * VOLY (euros). The higher costs associated with depression is driven by its higher disability weight. While the lower mild Major Depressive Disorder weight (0.145) is applied for post-trafficking mental health, depression during trafficking is assumed to be more severe and is given the moderate Major Depressive Disorder weight (0.396) (also used by Reed et al., 2018)[154]. Reed et al. provided the disability weight of 0.03 for fear.

Table 8.3.3.2 Lost quality of life due to emotional harms, per victim

Emotional harm	Disability weight (DALY)	Value of year of life (EUR)	Cost per person per year (EUR)
Fear	0.030	75 000	2 250
Depression	0.396	75 000	29 700
PTSD/moderate anxiety disorder	0.133	75 000	9 975

Emotional harms are assumed to persist for the duration of time in trafficking. Average duration of trafficking estimated from the systematic review was shortest for labour exploitation, at 7.8 months, and longest for sexual exploitation (15.4 months) and exploitation for other reasons (16.2 months).

Table 8.3.3.3 shows the costs of emotional health harms experienced during trafficking due to exposure to physical violence, Table 8.3.3.4 sets these out for EU-27. The total costs were EUR 331 639 996 in EU-28 and EUR 243 116 007 in EU-27. **Most of this cost was due to depression. Per victim costs were highest for those trafficked for sexual and other reasons, and lowest for those trafficked for labour exploitation. The higher cost of emotional harm for sexual and other exploitation reflects the higher prevalence of depression and PTSD in these groups as well as the longer duration of time in trafficking.**

Table 8.3.3.3 Costs of lost quality of life due to emotional health harms during trafficking: per victim and for EU-28, by form of exploitation, sex and adult/child, EUR

Emotional injuries during trafficking	Total costs to quality of life [a]	Average cost per victim
Total cost	**331 639 996**	**28 029**
Fear	34 072 074	2 880
Depression	220 549 735	18 640
PTSD/anxiety disorder	77 018 187	6 509
Form of exploitation		
Sexual	221 015 562	33 356
Labour	38 362 136	12 969
Other	72 262 298	32 144
Sex of victim		
Female	260 254 909	31 811
Male	71 385 086	19 554
Age of victim		
Child	76 216 739	27 837
Adult	255 423 257	28 087

[a] Costs were applied to the proportion of trafficked victims estimated to have experienced each type of emotional harm. Duration of fear and mental health conditions assumed to be throughout trafficking. Duration of trafficking for each form of exploitation derived from the systematic review.

(154) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery*. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf.

Table 8.3.3.4 Costs of lost quality of life due to emotional health harms during trafficking: per victim and for EU-27, by form of exploitation, sex and adult/child, EUR

Emotional and other injuries during trafficking	Total costs to quality of life [a]	Average cost per victim
Total cost	**243 116 007**	**30 287**
Fear	24 571 054	3 061
Depression	161 038 576	20 062
PTSD/anxiety disorder	57 506 376	7 164
Form of exploitation		
Sexual	171 360 178	33 356
Labour	14 991 443	13 340
Other	56 764 386	32 144
Sex of victim		
Female	198 499 113	32 312
Male	44 599 758	23 683
Age of victim		
Child	50 977 885	31 445
Adult	192 120 986	29 994

[a] *Costs were applied to the proportion of trafficked victims estimated to have experienced each type of emotional harm. Duration of fear and mental health conditions assumed to be throughout trafficking. Duration of trafficking for each form of exploitation derived from the systematic review.*

8.4 Lost quality of life due to mental health harms post-trafficking

The approach taken to estimating the costs of long-term mental health harm resulting from exposure to different forms of violence are described in in Section 8.2 and summarised below.

*PREV * RISK * DISWEIGHT * DUR * VOLY = average cost per person exposed to each type of violence*

The prevalence (PREV) of any limiting mental health condition (LMC) in the population is multiplied by the increased risk (RISK) of LMC in the exposed population (after adjustment for potential confounding factors), the disability weight (DISWEIGHT) produced by the GBD (2019) for mild Major Depressive Disorder, and the average duration (DUR) of LMC post-trafficking associated with exposure to each type of violence in years. The total is multiplied by the statistical value of a life year (VOLY) to estimate the cost of mental health harm from exposure to each type of violence. As previously stated, the VOLY used in this report is based on the European Commission's 2009 *Impact Assessment Guidelines*. We use the midpoint of their recommended range of EUR 50,000 to EUR 100,000. These values are set out in Table 8.4.1.

Table 8.4.1 Long-term mental health harms associated with physical violence, sexual violence and threats

Risk factor	Likelihood of LMH in the population (%)	Increased likelihood in those exposed (%)	Disability weight for LMH (QALY loss)	Duration of LMH in those exposed (years)	Value of a year of life at full health (EUR)	Cost per person exposed to the risk factor (EUR)
Physical violence	11.4	1.6	0.145	10.6	75 000	22 340
Sexual violence	11.4	1.6	0.145	17.0	75 000	35 8289
Threats	11.4	1.7	0.145	2.7	75 000	6 025

Source: APMS.

The costs of long-term mental health harms associated with violence (physical, sexual, threat) are re-profiled to victims of trafficking (using data from the review of scientific literature shown in Table 2.6.1). The costs for victims of trafficking, disaggregated by form (sexual, labour, other), sex and age, with and without the application of a child multiplier, are shown in Table 8.4.2 for EU-28 and Table 8.4.3 for EU-27.

The overall costs to quality of life resulting from the long-term mental health effects of exposure to violence during trafficking is EUR 547 476 910 for EU-28 and EUR 393 527 161 for EU-27 (with child multiplier). Overall costs are highest for sexual exploitation and for female victims. This is not only due to the larger number of female victims and victims trafficked for sexual exploitation. The per victim cost is also higher for these groups. The costs of reduced quality of life in the post-trafficking years for women is EUR 52 020 (EU-28) or EUR 52 595 (EU-27), and for men EUR 33 386 (EU-28) or EUR 37 394 (EU-27). These gender differences are driven by the higher likelihood that women are trafficked for purpose of sexual exploitation.

The meta-analysis of systematically reviewed studies gave estimates for experience of sexual violence of 30% for victims of labour trafficking and 67% for victims of other trafficking (including domestic servitude) experienced sexual violence. These estimates by form of exploitation however were not gender disaggregated. It is probable that women trafficked for labour/other reasons experienced much higher levels of sexual violence than men trafficked for these reasons. **This means our results underestimate the extent to which costs are higher in female victims of trafficking than male.**

Table 8.4.2 Cost of lost quality of life due to long-term mental health harms, due to violence in trafficking (physical, sexual, threat), per victim and for EU-28, by form of exploitation, sex and adult/child, EUR

EU-28	Cost of mental health harm due to physical violence	Cost of mental health harm due to sexual violence	Cost of mental health harm due to threat	Total costs to long term mental health	Average cost per victim	Total costs with 1.3 multiplier applied to children	Average cost per victim with child multiplier
Total	157 203 849	304 147 693	50 937 399	512 288 941	43 297	547 476 910	46 271
Form of exploitation							
Sexual	94 735 284	223 432 648	31 669 247	349 837 179	52 798	372 957 919	56 288
Labour	29 853 556	29 924 015	9 930 302	69 707 873	23 566	74 708 019	25 256
Other	32 615 010	50 791 029	9 337 850	92 743 888	41 255	99 810 973	44 398
Sex of victim							
Female	115 024 609	247 333 753	37 446 986	399 805 348	48 868	425 596 499	52 020
Male	42 179 241	56 813 939	13 490 413	112 483 592	30 812	121 880 411	33 386
Age of victim							
Adult	120 911 469	234 869 727	39 214 515	394 995 710	43 435	394 995 710	43 435
Child	36 292 381	69 277 966	11 722 884	117 293 231	42 840	152 481 200	55 692

Prevalence of physical violence, sexual violence, and threat among victims of each form of trafficking were estimated by meta-analysis of data from the systematic review. These rates were applied to the number of trafficking victims registered in EU-28 in 2016, according to their age and sex profile within form of exploitation.

Table 8.4.3 Cost of lost quality of life due to long-term mental health harms, due to violence in trafficking (physical, sexual, threat), per victim and for EU-27, by form of exploitation, sex and adult/child, EUR

EU-27	Cost of mental health harm due to physical violence	Cost of mental health harm due to sexual violence	Cost of mental health harm due to threat	Total costs to long term mental health	Average cost per victim	Total costs with 1.3 multiplier applied to children	Average cost per victim with child multiplier
Total	110 413 064	224 500 721	35 661 970	370 575 755	46 166	393 527 161	49 025
Form of exploitation							
Sexual	73 451 186	173 234 219	24 554 143	271 239 548	52 798	287 625 129	55 988
Labour	11 341 727	11 368 496	3 772 642	26 482 865	23 566	27 381 428	24 365
Other	25 620 152	39 898 006	7 335 185	72 853 343	41 255	78 520 604	44 464
Sex of victim							
Female	86 971 631	189 464 338	28 342 777	304 778 746	49 612	323 104 717	52 595
Male	23 434 088	35 019 059	7 316 738	65 769 885	34 924	70 422 445	37 394
Age of victim							
Adult	87 664 560	177 910 725	28 378 245	293 953 531	45 892	293 953 531	45 892
Child	22 741 159	46 572 672	7 281 270	76 595 101	47 246	99 573 631	61 420

Prevalence of physical violence, sexual violence, and threat among victims of each form of trafficking were estimated by meta-analysis of data from the systematic review. These rates were applied to the number of trafficking victims registered in EU-27 in 2016, according to their age and sex profile within form of exploitation.

8.5 Lost quality of life post-trafficking due to substance dependence and physical health conditions

The same approach taken to estimating the costs of long-term mental health harm resulting from exposure to different forms of violence (Section 8.4) was also applied to estimate the costs of other outcomes linked to violence. This Section presents the quality of life costs associated with drug dependence (Section 8.6), alcohol dependence (8.7), and presence of doctor-diagnosed migraine (8.8), digestive problems (8.9), and urinary problems (8.10). The adjusted multipliers, disability weights (drawn from the Global Burden of Disease[155]), and the estimated cost per person experiencing the risk factor is set out in Table 8.5.1.

Table 8.5.1 Long-term substance and physical health conditions associated with physical violence, sexual violence and threats

Risk factor	Likelihood in the whole population (%)	Increased likelihood in those exposed (multiplier)	Disability weight for LMH (quality of life loss)	Duration in those exposed (years)	VOLY (EUR)	Cost per person exposed to the risk factor (EUR)
Drug dependence						
Physical violence	3.0	2.8	0.116	10.6	75 000	7 746
Sexual violence	3.0	2.8	0.116	17	75 000	12 424
Threats	3.0	NS	0.116	2.7	75 000	-
Alcohol dependence						
Physical violence	3.1	1.2	0.235	10.6	75 000	6 950
Sexual violence	3.1	2	0.235	17	75 000	18 577
Threats	3.1	NS	0.235	2.7	75 000	-
Migraine						
Physical violence	13.4	1.2	0.037	10.6	75 000	4 730
Sexual violence	13.4	NS	0.037	17	75 000	-
Threats	13.4	1.3	0.037	2.7	75 000	1 305
Digestive problems						
Physical violence	7.1	1.4	0.114	10.6	75 000	9 009
Sexual violence	7.1	NS	0.114	17	75 000	-
Threats	7.1	1.4	0.114	2.7	75 000	2 295
Urinary problems						
Physical violence	4.4	1.3	0.051	10.6	75 000	2 319
Sexual violence	4.4	1.6	0.051	17	75 000	4 578
Threats	4.4	NS	0.051	2.7	75 000	-

Source: APMS.

[155] Global Burden of Disease (GBD) Collaborative Network. (2017) *Global Burden of Disease Study 2017. Disability Weights.* Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2018. http://ghdx.healthdata.org/record/ihme-data/gbd-2017-disability-weights

Table 8.5.2 Cost of lost quality of life due to drug dependence linked to violence in trafficking (physical, sexual, threat), per victim and for EU-28, by form of exploitation, sex and adult/child, EUR

EU-28	Cost of drug dependence linked to physical violence	Cost of drug dependence linked to sexual violence	Cost of drug dependence linked to threat/ coercion	Total drug dependence costs (without child multiplier)	Average cost per victim (without child multiplier)	Total drug dependence costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	57 914 060	112 058 685	-	169 972 745	14 366	181 641 120	15 352
Form of exploitation							
Sexual	34 900 576	82 320 430	-	117 221 006	17 691	124 968 142	18 860
Labour	10 998 081	11 025 058	-	22 023 138	7 445	23 602 858	7 979
Other	12 015 403	18 713 198	-	30 728 601	13 669	33 070 120	14 710
Sex of victim							
Female	42 375 184	91 126 436	-	133 501 620	16 318	142 113 255	17 370
Male	15 538 876	20 932 249	-	36 471 125	9 990	39 527 865	10 828
Age of victim							
Child	13 370 150	25 524 434	-	38 894 585	14 206	50 562 960	18 467
Adult	44 543 909	86 534 251	-	131 078 160	14 414	131 078 160	14 414

Source: APMS.

Table 8.5.3 Cost of lost quality of life due to drug dependence linked to violence in trafficking (physical, sexual, threat), per victim and for EU-27, by form of exploitation, sex and adult/child, EUR

EU-27	Cost of drug dependence linked to physical violence	Cost of drug dependence linked to sexual violence	Cost of drug dependence linked to threat/ coercion	Total drug dependence costs (without child multiplier)	Average cost per victim (without multiplier)	Total drug dependence costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	40 676 286	82 713 945	-	123 390 232	15 372	131 042 205	16 325
Form of exploitation							
Sexual	27 059 492	63 825 567	-	90 885 059	17 691	96 375 425	18 760
Labour	4 178 304	4 188 553	-	8 366 857	7 445	8 650 744	7 698
Other	9 438 490	14 699 826	-	24 138 316	13 669	26 016 036	14 732
Sex of victim							
Female	32 040 438	69 805 312	-	101 845 751	16 578	107 970 988	17 576
Male	8 633 142	12 902 251	-	21 535 393	11 435	23 071 217	12 251
Age of victim							
Child	8 377 866	17 159 007	-	25 536 873	15 752	33 197 935	20 477
Adult	32 295 714	65 548 556	-	97 844 270	15 276	97 844 270	15 276

Source: APMS.

Table 8.5.4 Cost of lost quality of life due to alcohol dependence linked to violence in trafficking (physical, sexual, threat), per victim and for EU-28, EUR

EU-28	Cost of alcohol dependence linked to physical violence	Cost of alcohol dependence linked to sexual violence	Cost of alcohol dependence linked to threat/ coercion	Total alcohol dependence costs (without child multiplier)	Average cost per victim (without multiplier)	Total alcohol dependence costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	51 962 654	167 555 876	-	219 518 529	18 553	234 567 020	19 825
Form of exploitation							
Sexual	31 314 098	123 089 716	-	154 403 814	23 303	164 608 362	24 843
Labour	9 867 888	16 485 230	-	26 353 118	8 909	28 243 427	9 548
Other	10 780 668	27 980 930	-	38 761 598	17 242	41 715 231	18 556
Sex of victim							
Female	38 020 595	136 256 906	-	174 277 501	21 302	185 509 737	22 675
Male	13 942 059	31 298 969	-	45 241 028	12 393	49 057 283	13 438
Age of victim							
Child	11 996 197	38 165 439	-	50 161 636	18 321	65 210 127	23 817
Adult	39 966 456	129 390 437	-	169 356 893	18 623	169 356 893	18 623

Source: APMS.

Table 8.5.5 Cost of lost quality of life due to alcohol dependence linked to violence in trafficking (physical, sexual, threat), per victim and for EU-27, EUR

EU-27	Cost of alcohol dependence linked to physical violence	Cost of alcohol dependence linked to sexual violence	Cost of alcohol dependence linked to threat/ coercion	Total alcohol dependence costs (without child multiplier)	Average cost per victim (without multiplier)	Total alcohol dependence costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	36 496 281	123 678 120	-	160 174 401	19 954	170 114 617	21 193
Form of exploitation							
Sexual	24 278 785	95 435 251	-	119 714 036	23 303	126 945 961	24 711
Labour	3 748 930	6 262 938	-	10 011 868	8 909	10 351 571	9 211
Other	8 468 565	21 979 931	-	30 448 496	17 242	32 817 085	18 583
Sex of victim							
Female	28 747 876	104 376 472	-	133 124 348	21 670	141 121 360	22 972
Male	7 745 977	19 292 105	-	27 038 082	14 357	28 993 257	15 395
Age of victim							
Child	7 516 934	25 657 025	-	33 173 958	20 463	43 126 146	26 601
Adult	28 976 919	98 011 552	-	126 988 471	19 826	126 988 471	19 826

Source: APMS.

Table 8.5.6 Cost of lost quality of life due to migraine linked to violence in trafficking (physical, sexual, threat), per victim and for EU-28, EUR

EU-28	Cost of migraine linked to physical violence	Cost of migraine linked to sexual violence	Cost of migraine linked to threat/ coercion	Total migraine costs (without child multiplier)	Average cost per victim (without multiplier)	Total migraine costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	35 364 511	-	11 682 479	47 046 990	3 976	50 302 878	4 251
Form of exploitation							
Sexual	21 311 609	-	7 263 334	28 574 943	4 313	30 463 461	4 598
Labour	6 715 843	-	2 277 512	8 993 355	3 040	9 638 449	3 258
Other	7 337 059	-	2 141 633	9 478 692	4 216	10 200 968	4 538
Sex of victim							
Female	25 875 887	-	8 588 456	34 464 343	4 213	36 697 694	4 486
Male	9 488 624	-	3 094 023	12 582 647	3 447	13 605 183	3 727
Age of victim							
Child	8 164 318	-	2 688 640	10 852 959	3 964	14 108 847	5 153
Adult	27 200 192	-	8 993 839	36 194 031	3 980	36 194 031	3 980

Source: APMS.

Table 8.5.7 Cost of lost quality of life due to migraine linked to violence in trafficking (physical, sexual, threat), per victim and for EU-27, EUR

EU-27	Cost of migraine linked to physical violence	Cost of migraine linked to sexual violence	Cost of migraine linked to threat/ coercion	Total migraine costs (without child multiplier)	Average cost per victim (without multiplier)	Total migraine costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	24 838 476	-	8 179 063	33 017 539	4 113	35 051 063	4 367
Form of exploitation							
Sexual	16 523 547	-	5 631 486	22 155 034	4 313	23 493 419	4 573
Labour	2 551 430	-	865 254	3 416 685	3 040	3 532 13	3 144
Other	5 763 498	-	1 682 323	7 445 821	4 216	8 025 032	4 544
Sex of victim							
Female	19 565 101	-	6 500 408	26 065 509	4 243	27 641 792	4 500
Male	5 271 722	-	1 678 092	6 949 814	3 690	7 409 271	3 934
Age of victim							
Child	5 115 841	-	1 669 957	6 785 799	4 186	8 821 538	5 441
Adult	19 720 982	-	6 508 543	26 229 525	4 095	26 229 525	4 095

Source: APMS.

Table 8.5.8 Cost of lost quality of life due to stomach/digestive problems linked to violence in trafficking (physical, sexual, threat), per victim and for EU-28, EUR

EU-28	Cost of digestive problems linked to physical violence	Cost of digestive problems linked to sexual violence	Cost of digestive problems linked to threat/ coercion	Total digestive problems costs (without child multiplier)	Average cost per victim (without multiplier)	Total digestive problems costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	67 357 057	-	20 545 049	87 902 106	7 429	93 985 649	7 943
Form of exploitation							
Sexual	40 591 181	-	12 773 449	53 364 630	8 054	56 891 498	8 586
Labour	12 791 339	-	4 005 280	16 796 618	5 678	18 001 440	6 086
Other	13 974 537	-	3 766 321	17 740 858	7 892	19 092 712	8 493
Sex of victim							
Female	49 284 538	-	15 103 837	64 388 375	7 870	68 561 182	8 380
Male	18 072 519	-	5 441 212	23 513 731	6 441	25 424 467	6 964
Age of victim							
Child	15 550 179	-	4 728 299	20 278 477	7 406	26 362 021	9 628
Adult	51 806 878	-	15 816 751	67 623 629	7 436	67 623 629	7 436

Source: APMS.

Table 8.5.9 Cost of lost quality of life due to stomach/digestive problems linked to violence in trafficking (physical, sexual, threat), per victim and for EU-27, EUR

EU-27	Cost of digestive problems linked to physical violence	Cost of digestive problems linked to sexual violence	Cost of digestive problems linked to threat/ coercion	Total digestive problems costs (without child multiplier)	Average cost per victim (without multiplier)	Total digestive problems costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	47 308 632	-	14 383 870	61 692 502	7 686	65 492 579	8 159
Form of exploitation							
Sexual	31 471 594	-	9 903 648	41 375 242	8 054	43 874 721	8 540
Labour	4 859 584	-	1 521 654	6 381 239	5 678	6 597 754	5 871
Other	10 977 454	-	2 958 568	13 936 021	7 892	15 020 105	8 505
Sex of victim							
Female	37 264 693	-	11 431 753	48 696 445	7 927	51 641 762	8 406
Male	10 040 792	-	2 951 127	12 991 919	6 899	13 850 817	7 355
Age of victim							
Child	9 743 893	-	2 936 822	12 680 715	7 822	16 484 929	10 168
Adult	37 561 592	-	11 446 058	49 007 650	7 651	49 007 650	7 651

Source: APMS.

Table 8.5.10 Cost of lost quality of life due to urinary problems linked to violence in trafficking (physical, sexual, threat), per victim and for EU-28, EUR

EU-28	Cost of urinary problems linked to physical violence	Cost of urinary problems linked to sexual violence	Cost of urinary problems linked to threat/ coercion	Total urinary problems costs (without child multiplier)	Average cost per victim (without multiplier)	Total urinary problems costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	17 338 330	41 291 425	-	58 629 755	4 955	62 652 159	5 295
Form of exploitation							
Sexual	10 448 546	30 333 462	-	40 782 008	6 155	43 477 290	6 562
Labour	3 292 609	4 062 517	-	7 355 126	2 487	7 882 709	2 665
Other	3 597 175	6 895 446	-	10 492 621	4 667	11 292 159	5 023
Sex of victim							
Female	12 686 296	33 578 302	-	46 264 598	5 655	49 247 817	6 020
Male	4 652 034	7 713 123	-	12 365 156	3 387	13 404 342	3 672
Age of victim							
Child	4 002 760	9 405 253	-	13 408 013	4 897	17 430 417	6 366
Adult	13 335 570	31 886 172	-	45 221 742	4 973	45 221 742	4 973

Source: APMS.

Table 8.5.11 Cost of lost quality of life due to urinary problems linked to violence in trafficking (physical, sexual, threat), per victim and for EU-27, EUR

EU-27	Cost of urinary problems linked to physical violence	Cost of urinary problems linked to sexual violence	Cost of urinary problems linked to threat/ coercion	Total urinary problems costs (without child multiplier)	Average cost per victim (without multiplier)	Total urinary problems costs (with child multiplier)	Average cost per victim (with child multiplier)
Total	12 177 680	30 478 464	-	42 656 144	5 314	45 302 260	5 644
Form of exploitation:							
Sexual	8 101 080	23 518 468	-	31 619 547	6 155	33 529 684	6 527
Labour	1 250 902	1 543 399	-	2 794 301	2 487	2 889 112	2 571
Other	2 825 698	5 416 597	-	8 242 295	4 667	8 883 464	5 030
Sex of victim							
Female	9 592 277	25 721 887	-	35 314 163	5 748	37 436 953	6 094
Male	2 584 593	4 754 226	-	7 338 819	3 897	7 865 307	4 176
Age of victim							
Child	2 508 168	6 322 757	-	8 830 925	5 447	11 480 203	7 081
Adult	9 668 701	24 153 355	-	33 822 057	5 280	33 822 057	5 280

Source: APMS.

8.6 Summary of costs of lost quality of life

The cost of lost quality of life per victim for EU-28 was EUR 74 838 (EUR 80 063 for EU-27). The cost of lost quality of life for the EU-28 was EUR 885 480 360 (EUR 642 669 538 for EU-27). See Table 8.6.1.

Table 8.6.1 Cost of lost quality of life, per victim and EU-28/27 total, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Lost quality of life	127 504	1 508 629 186	135 750	1 089 672 262

The distribution of costs by the type of harm caused to the victim (physical injuries while trafficked, emotional harms while trafficked, homicide while trafficked, mental health harm post-trafficking) are shown in Table 8.6.2. The costs for physical injuries, emotional harms and mental health harms include a child multiplier. The costs for homicide do not include a child multiplier.

Table 8.6.2 Cost of lost quality of life, per victim and for EU-28/27, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total[a]	127 504	1 508 629 186	135 751	1 089 672 262
Form of harm				
Physical injuries while trafficked	99	1 173 454	104	836 370
Emotional harms while trafficked	28 029	331 639 996	30 287	243 116 007
Homicide while trafficked	439	5 190 000	647	5 190 000
Mental health post-trafficking	46 271	547 476 910	49 025	393 527 161
Substance dependence post trafficking	35 176	416 208 141	37 518	301 156 822
Physical health conditions post trafficking	17 490	206 940 686	18 169	145 845 903

[a]*All costs for lost quality of life include a child multiplier, excluding homicide costs which do not include a child multiplier*

The costs are disaggregated by form of exploitation (sexual, labour, other), sex of victim (female, male) and age of victim (adult, child). See Table 8.6.3.

Table 8.6.3 Cost of lost quality of life per victim and for EU-28/27, by form of exploitation, sex of victim and adult/child, EUR

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Total	127 504	1 508 629 186	135 751	1 089 672 262
Form of exploitation				
Sexual	153 645	1 018 041 304	153 215	787 109 477
Labour	68 265	201 928 237	66 912	75 194 722
Other	128 403	288 659 749	128 753	227 369 373
Sex of victim				
Female	143 309	1 172 459 131	145 210	892 064 323
Male	92 086	336 174 403	104 923	197 593 628
Age of victim				
Child	236 073	646 358 665	283 287	459 263 582
Adult	94 818	862 274 870	98 418	630 394 370

9 Adding it up

9.1 Total cost

The cost of trafficking in human beings in EU-28 is EUR 312 756 per victim (EUR 337 462 for EU-27) (over their life-time) and a total of EUR 3 700 524 433 for EU-28 (EUR 2 708 804 838 for EU-27), as shown in Table 9.1.

This is an under-estimate. There are several reasons for this. This cost is based on the number of victims registered with the authorities in 2016; it would have been higher if victims not registered with the authorities had been included. **Some items were identified as likely to increase costs but, data could not be found to support their inclusion (for example, the repetition of violence and injuries). When there were doubts about the robustness of data, the conservative position was routinely adopted**. Sensitivity analyses used to investigate the implications of these and other design issues were reported in Appendix 2.

Table 9.1 Cost of trafficking in human beings registered in 2016, per victim and EU-28/27 total

	EU-28		EU-27	
	Per victim	Total	Per victim	Total
Cost, EUR	312 756	3 700 524 433	337 462	2 708 804 838

9.2 Disaggregation by type of cost

The cost of trafficking is divided into three parts: the use of services (40% for EU-28, 42% for EU-27); lost economic output (19% for EU-28, 18% for EU-27); and lost quality of life (41% for EU-28, 40% for EU-27), as shown in Table 9.2. Services are subdivided into coordination and prevention (1% for both EU-28 and EU-27); law enforcement (30% for EU-28, 31% for EU-27); specialised victim services (3% for both EU-28 and EU-27); and health services and social protection (7% for EU-28, 6% for EU-27).

Table 9.2 Costs of trafficking in human beings per victim and EU-28/27 total by types of costs, EUR

	EU-28 per victim	EU-28 total	%	EU-27 per victim	EU-27 total	%
Total cost	312 756	3 700 524 432	100	337 462	2 708 804 838	100
Service costs						
Total service costs	125 714	1 487 446 188	40	141 917	1 139 158 901	42
Coordination and prevention	*2 059*	*24 356 744*	*1*	*2 949*	*23 670 826*	*1*
Law enforcement	*93 293*	*1 103 841 971*	*30*	*105 827*	*849 476 554*	*31*
Specialised victim services	*9 614*	*113 750 742*	*3*	*11 355*	*91 149 042*	*3*
Health and social protection	*20 749*	*245 496 731*	*7*	*21 785*	*174 862 479*	*6*
Lost economic output costs						
Lost economic output	59 537	704 449 058	19	59 795	479 973 675	18
Lost quality of life costs						
Lost quality of life	127 504	1 508 629 186	41	135 751	1 089 672 262	40

9.3 Disaggregation by phase of trafficking

The cost of trafficking is spread across the different phases of trafficking: in trafficking (33% for EU-28, 35% for EU-27), in services (16% for EU-28, 15% for EU-27), and post-trafficking (51% for both EU-28 and EU-27), as shown in Table 9.3. About half (51% for both EU-28 and EU-27) of the cost of trafficking in human beings occurs after the period in trafficking and in services are over. **The effects of trafficking on victims have significant duration.**

The types of costs were disaggregated into the phases of trafficking in which they are relevant, shown in Figure 2.3.4. Where costs spread over multiple phases, the total cost **was split by the average proportion of time spent in that phase for a victim of trafficking.**

Coordination and prevention costs apply to both the in trafficking and in services phases of the trafficking journey. It was estimated that the average time spent in trafficking for EU-28/27 was 1.14 years. The average time spent in services for EU-28 was 0.44 years (0.37 years for EU-27). This means that of the combined period in trafficking and in services for EU-28 (1.58 years), 72% of time is spent in trafficking and 28% of time is spent in services (1.51 years for EU-27, of which 75% in trafficking and 25% in services). These proportions were applied to the total cost of coordination and prevention for EU-28 EUR 24 356 744 (EUR 23 670 826, EU-27) to provide a cost of coordination and prevention in trafficking and in services per victim and for the EU-28/27 total.

Law enforcement costs apply to both the in trafficking and in services phases of the trafficking journey. The same proportions applied to coordination and prevention were applied to the total cost of law enforcement for EU-28 which is EUR 1 103 841 971 (EUR 849 476 554, EU-27) to provide a cost of law enforcement in trafficking and in services per victim and for the EU-28/27 total.

All (100%) of the costs for services per victim and EU-28/27 total apply to the in services phase of trafficking.

Health and social protection costs apply to the in services and post-trafficking phases of the trafficking journey. It was estimated that the average time spent in services for EU-28 was 0.44 years (0.37 years, EU-27) and the harms could last up to 17 years post-trafficking. This means that of the combined period of in services and post-trafficking for EU-28 (17.44 years), 3% of time is spent in services and 97% of time is spent post-trafficking (17.37 years for EU-27, of which 2% in services and 98% post-trafficking). These proportions were applied to the total cost of health and social protection for EU-28 EUR 245 496 731 (EUR 174 862 479, EU-27) to provide a cost of health and social protection in services and post-trafficking per victim and total EU-28/27.

Victims of trafficking lose some of their economic output in every phase of trafficking. Economic output lost in trafficking and in services only applies to adult victims as child victims are not expected to have economic output whilst children, though as the harms of trafficking last for several years child victims lose some of their economic output as adults as a result of being a victim of trafficking. Lost economic output was estimated by phase of trafficking in Section 7 of this report. Lost economic output in trafficking and in services was estimated by the average duration an adult victim of trafficking spends in these phases. Lost economic output post-trafficking is estimated with a child multiplier.

Victims of trafficking have losses to their quality of life in every phase of trafficking. It was estimated that the average time spent in trafficking was 1.14 years, in services was 0.44 years (0.37, EU-27) and the harms last for up to 17 years post-trafficking. This means that of the combined time of each phase of trafficking for EU-28 (18.58 years), 6% was spent in trafficking, 2% in services, and 91% post-trafficking (18.51 years for EU-27, of which 6% in trafficking, 2% in services and 92% post-trafficking). These proportions were applied to the total cost of lost quality of life for EU-28 EUR 1 508 629 186 (EUR 1 089 672 262, EU-27) to provide a cost of lost quality of life in trafficking, in services and post-trafficking per victim and total EU-28/27.

Table 9.3 Cost of trafficking by phase (in trafficking, in services, post-trafficking) by type of cost, per victim, for EU-28/27, EUR

	EU-28			EU-27		
	Cost per victim	Total	%	Cost per victim	Total	%
Total cost	312 756	3 700 524 433	100	337 462	2 708 804 838	100
In trafficking			**33**			**35**
Coordination and prevention	1 482	17 536 856		2 212	17 753 120	
Law enforcement	67 171	794 766 219		79 371	637 107 415	
Lost economic output (in trafficking)	25 656	303 564 219		26 929	216 158 756	
Lost quality of life	7 823	92 563 901		8 361	67 111 096	
In services			**16**			**15**
Coordination and prevention	576	6 819 888		737	5 917 707	
Specialised services	9 614	113 750 742		11 355	91 149 042	
Law enforcement	26 122	309 075 752		26 457	212 369 138	
Health services and social protection	523	6 193 725		464	3 724 762	
Lost economic output (in services)	9 912	117 280 374		8 314	66 737 989	
Lost quality of life	3 019	35 726 418		2 714	21 781 671	
Post-trafficking			**51**			**51**
Health services and social protection	20 226	239 303 006		21 321	171 137 717	
Lost economic output (post-trafficking)	23 969	283 604 465		24 552	197 076 930	
Lost quality of life	116 662	1 380 338 868		124 677	1 000 779 496	

Figure 9.3.1 presents the average per-victim costs (EU-28) associated with different phases of trafficking. Figure 9.3.2 presents this for EU-27. Orange indicates costs incurred during trafficking or while in services. Blue relates to long-term costs, which extend into the post-trafficking phase. The Figures make clear that the majority of costs are long-term, relating to health and social protection, lost economic output, and lost quality of life. Of the costs incurred during trafficking or while in services: these are dominated by law enforcement costs, with a small proportion being spent on specialised services and smaller proportion on coordination.

Figure 9.3.1 Cost per victim by type of cost (EU-28), EUR

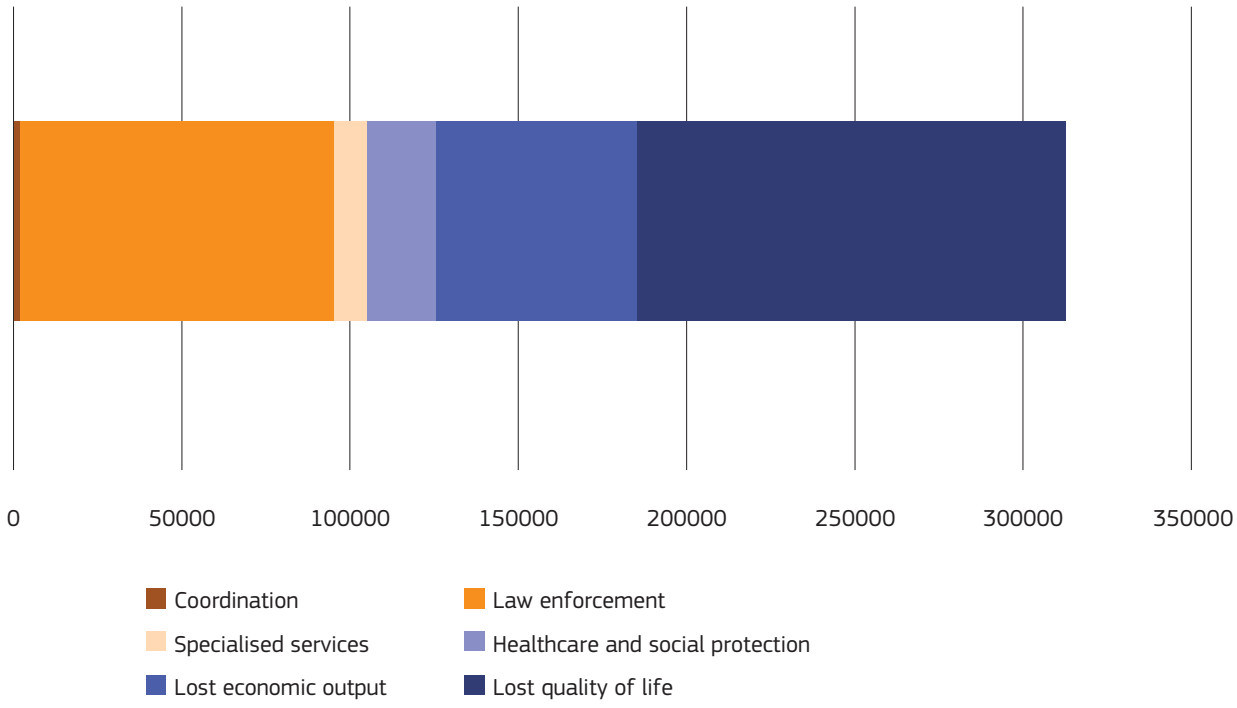
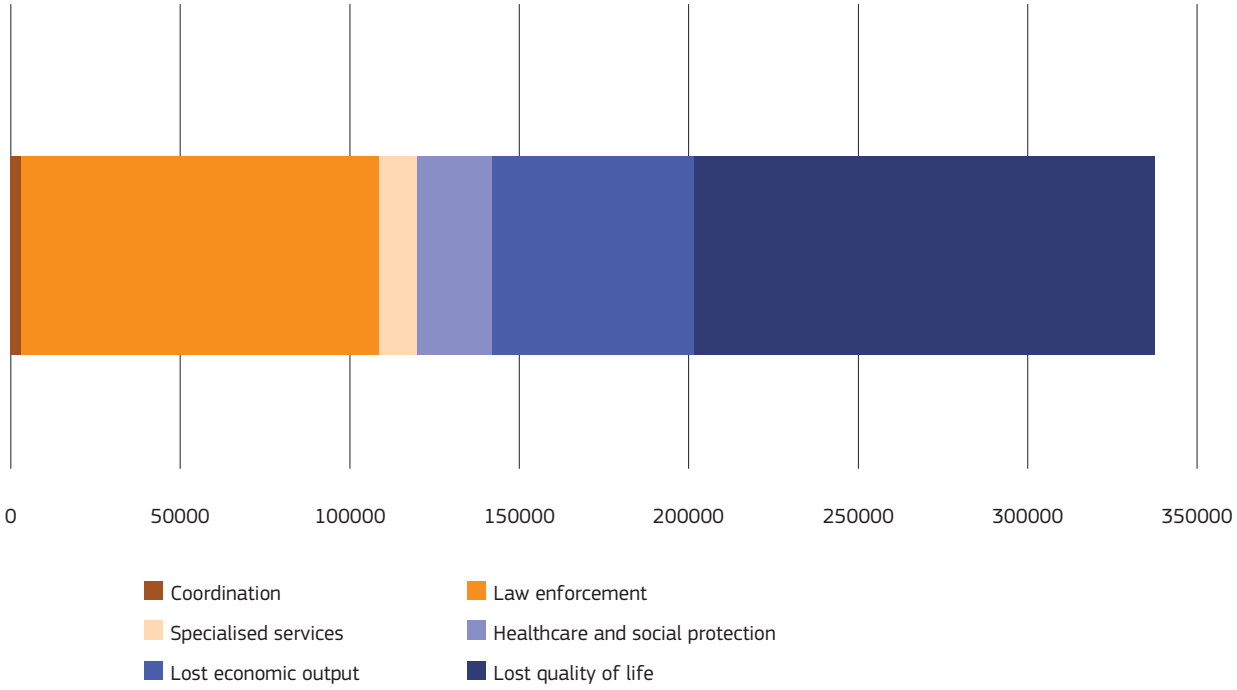


Figure 9.3.2 Cost per victim by type of cost (EU-27), EUR



9.4 Cost by form of exploitation, sex of victim, age of victim

The cost of trafficking varies by the form of exploitation (labour, sexual, other), the sex (male/female) of the victim and the age (child/adult) of the victim, as shown in Table 9.4.

There are higher costs for victims of sexual exploitation. For EU-28 the costs are EUR 353 893 for sexual exploitation, EUR 219 382 for labour exploitation, and EUR 314 370 for other exploitation; for EU-27 the costs are EUR 364 474 for sexual exploitation, EUR 232 923 for labour exploitation, and EUR 325 405 for other exploitation. **This is driven by the larger costs to health associated with sexual violence (rather than physical violence or threat), which has implications not only for utilisation of health services and social protection, but also for lost economic output and lost quality of life).**

There are higher costs for female rather than male victims (for EU-28 EUR 337 999 for females, EUR 256 184 for males; for EU-27 EUR 353 027 for females, EUR 286 769 for males). **This is driven by the larger costs associated with sexual exploitation, which is disproportionately experienced by women. The larger costs associated with sexual exploitation are, as noted above, linked to greater utilisation of health services and social protection, greater lost economic output and greater lost quality of life[156].**

There are higher costs for child rather than adult victims (for EU-28 EUR 394 132 for children, EUR 288 256 for adults; for EU-27 EUR 460 391 for children, EUR 306 373 for adults). This is due to greater utilisation of health services and greater lost quality of life.

Table 9.4 Cost of trafficking in human beings per victim, for EU-28/27, by form of exploitation (sexual, labour, other), sex of victim (female, male), age of victim (child, adult), EUR

	EU-28		EU-27	
	Per victim average	Total	Per victim average	Total
Total cost	312 756	3 700 524 432	337 462	2 708 804 838
Form of exploitation				
Sexual	353 893	2 344 864 387	364 474	1 872 407 197
Labour	219 382	648 931 571	232 923	261 754 074
Other	314 370	706 728 577	325 405	574 644 878
Sex of victim				
Female	337 999	2 765 284 348	353 027	2 168 738 120
Male	256 184	935 244 432	286 769	540 052 406
Age of victim				
Child	394 132	1 079 118 210	460 391	746 384 419
Adult	288 256	2 621 410 571	306 373	1 962 406 108

(156) The findings support the European Commission study on Gender dimension of trafficking in human beings highlighting with respect to the gender differences as to the loss of quality of life: *"The harms from trafficking are gender specific. The harms from trafficking for purposes of sexual exploitation are different from the harms from trafficking for purposes of labour and other forms of exploitation. Their seriousness is related to the specific ways that the bodies of trafficked women are abused. There are severe, brutal and long-term, gender-specific physical, gynaecological and mental health harms, risks to life and traumas from trafficking for purposes of sexual exploitation. (...) Specialised service provision needs to be gender specific. It needs to take account of complex intersections with other forms of disadvantage and vulnerability. It needs to recognise the gender-specific longer recovery time from the harms of trafficking for purposes of sexual exploitation as compared with other forms. The provision of specialised services to victims of trafficking needs to be appropriate to their needs. These are different according to the form of trafficking to which they have been subjected, and hence gender specific. These services are best provided by organisations that include users, victim-survivors of trafficking and gender experts in their decision making and which have sustainable funding."* European Commission (2016g) *Study on Gender Dimension of Trafficking in Human Beings. Final Report*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/anti-trafficking/eu-policy/study-gender-dimension-trafficking-human-beings_en p. 10.

APPENDICES

1 Introduction

The Appendices provide detailed information used in the research to produce the main report of the Study. The Appendices match the primary sections that they support.

2 Methodology

2.1 Victims of Trafficking: number and distribution

Tables A2.1.1 and A2.1.2 offer a more detailed summary of the number and distribution of victims derived from the European Commission *Data Report* provided in Table 2.5.1, including missing data.

It is the predicted distribution by age and sex within exploitation group that is used throughout for the purposes of costing.

Table A2.1.1 Number and distribution of victims, with and without missing data, EU-28

	EU-28			
	Actual distribution		Predicted distribution [a]	
	N	%	N	%
Total	**11 832**	3 700 524 433	**11 832**	2 708 804 838
Sexual exploitation	**5 374**	**45**	**6 626**	**56**
Female child	1 034	19	1 295	20
Male child	132	2	165	2
Female adult	3 931	73	4 921	74
Male adult	196	4	245	4
Unknown/other	81	2	0	0
Labour exploitation	**2 459**	**21**	**2 958**	**25**
Female child	75	3	96	3
Male child	475	19	611	21
Female adult	341	14	439	15
Male adult	1 409	57	1 812	61
Unknown/other	159	6	0	0
Other exploitation	**1 789**	**15**	**2 248**	**19**
Female child	267	15	372	17
Male child	143	8	199	9
Female adult	760	42	1 059	47
Male adult	444	25	618	28
Unknown/other	175	10	0	0
Unknown exploitation	**823**	**7**	0	**0**
Missing [b]	**1 387**	**12**	**0**	**0**

[a] *Unknown/other cases recoded to the known profile.*
[b] *Includes 447 victims registered in Bulgaria who were not in the Data Report.*

Table A2.1.2 Number and distribution of victims, with and without missing data, EU-27

	EU-27			
	Actual distribution		Predicted distribution [a]	
	N	%	N	%
Total	8 027	3 700 524 433	8 027	2 708 804 838
Sexual exploitation	**4 066**	**51**	**5 137**	**64**
Female child	713	18	919	18
Male child	91	2	117	2
Female adult	3 043	75	3 923	76
Male adult	138	3	178	3
Unknown/other	81	2	0	0
Labour exploitation	**884**	**11**	**1 124**	**14**
Female child	7	1	11	1
Male child	75	8	116	2
Female adult	159	18	246	22
Male adult	484	55	750	67
Unknown/other	159	18	0	0
Other exploitation	**1 359**	**17**	**1 766**	**22**
Female child	200	15	298	17
Male child	107	8	160	9
Female adult	500	37	746	42
Male adult	377	28	562	32
Unknown/other	175	13	0	0
Unknown exploitation	**336**	**4**	0	**0**
Missing [b]	**1 382**	**17**	**0**	**0**

[a] *Unknown/other cases recoded to the known profile.*
[b] *Includes 447 victims registered in Bulgaria who were not in the Data Report.*

2.2 Systematic Review of Scientific Literature

Methods

We conducted a systematic review of the scientific literature of the harms of trafficking in human beings, drawing on a previous review in which Oram was involved (Ottisova et al. 2016). The review established: the prevalence of physical violence, sexual violence and threats among those who are victims of trafficking. It offered disaggregations, where possible, by type of exploitation (sexual, labour, other). The systematic review protocol was registered with PROSPERO (the Prospective Register of Systematic Reviews). The registration number is CRD42019141929 and the protocol can be accessed via the following link: https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=141929.

Inclusion criteria required that studies (i) reported empirical research based on one of the following study designs: cross-sectional survey; case control study; cohort study; case series analysis; experimental study with baseline measures for the outcomes of interest; or secondary analysis of organisational records; (ii) were published as a scientific journal article, doctoral thesis or dissertation, or research report; (iii) reported on physical violence while trafficked; sexual violence while trafficked; sex without consent while trafficked; threat while trafficked; physical health harms; mental health harms; or reproductive health harms; (iv) included adult or child males or females who self-identified or were believed by the research team to have been trafficked according to the definition laid down by the United Nations Palermo Protocol. No language restrictions were used. A lower date limit of the 17th April 2015 was used, as the review updated a previous review (Ottisova et al. 2016) which used an upper date limit of 17th April 2015.

In order to identify studies, we searched electronic bibliographic databases PsycINFO (Online database of psychological literature); MEDLINE (Online database of health and medical journals and other news sources); EMBASE (Online database of health and medical journals); CINAHL (Online database of nursing and allied health literature); The Cochrane Central Register of Controlled Trials (CENTRAL); and PILOTS (Online database, Published International Literature On Traumatic Stress[157]). Returns were de-duplicated to remove any duplicate references, resulting in a total of 1 713 references for screening.

Screening followed a two-stage process: in the first stage title and abstracts were screened against the inclusion criteria for likely relevance, in the second stage the full-text of potentially relevant studies were read in full and again considered against the inclusion criteria. If it was not clear from the title and abstract whether the paper met the inclusion criteria for the review, it was included for full text screening. One reviewer (MP) screened all studies across these two stages; a second reviewer (PB) reviewed 10% of studies included at the title and abstract screening stage and 20% of studies included at the full-text screening stage. Disagreements were resolved by discussion or with reference to a third reviewer (SO). If studies collected data on outcomes of interest among trafficked individuals but did not report it, study authors were contacted to request information. Studies included after full-text screening underwent reference list screening and citation tracking using Web of Science and Google Scholar. Finally, hand searches of key websites were conducted[158].

Of the 1 718 articles identified during electronic searches and subjected to title and abstract screening, 94 were taken through to full-text screening. Reference list screening and citation tracking identified 19 further potentially relevant papers while website searches identified a further 7 potentially relevant papers. Thus a total of 120 papers underwent full-text screening; 53 of these met the inclusion criteria. A further 37 papers were identified in the previous systematic reviews (Ottisova et al. 2016), resulting in a total of 90 papers at that stage.

In order to ensure alignment with other Study components (i.e. outputs from analysis of the APMS and CSEW), additional inclusion criteria were then applied. Specifically, studies were required to report on at least one of the following high-level categories: physical violence; sexual violence; threats. Studies were excluded if they did not report on at least one of these categories of interest, for example because they provided aggregated data on any physical/sexual violence, did not disaggregate between violence and other elements (e.g. physical violence and material neglect), or focused only on a very specific type of violence or coercion (e.g. threatened with gun/knife, rather than threatened more widely). Papers were also excluded because data were more comprehensively reported in another article that was already included. Details of the excluded papers are provided at the end of this section.

Data extraction was conducted by one reviewer using a standardised data extraction sheet. Extracted data included bibliographic information, study design and setting, sample size and characteristics, and outcomes. Outcomes were extracted based on the following high-level categories: physical violence; sexual violence[159] and threats. Although the APMS and the CSEW allow for finer grained disaggregations of type of violence, limitations of the data available from studies included in the review meant this was not possible here. For example, the majority of the studies did not disaggregate between types of physically violent acts or violence with injury and without injury. As far as possible, data has been extracted disaggregated by type of exploitation (sexual, labour, other). Where exploitation type was not specified, it was categorised as unspecified and was excluded from final analysis of pooled prevalence estimates. Information was also extracted on duration of trafficking; either median (with first and third quartiles) or mean (with standard deviation). Study authors were contacted for data in cases where studies included duration data that were not disaggregated by type of exploitation and age of the victims, or where data were not provided in the necessary format required by the software used for conducting the meta-analysis. Duration data were converted to months using the ratios of 12 months to 1 year; 4.35 weeks to 1 month; and 30 days to 1 month.

(157) (PROSPERO – Prospective Register of Systematic Reviews; EMBASE - Excerpta Medica Database; MEDLINE - Medical Literature Analysis and Retrieval System Online; PsycINFO – Psychological Information Database; CINAHL - Cumulative Index to Nursing and Allied Health Literature; PILOTS - Published International Literature on Traumatic Stress.

(158) Searches were conducted of relevant websites, including: European Commission https://ec.europa.eu/commission/index_en; World Health Organisation https://www.who.int/; United Nations Office on Drugs and Crime https://www.unodc.org/.

(159) For the purposes of the Study, all victims of sexual exploitation are assumed to have experienced sexual violence, as they would not have been able to consent to these experiences due to being victims of trafficking. Taking this approach means that prevalence estimates for victims of sexual exploitation will differ from prevalence estimates reported in the identified papers. It is possible that some of the victims of sexual exploitation did not experience sexual contact or sex of this form and were instead exploited into other areas of sexual exploitation. However, this information was not available in the studies and hence it is suggested that victims of sexual exploitation are assumed to experience a 100% victimisation rate for sexual violence.

Prevalence estimates were calculated based on extracted data. Where possible, prevalence estimates were calculated disaggregated by type of exploitation.

Pooled estimates and 95% confidence intervals were calculated for prevalence and for duration using random effects meta-analysis where comparable data are available from more than one study[160]. For some disaggregations there was only one study estimate and hence no pooled prevalence estimate was calculated. Meta-analysis is a statistical technique that combines the results of multiple studies to provide a weighted average. A weighted average is calculated because we assume that larger studies provide a more precise estimate than do smaller studies. Thus, the meta-analysis gives more weight to the larger studies (and by extension, to individuals that provided data for the larger studies) than it does the smaller studies.

Prior to conducting the meta-analysis the appropriateness of grouping studies with regards to study design and study samples was considered. The meta-analyses included only studies that collected primary data from victims who were no longer being trafficked. Studies using case file reviews and studies with samples of victims still in trafficking were excluded from the meta-analysis as it was considered that the differences in the design and the type of samples made it difficult to compare the prevalence estimates. Consideration was also given to whether estimates of duration should be based on the median or the mean. As analysis of the primary datasets to which the research team had access to suggested that duration data are skewed by the inclusion of a small number of people with very high duration of exploitation, the preferred measure of average duration is the median. Separate duration estimates were produced for victims who were still trafficked and victims who were no longer trafficked; Study calculations are based on this latter estimate only. As the duration in trafficking is required only for lost economic output and therefore only relevant for adult victims of trafficking, child victims were excluded from analysis on duration of trafficking.

The following studies contributed to the meta-analysis of the duration estimates of duration in trafficking for adults by type of exploitation: Cwikel et al. (2004)[161]; Gezie et al. (2019)[162]; Kiss et al. (2015a)[163]; Le (2014)[164]; Oram et al. (2012)[165]; Oram et al. (2016)[166]; Rimal and Papadopoulos (2016)[167]; Scarsella (2017)[168] Tsutsumi et al. (2008)[169]; and Zimmerman et al. (2008)[170].

(160) For calculations which include studies with samples where all victims are victims trafficked for sexual exploitation, two pooled estimates are provided in the tables. For one estimate the prevalence for sexual violence is used as reported in the studies. For the other estimate it is assumed that the victims of trafficking for sexual exploitation experience a 100% victimisation rate for sexual violence.

(161) Cwikel, J., Chudakov, B., Paikin, M., Agmon, K., and Belmaker, R. H. (2004) 'Trafficked Female Sex Workers Awaiting Deportation: Comparison with Brothel Workers'. *Archives of Women's Mental Health*, 7 (4): 243–249.

(162) Gezie, L. D., Worku, A., Kebede, Y., and Gebeyehu, A. (2019) 'Sexual violence at each stage of human trafficking cycle and associated factors: a retrospective cohort study on Ethiopian female returnees via three major trafficking corridors.' *British Medical Journal* Open Access, 9: e024515.

(163) Kiss, L., Pocock, NS., Naisanguansri, V., Suos, S., Dickson, B., Thuy, D., Koehler, J. et al (2015a) 'Health of Men, Women, and Children in Post-Trafficking Services in Cambodia, Thailand, and Vietnam: An Observational Cross-Sectional Study', *The Lancet Global Health*, 3 (3): e154–e161.

(164) Le, P., (2014) *Human Trafficking and Psychosocial Well-Being: A Mixed-Methods Study of Returned Survivors of Trafficking in Vietnam.* Doctoral Dissertation, UCLA.

(165) Oram, S., Ostrovschi, N.V., Gorceag, V.I., Hotineanu, M.A., Gorceag, L., Trigub, C., and Abas, M. (2012) 'Physical Health Symptoms Reported by Trafficked Women Receiving Post-Trafficking Support in Moldova: Prevalence, Severity and Associated Factors.' *Biomedcentral Women's Health* 12 (1): 20.

(166) Oram, S., Abas, M., Bick, D., Boyle, A., French, R., Jakobowitz, S,. Khondoker, M., Stanley, N., Trevillion, K., Howard, L.M. and Zimmerman, C. (2016) 'Human trafficking and health: a survey of male and female survivors in England.' *American Journal of Public Health.* 106(6):1073-1078.

(167) Rimal, R., and Papadopoulos, C. (2016) 'The Mental Health of Sexually Trafficked Female Survivors in Nepal.' *International Journal of Social Psychiatry*, 62 (5): 487–495

(168) Scarsella, G. M (2017) 'The Relationship Between Trauma and Well-Being: Moral Emotions in Sex-Trafficked Women,' *Clinical Psychology Dissertations.*

(169) Tsutsumi, A., Izutsu, T., Poudyal, A.K., Kato, S., and Marui, E. (2008) 'Mental Health of Female Survivors of Human Trafficking in Nepal', *Social Science & Medicine*, 66 (8): 1841–1847.

(170) Zimmerman, C., Hossain, M., Yun, K., Gajdadziev, V., Guzun, N., Tchomarova, M., Ciarrocchi, R.A., et al. (2008) 'The Health of Trafficked Women: A Survey of Women Entering Posttrafficking Services in Europe.' *American Journal of Public Health*, 98 (1): 55–59.

The following studies contributed to the meta-analysis of the prevalence of violence by type of exploitation: Gezie et al. (2019)[171]; Joarder and Miller (2014)[172]; Kiss et al. (2015b)[173]; Le (2014)[174]; Lederer and Wetzel (2014)[175]; Oram et al. (2016)[176]; Pocock et al. (2016)[177]; Stöckl et al. (2017)[178]; and Zimmerman et al. (2008)[179].

Meta-analyses of prevalence were conducted using the metaprop command in STATA 15 IC. Meta-analyses of duration were conducted using the metamedian command in R 3.6.0. The metamedian command allows for the combining of studies that report different types of average (i.e. medians and means), providing that the necessary data points can be inputted, to provide a pooled estimate of the median.

Findings

The summary tables below provide the overarching pooled estimates (including the 95% confidence intervals for the estimates) of the hurts of trafficking disaggregated by form of exploitation (Table A2.2.1); and individual study estimates of the hurts of trafficking disaggregated by form of exploitation (Table A2.2.2). Also presented are the overarching pooled estimates (including the 95% confidence intervals for the estimates) of the duration of trafficking for adult victims, disaggregated by form of exploitation (Table A2.2.3); and individual study estimates of the duration of trafficking for adult victims, disaggregated by form of exploitation (Table A2.2.4).

Table A2.2.1 Pooled prevalence estimates by type of exploitation summary

Exposure	Sexual exploitation	Labour exploitation	Other exploitation	Exploitation type unspecified
Physical violence	Pooled estimate: 68% 95% CI: 43-92%	Pooled estimate: 48% 95% CI: 43-52%	Pooled estimate: 69% 95% CI: 60-78%	Pooled estimate: 42% 95% CI: 24-60%
Sexual violence	Assumed to be 100%** Pooled estimate: 84% 95% CI: 75%-92%	Pooled estimate: 30% 95% CI: 0-60%	Pooled estimate: 67% 95% CI: 55-80%	Single estimate: 16%
Threats	Pooled estimate: 84% 95% CI: 70-98%	Pooled estimate: 59% 95% CI: 55-63%	Pooled estimate: 73% 95% CI: 65-81%	Single estimate: 47.1%

*** It is assumed in this report that 100% of victims of trafficking for sexual exploitation are victims of sexual violence. Findings using the terminology preferred in the studies themselves is reported as the 'pooled estimate'.*

(171) Gezie, L. D., Worku, A., Kebede, Y., and Gebeyehu, A. (2019) 'Sexual violence at each stage of human trafficking cycle and associated factors: a retrospective cohort study on Ethiopian female returnees via three major trafficking corridors.' *British Medical Journal* Open Access, 9: e024515.

(172) Joarder, M., Munim, A., and Miller, P. W. (2014) 'The Experiences of Migrants Trafficked from Bangladesh.' *The ANNALS of the American Academy of Political and Social Science*, 653 (1): 141–161..

(173) Kiss, L., Yun, K., Pocock, N., and Zimmerman, C. (2015a) 'Exploitation, Violence, and Suicide Risk Among Child and Adolescent Survivors of Human Trafficking in the Greater Mekong Subregion', *JAMA Pediatrics*, 169 (9): e152278.

(174) Le, P., (2014) *Human Trafficking and Psychosocial Well-Being: A Mixed-Methods Study of Returned Survivors of Trafficking in Vietnam.* Doctoral Dissertation, UCLA.

(175) Lederer, L. J., and Wetzel, C. A. (2014) 'The Health Consequences of Sex Trafficking and Their Implications for Identifying Victims in Healthcare Facilities', *Annals of Health Law*, 23: 31

(176) Oram, S., Abas, M., Bick, D., Boyle, A., French, R., Jakobowitz, S,. Khondoker, M., Stanley, N., Trevillion, K., Howard, L.M. and Zimmerman, C. (2016) 'Human trafficking and health: a survey of male and female survivors in England.' *American Journal of Public Health*. 106(6):1073-1078.

(177) Pocock, N. S., Kiss, L., Oram, S., and Zimmerman, C. (2016) 'Labour Trafficking among Men and Boys in the Greater Mekong Subregion: Exploitation, Violence, Occupational Health Risks and Injuries', *PLOS ONE* 11 (12): e0168500

(178) Stöckl, H., Kiss, L., Koehler, J., Thuy Dong, D., and Zimmerman, C. (2017) 'Trafficking of Vietnamese Women and Girls for Marriage in China.' *Global Health Research and Policy*, 2 (1): 28.

(179) Zimmerman, C., Hossain, M., Yun, K., Gajdadziev, V., Guzun, N., Tchomarova, M., Ciarrocchi, R.A., et al. (2008) 'The Health of Trafficked Women: A Survey of Women Entering Posttrafficking Services in Europe.' *American Journal of Public Health*, 98 (1): 55–59.

Table A2.2.2 Individual study estimates of the hurts of trafficking, disaggregated by type of exploitation[180]

Exposure	Sexual exploitation	Labour exploitation	Forced marriage	Domestic servitude	Exploitation type unspecified	Range
Physical violence	Le 2014 = 47% Lederer 2014 = 92.2% Kiss 2015b = 34% Oram 2016 = 86% Zimmerman 2008 = 75.5%	Pocock 2016 = 48.2% Oram 2016 = 42%	Le 2014 = 31% Stockl 2017 = 61%	Le 2014 = 73% Oram 2016 = 75%	Chisolm-Straker 2016 = 66% Kiss 2015a = 38.3% Okech 2016 = 21.5%	21.5–92.2%
Sexual violence	Kiss 2015b = 71% Le 2014 = 84% Lederer 2014 = 81.6% Oram 2016 = 93% Zimmerman 2008 = 89.6% **Assumed to be 100%	Joarder 2014 = 38.6% Gezie 2019 = 75.1% Oram 2016 = 5% Pocock 2016 = 1.4%	Le 2014 = 38% Stockl = 86%	Gezie 2019 = 69.4% Le 2014 = 91% Oram 2016 = 48%	Okech 2016 = 16%	1.4–100%
Threats	Lederer 2014 = 66% Oram 2016 = 95% Zimmerman 2008 = 89.1%	Oram 2016 = 73% Pocock 2016 = 57%	Stockl = 49%	Oram 2016 = 84%	Kiss 2015a = 47.1%	47.1–95%

*Notes: Table only includes surname of first author** It is assumed in this report that 100% of victims of trafficking for sexual exploitation are victims of sexual violence.*

(180) When conducting the meta-analysis, the categories of trafficking for forced marriage and domestic servitude were combined into the type of exploitation of 'other'.

Table A2.2.3 Pooled estimates of duration in trafficking, disaggregated by type of exploitation

Type of exploitation	Estimated duration of trafficking (months)	Estimated duration of trafficking (years)
Sexual	Pooled estimate: 15.4 months 95% CI: 5.8-25.0 months	1.28 years 95% CI: 0.48-2.08 years
Labour	Pooled estimate: 7.8 months 95% CI: 4.8-10.8 months	0.65 years 95% CI: 0.40-0.90 years
Other	Pooled estimate: 16.2 months 95% CI: 3.4-29.1 months	1.35 years 95% CI: 0.28-2.43 years

Table A2.2.4 Individual study data on duration of trafficking for adults (in months)[181]

	Sample n	Mean	SD	Median	1st Quartile	3rd Quartile
Cwikel et al. (2004)[182]						
Sexual	47	11.3	9.6	-	-	-
Gezie et al. (2019)						
Labour	605	-	-	9.7	6	14.3
Domestic servitude	452	-	-	12.7	9.1	17.4
Kiss et al. (2015a)						
Sexual	125	-	-	3.1	1.5	7.3
Labour	449	-	-	6.3	2.4	20.6
Domestic servitude	23	-	-	4.4	2.5	14.2
Forced marriage	38	-	-	6.8	4.1	10.5
Le (2014)						
Sexual	19	4.3	4.7	-	-	-
Domestic servitude	11	7.4	12.7	-	-	-
Forced marriage	13	10.8	13.8	-	-	-
Oram et al. (2012)						
Sexual	97	-	-	7	5	12
Labour	23	-	-	11	8	15
Oram et al. (2016)						
Sexual	40	-	-	10	4	36
Labour	59	-	-	4	0.1	13
Domestic servitude	44	-	-	18	6	60
Rimal and Papadopoulos (2016)						
Sexual	64	-	-	36	8.25	48
Scarsella (2017)						
Sexual	16	113.6	115.9	-	-	-
Tsutsumi et al. (2008)						
Sexual	44	29.7	24.4	-	-	-
Other	120	54.3	36.7	-	-	-
Zimmerman et al. (2008)						
Sexual	55	-	-	5.75	2.25	21

(181) Studies that report on trafficking for domestic servitude and forced marriage separately were both included in the category of 'other' for analysis.

(182) This study also includes a sample of victims who are still in the trafficking situation. Only the duration of trafficking for the proportion of the sample who were no longer in the trafficking situation is presented in the table and was included in analysis.

Studies excluded from Study

Abas, M., Ostrovschi, NV., Prince, M., Gorceag, VI., Trigub, C., and Oram, S. (2013) 'Risk Factors for Mental Disorders in Women Survivors of Human Trafficking: A Historical Cohort Study', *BMC Psychiatry*, 13 (1): 204.

Bick, D., Howard, LM., Oram, S., and Zimmerman, C. (2017) Maternity Care for Trafficked Women: Survivor Experiences and Clinicians' Perspectives in the United Kingdom's National Health Service', *PLOS ONE,* 12 (11): e0187856.

Borschmann, R., Oram, S., Kinner, S.A., Dutta, R., Zimmerman, C. and Howard, L.M. (2017). Self-harm among adult victims of human trafficking who accessed secondary mental health services in England. *Psychiatric services*, *68*(2), pp.207-210.

Chapple, CL. and Crawford, BL. (2019) 'Mental Health Diagnoses of Youth Commercial Sex Exploitation Victims: An Analysis within an Adjudicated Delinquent Sample', *Journal of Family Violence*, pp. 1–10.

Chisolm-Straker, M., Baldwin, S., Gaïgbé-Togbé, B., Ndukwe, N., Johnson, P.N. and Richardson, L.D. (2016). Health care and human trafficking: we are seeing the unseen. *Journal of health care for the poor and underserved*, *27*(3), pp.1220-1233.

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2.3 Children

In some costing work, Studies apply a generic multiplier for costs for children (persons aged under 18), on the grounds that they usually generate more costs, but the data does not support specific identification of costs. In this Study, we investigate the different costs for adults and children on a cost by cost basis rather than generalising across all forms of cost. Different vulnerabilities and legal entitlements distinguish adults from children differently in different areas of cost. We offer this text to describe the alternative costing methodology used elsewhere. The net outcome is not dissimilar to our own methodology.

The alternative methodology estimates a ratio for the costs associate with adults and children from one location where data is abundant and apply this to areas where data is scarce. This is the strategy of using a 'multiplier'.

The UK used a multiplier for the costs of children in its study of the costs of "modern slavery" (Reed et al. 2018)[183], which was derived from a US study of the cost of sexual assault against adults and children by the Minnesota Department of Health (2007)[184].

"To account for the additional impact on underage victims, the physical and emotional harms suffered by those under 18 have been weighted using a multiplier of 1.21. The multiplier is based on evidence from a study by the Minnesota Department of Health (2007)[185] which compared the adult and child costs for rape and sexual assault and showed that the physical and emotional costs are relatively worse for children than adults." (Reed et al 2018, p. 11)[186].

(183) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery.* London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf.

(184) Minnesota Department of Health (2007) *Costs of Sexual Violence in Minnesota.* http://stmedia.startribune.com/documents/costofsexualviolence.pdf

(185) Minnesota Department of Health (2007) *Costs of Sexual Violence in Minnesota.* http://stmedia.startribune.com/documents/costofsexualviolence.pdf

(186) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery.* London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf.

The Minnesota study estimated that "Adults had lower mental health care costs, lost less quality of life, and had less likelihood of turning to suicide or substance abuse than children following a sexual assault" (Minnesota Department of Health, 2007, p. 10)[187]. This study found a different ratio of costs for adults and children for sexual assault among the various different things that were costed. They found an average of 1.32. In some areas the ratio was lower, for example, the ratio was 1.21 in the category of 'suffering and lost quality of life'. The costs are shown in Table 2.4. Logically, perhaps, the ratio to be transferred is that of 1.32. However, the UK study selected the lower ratio of 1.21 despite the fact that this pertained only to one component.

Table A2.3 Cost per sexual assault victimisation in Minnesota, 2005 (in 2005 dollars)

	Rape and Child Sexual Assault Aged 0–17	Rape Aged 18 and Older	All Rape and Child Sexual Assault	Other Adult Sexual Assault Aged 18 and Older
Medical Care	700	700	700	-
Mental Health Care	9 400	1 400	5 000	-
Lost Work	3 900	2 800	3 300	-
Property Damage	100	100	100	-
Suffering and Lost Quality of Life	143 400	118 100	129 400	270
Sexually Transmitted Diseases	1 100	1 100	1 100	-
Pregnancy	300	400	300	-
Suicide Acts	16 500	8 200	11 900	-
Substance Abuse	4 600	2 300	3 300	-
Victim Services/Out of Home Placement	300	100	200	-
Criminal Justice:				
Investigation/Adjudication	600	500	500	-
Sanctioning	2 100	2 100	2 100	-
Earning Loss While Confined	1 300	1 300	1 300	-
Total (Rounded)	**184 000**	**139 000**	**159 000**	**270**

Source: Minnesota Department of Health, 2007, p. 11.

The Anti-trafficking Directive places obligations on Member States under Article 14(1) that "Within a reasonable time, Member States shall provide access to education for child victims and the children of victims who are given assistance and support in accordance with Article 11, in accordance with their national law."[188]

2.4 Aligning to 2016

This section details the technical adjustments to bring data obtained for years other than 2016 into alignment with 2016.

These are inflators and deflators that adjust the value of the size of the economy and of the population to bring them into alignment with 2016. These annual adjusters are found from Eurostat.

There are no adjustments regarding the number of victims in different years, since European Commission (2018a)[189] found that there were no discernible trends.

(187) Minnesota Department of Health (2007) *Costs of Sexual Violence in Minnesota*. http://stmedia.startribune.com/documents/costofsexualviolence.pdf

(188) *EU Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA* https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

(189) European Commission (2018a) *Data collection on trafficking in human beings in the EU*. Brussels: European Commission. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_data-collection-study.pdf

Future costs. There are divergent practices as to whether a discount is applied to the value of future costs and benefits. The UK government (2018)[190] applies a discount, on the grounds that most people value immediate benefits more than ones in the distant future. The Global Burden of Disease (Murray et al. 2018)[191] project does not apply a discount, partly on the grounds that these values are real to people in practice and partly on the grounds that the complexity introduced by discounting was detrimental to the overall comprehensibility and thus legitimacy and value of cost-benefit analysis. This Study adopts the practice of not discounting on two grounds: first, this Study uses values estimated by the GBD project for its estimates for the lost quality of life, so it is appropriate to follow the practices of the source study; and secondly, we agree with the GBD argument as to maintaining simplicity for the purposes of comprehensibility and legitimacy of the Study findings on costs.

2.5 Aligning to EU-28/27

In some instances, there is data for some Member States but not all. In aggregating this data to EU-28/27 level the following practices were addressed.

For information on the cost of specialised services provided by National Rapporteurs and equivalent mechanisms for Member States, data was weighted by the number of victims in the Member State providing data. It was not weighted by population. This was to ensure that the contribution of information from one Member State to the cost for the EU was proportionate to the proportion of victims that the Member State contributed to the EU total.

2.6 Technical adjustments and design decisions

Sources of authority

The *Better Regulation: Guidelines and Toolbox* (European Commission, 2015a)[192] is the Study's primary authority on technical design decisions. Where the *Guidelines* refer analysts to other sources for design guidance, such as OECD, we have drawn on those. Where further or more precise guidance was needed, decisions have drawn on the European Institute for Gender Equality (EIGE)'s report *Estimating the costs of gender-based violence in the European Union*[193] and The Global Burden of Disease (GBD) project.[194] Whenever another authority is drawn on, a reference is given for the source.

In this Study, the Better Regulation Guidelines is the primary source of authority. When superseded, rationale and references are provided for the alternative source.

Responsive to context

Throughout the *Better Regulation Guidelines* it is recommended that analytic approaches should be adapted to meet specific assessment aims: "When making choices about the focus and depth of the analysis, the IA [Impact Assessment] should concentrate on what is relevant to inform decision-making. The most appropriate methods should be identified to collect data and analyse impacts."

(190) HM Treasury (2018) *The Green Book: Central Government Guidance of Appraisal and Evaluation*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

(191) Murray, C. J. L. et al. (2018) 'Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017', *Lancet,* 392: 1923-94.

(192) European Commission (2015a) *Better Regulation: Guidelines and Toolkit*. https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

(193) European Institute for Gender Equality (EIGE) (2014) *Estimating the costs of gender-based violence in the European Union* https://eige.europa.eu/publications/estimating-costs-gender-based-violence-european-union-report

(194) Institute for Health Metrics and Evaluation. (2013) *The Global Burden of Disease: Generating Evidence, Guiding Policy.* Seattle, WA: IHME, 2013. https://www.healthdata.org/sites/default/files/files/policy_report/2013/GBD_GeneratingEvidence/IHME_GBD_GeneratingEvidence_FullReport.pdf

The *Regulations' Health Impacts Toolkit (31)* states that "[t]here is no uniform methodology to analyse and assess impact of policies on human health."[195] The *Guidelines* direct analysts to check how the same or similar potential health impacts have already been dealt with in related studies.[196]

Throughout this Study, design decisions are made to be appropriate to the specific policy context.

Discounting

Health costs: The *Better Regulation Guidelines* recommend the use of QALYs or DALYs in assessing health impacts, and refers analysts to the GBD programme website for the preferred approach to discounting.[197] Since 2010, the GBD practice has been to not discount. They reached this position through consultation with ethicists, philosophers, epidemiologists and economists. The European Institute For Gender Equality position was to be consistent with GBD's considered policy to not discount.[198] A consistent approach has been adopted in this Study.

Lost economic output costs: *Better Regulation Guidelines* Toolkit 61 considers the use of discounting in cost benefit analyses of policies. While a social discount rate of 4% is recommended, the *Guidelines* acknowledge this can be problematic. They recommend conducting sensitivity analyses "of the social discount rate when it is applied over long time frames. This is because discounting at even modest rates (i.e. 4%) reduces the value of costs and benefits effectively to zero over very long time periods. This can be criticised because it excludes future generations from consideration in today's decisions."[199]

We have decided to be consistent with the approach taken on our estimates of health costs to not discount, due to the potential gender bias this introduces. However, as recommended in the guidelines, sensitivity analyses are provided to demonstrate the impact of discounting at an annual 4% rate; and show the gender bias introduced in terms of total costs.

The GBD recommendation to not discount health is applied. While this does not follow the Better Regulation Guidelines to use 4%; it does follow the Better Regulation Guidelines recommending consistency with the GBD; to be responsive to specific policy context; and to heed sensitivity analysis.

Value of a Statistical Life (VOSL) and Value of a Life Year (VOLY)

The *Better Regulation Guidance* describe how the VOSL and VOLY are derived from individuals' willingness to pay (WTP) for a lower risk of mortality, divided by that risk reduction. As such, the approach does not measure the value of a life per se, instead it puts a monetary value on the willingness to accept slightly higher or lower levels of risk. The *Guidelines* state therefore that VOSL and VOLY should be used in combination with DALY/QALY weights.

In terms of the monetary value to use, the *Guidelines* refer analysts to the OECD for discussion of the right values to use. [200] The OECD ranges cited in the *Better Regulation Guidelines* for the average adult VOSL for the EU is USD 3.6 million (3.3 euros at the current exchange;).[201] The 2015 *Better Regulation Guidelines* do not provide a recommended value to use for the VOLY. The European Commission's 2009 *Impact Assessment Guidelines* have

(195) European Commission (2015) *Better Regulations Toolkit 31: Health Impacts*. p240 https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-31_en_0.pdf

(196) European Commission (2015) *Better Regulations Toolkit 31: Health Impacts*. p241 https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-31_en_0.pdf

(197) Global Burden of Disease Study 2017 (GBD 2017) *Disability Weights* http://ghdx.healthdata.org/record/ihme-data/gbd-2017-disability-weights

(198) "Discounting future losses for social time preference assumes that the relative value of goods/services will be less over time and the discount rate converts future costs and benefits to present values (HM Treasury 2014). However, estimating the costs of health losses and related lost economic output is not concerned with goods/services but the economic value of days of lost productivity through health losses resulting from intimate partner and gender-based violence. Following the methodology of the global burden of disease we have not applied discount rates in acknowledgement that the value of future losses should not be assessed to have a lesser value and we present future losses in today's (2012/13) 'real terms'." European Institute for Gender Equality (EIGE) (2014) *Estimating the costs of gender-based violence in the European Union* https://eige.europa.eu/publications/estimating-costs-gender-based-violence-european-union-report p. 127

(199) European Commission (2015b) *Toolkit 61:The Use of Discount Rates*. p. 505 https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-61_en_0.pdf

(200) Global Burden of Disease Study 2017 (GBD 2017) *Disability Weights* http://ghdx.healthdata.org/record/ihme-data/gbd-2017-disability-weights

(201) Organisation for Economic Co-operation and Development (OECD) (2012) *Mortality Risk Valuation in Environment, Health and Transport Policies*. Paris. https://read.oecd-ilibrary.org/environment/mortality-risk-valuation-in-environment-health-and-transport-policies/recommended-value-of-a-statistical-life-numbers-for-policy-analysis_9789264130807-9-en#page1

therefore been referred to, and the mid-point of the range 50,000-100,000 (75,000 euros) has been applied.[202] Because this figure is an approximate value, it is assumed that spurious accuracy would be implied by the application of inflation/deflation adjustment to this figure.

The Better Regulation Guidelines recommendation to combine VOLYs with GBD Disability weights has been applied in this study. In lieu of a specific VOLY recommendation in the Guidelines, 75,000 euros has been applied. No inflation/deflation has been applied to this VOLY.

Purchasing power parities (PPP)

Purchasing power parities (PPPs) are indicators of price level differences across countries. PPPs tell us how many currency units a given quantity of goods and services costs in different countries.[203] The *Better Regulation Guidelines* and *Toolkits* do not refer to PPP and so do not make recommendations for their use (nor do they explicitly recommend against their use). Because this study does not seek to make cross-country comparisons and because the *Better Regulation Guidelines* do not recommend their use, PPPs have not been applied here.

In this Study PPP have not been applied.

Visual display of information

The study has sought to follow the *Better Regulations Guidelines* set out in *How to use Visual Aids and Present Quantitative Data: Toolbox 65*[204], prioritising the display of information in tables, with graphical display only as an aid to understanding process stages and for comparison of groups.

In this Study data are primarily presented in tabulated form.

Sensitivity analyses

The *Better Regulation Guidelines* highlights that there are a range of approaches possible to undertaking sensitivity analyses, include the 'global' approach and the 'one-at-a-time' (OAT) approach (which examines the variation in the model output as each input variable is changed one at a time, usually to the minimum and maximum plausible values). While the Guidelines recognise that a 'global' approach to sensitivity analyses is ideal, it notes that in practice the OAT approach is most commonly used in Commission IAs and is also the approach taken in the Study (see Section 2.7 below).[205]

An OAT approach to sensitivity analysis has been used in this Study, testing key design approaches where a decision between apparently equivalent approaches was required or where there was particular uncertainty about an input value.

2.7 Sensitivity testing

2.7.1 Summary

Many choices had to made to produce a cost of trafficking in human beings. In this Section the impact of particular design choices on costs is presented. It is shown that while there is a lot of uncertainty, most choices made were conservative. Mostly, the impact of having made a different (also defensible) decision would have been to increase the estimated costs.

(202) European Commission (2009) *Annexes to Impact Assessment Guidelines* https://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/iag_2009_annex_en.pdf

(203) Eurostat Statistics Explained https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:PPP

(204) European Commission (2015c) *How to use Visual Aids and Present Quantitative Data: Toolkit 65* https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-65_en_0.pdf

(205) European Commission (2015d) *The Use of Analytical Models and Methods: Toolbox 62*: https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-62_en_0.pdf p. 510

2.7.2 Introduction

Values can be subject to uncertainty, in particular due to sampling error. This can result from the countries providing information not being typical of all eligible countries, or because a survey sample does not represent the population its drawn from. Uncertainty can also result from problems with validity and reliability. For example, whether it is valid to extrapolate associations with violence experienced by people in the general population to the associations with violence experienced by victims of trafficking. During the costing process decisions have to be made over which values to use and which approaches to apply. Each decision was reviewed and the approach selected was the one considered most appropriate (often the most conservative). Had a different approach been taken, final cost estimates would have also differed. In this Section we consider the impact of various design choices and sources of uncertainty on cost estimates. As discussed in Section 2.13 of the main report, we do not present a global sensitivity test. Instead we have performed a series of One-At-A-Time (OAT) reviews to demonstrate the impact of a range of design decisions.

2.7.3 Prevalence of violence in victims of trafficking

The impact of trafficking on people's quality of life, health and need for social protection was gauged by measuring the impact of violence on people. Only those counted as having experienced violence (sexual, physical or threat) are counted as having health, social protection or economic costs. The extent to which trafficked people experienced violence was based on the systematic review, and that that those exploited for sex had been subject to sexual violence. In the costings it is assumed that only some victims of trafficking were subjected to threat or coercion. Our estimate of the prevalence of threat in the trafficked population comes from the systematic review and was 84% of those subject to sexual exploitation, 59% of those subject to labour exploitation, and 73% of those subject to other forms of exploitation. However, it could be argued that by definition threat is implicit to all experiences of trafficking. If the cost modelling had assumed that 100% of trafficked victims experienced threat, then many aspects of the costing would be higher (e.g. costs associated with quality of life, healthcare, social protection, and economic output). Tables A2.7.3.1 and A2.7.3.2 show the estimated cost of reduced quality of life post trafficking (measured in terms of impact on long-term mental health harm) in the selected model, and a revised model where all victims experience threat.

Table A2.7.3.1 Impact of assumptions about prevalence of threat in victims of trafficking on cost of long-term mental health harm, EU-28, EUR

EU-28	Total cost of long-term mental health harm (current model)	Average cost per victim (current model)	Total cost of long-term mental health harm with 100% threat prevalence	Average cost per victim with 100% threat prevalence	INCREASE in total cost with 100% threat prevalence
Total	547 476 910	46 271	565 020 424	47 754	17 543 514
Form of exploitation					
Sexual	372 957 919	56 288	379 388 827	57 258	6 430 908
Labour	74 708 019	25 256	82 103 725	27 756	7 395 707
Other	99 810 973	44 398	103 527 872	46 052	3 716 899
Sex of victim					
Female	425 596 499	52 020	435 293 759	53 206	9 697 260
Male	121 880 411	33 386	129 726 665	35 535	7 846 254
Age of victim					
Child	152 481 200	55 692	157 494 143	57 522	5 012 943
Adult	394 995 710	43 435	407 526 281	44 812	12 530 571

Table A2.7.3.2 Impact of assumptions about prevalence of threat in victims of trafficking on cost of long-term mental health harm, EU-27, EUR

EU-27	Total cost of long-term mental health harm (current model)	Average cost per victim (current model)	Total cost of long-term mental health harm with 100% threat prevalence	Average cost per victim with 100% threat prevalence	INCREASE in total cost with 100% threat prevalence
Total	393 527 161	49 025	404 121 356	50 345	10 594 195
Form of exploitation					
Sexual	287 625 129	55 988	292 584 645	56 953	4 959 516
Labour	27 381 428	24 365	30 092 048	26 778	2 710 620
Other	78 520 604	44 464	81 444 663	46 120	2 924 059
Sex of victim					
Female	323 104 717	52 595	330 113 176	53 736	7 008 460
Male	70 422 445	37 394	74 008 180	39 299	3 585 735
Age of victim					
Child	99 573 631	61 420	102 099 975	62 978	2 526 344
Adult	293 953 531	45 892	302 021 381	47 152	8 067 850

2.7.4 Repetition of injuries

Repetition of violence matters (Walby, Towers and Francis 2014, 2016)[206]. But data on repetition is scarce. We had information on the prevalence of physical injuries among people in the general population who experienced physical violence, but not about the number of incidents. Due to lack of reliable information on number of incidents, the default was to assume that each incident occurred just once. In Reed et al. (2018)[207] an estimate of the number of incidents of each type of physical injury during an average period of trafficking was produced, based on expert interviews. For example, for bruising or black eye, it was estimated that this occurred on average 117 times. Table A2.7.4 shows the impact on the estimated quality of life costs if this level of repetition been applied in these costings just for bruising/ black eye. If repetition was factored in for other physical injuries the impact on cost estimates would have been greater.

Table A2.7.4 Impact of estimate of number of bruising/black eye incidents on cost of bruising/black eye, EUR

Bruising/black eye	Total costs linked to bruising/ black eye	Average cost per victim
EU-28		
Assuming no repetition	215 688	18
Assuming repetition [a]	24 842 671	2 100
INCREASE with repetition included	24 626 983	2 082
EU-27		
Assuming no repetition	154 051	19
Assuming repetition [a]	17 797 513	2 217
INCREASE with repetition included	17 643 462	2 198

[a] Based on the estimate used by Reed et al. (2018) of 117 incidents of bruising. In our estimates this is applied the proportion of victims of physical violence, plus sexual violence, plus threat estimated to have experienced bruising/black eye.

(206) Walby, S., Towers, J. and Francis, B. (2014) 'Mainstreaming domestic and gender-based violence into sociology and the criminology of violence', The Sociological Review, 62(S2): 187-214. https://openaccess.city.ac.uk/id/eprint/21689/
Walby, S., Towers, J. and Francis, B. (2016) 'Is violent crime increasing or decreasing? A new methodology to measure repeat attacks making visible the significance of gender and domestic relations.' *British Journal of Criminology*, 56(6): 1203-1234 http://bjc.oxfordjournals.org/content/early/2015/12/31/bjc.azv131.full

(207) Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery*. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf.

2.7.5 Disability weights

The Global Burden of Disease project provides disability weights for specific conditions. The weights proposed for mild Major Depressive Disorder (MDD) are 0.145, and these have been selected as equivalent to the 'limiting mental health condition' assessed on the mental health survey. However, a disability weight of 0.396 is also proposed by the Global Burden of Disease for moderate MDD. We erred on using the lower weight for long-term mental health. However, given we also assumed a low prevalence of disorder in this population a case could have been made that the higher weight should have been applied. Selection of disability weight has a large impact on cost estimates. Tables A2.7.5.1 and A2.7.5.2 show the impact on estimated long-term quality of life costs had we selected the disability weight associated with the more severe condition (0.396).

It should also be noted that no costs were included for long-term physical health harms associated with trafficking. This is despite finding significant associations between experience of violence and long-term physical health outcomes after adjustment for other factors. The reasons that costs were not included for long-term physical health harm was because we did not have sufficient longitudinal evidence to be definitive about causal association, and because we did not have an appropriate disability weight to apply to our measure of limiting long-term physical health condition.

Table A2.7.5.1 Impact of disability weight on estimated cost of long-term mental health harm, EU-28, EUR

EU-28	Total cost of long-term mental health harm (disability weight: 0.145) [a]	Average cost per victim	Total cost of long-term mental health harm (disability weight: 0.396)	Average cost per victim	INCREASE in total cost if higher weight is applied
Total	547 476 910	46 271	1 514 473 311	127 998	966 996 401
Form of exploitation					
Sexual	372 957 919	56 288	1 032 703 825	155 858	659 745 906
Labour	74 708 019	25 256	205 936 083	69 620	131 228 064
Other	99 810 973	44 398	275 833 403	122 697	176 022 430
Sex of victim					
Female	425 596 499	52 020	1 177 949 400	143 980	752 352 901
Male	121 880 411	33 386	336 523 911	92 181	214 643 500
Age of victim					
Child	152 481 200	55 692	421 779 464	154 049	269 298 264
Adult	394 995 710	43 435	1 092 693 847	120 155	697 698 137

[a] *With child multiplier and disability weight of 0.145. See Chapter 8 of the main report for details.*

Table A2.7.5.2 Impact of disability weight on estimated cost of long-term mental health harm, EU-27, EUR

EU-27	Total cost of long-term mental health harm (disability weight: 0.145) [a]	Average cost per victim	Total cost of long-term mental health harm ((disability weigh: 0.396t	Average cost per victim	INCREASE in total cost if higher weight is applied
Total	393 527 161	49 025	1 088 895 540	135 654	695 368 379
Form of exploitation					
Sexual	287 625 129	55 988	796 421 140	155 028	508 796 011
Labour	27 381 428	24 365	75 478 164	67 165	48 096 736
Other	78 520 604	44 464	216 996 236	122 879	138 475 632
Sex of victim					
Female	323 104 717	52 595	894 333 922	145 580	571 229 205
Male	70 422 445	37 394	194 561 618	103 313	124 139 173
Age of victim					
Child	99 573 631	61 420	275 534 067	169 957	175 960 436
Adult	293 953 531	45 892	813 361 474	126 983	519 407 943

[a] *With child multiplier and disability weight of 0.145. See Chapter 8 of the main report for details.*

2.7.6 Discounting

The rationale for following the Global Burden of Disease practice to not discount is set out in Section 2.13. The impact of discounting is to reduce costs associated with the future. Table 2.7.6.1 demonstrates the impact on long-term quality of life cost estimates if a cumulative annual discount of 4% is applied. A similar pattern is evident if discounting is applied to the long-term costs associated with healthcare (see Table A2.7.6.2), social protection, and economic output.

Table A2.7.6.1 Impact of discounting on estimated cost of long-term mental health harm, EU-28, EUR

EU-28	Total cost of long-term mental health harm [a]	Average cost per victim	Total cost of long-term mental health harm with discounting	Average cost per victim with discounting	DECREASE in total cost if discounting is applied
Total	547 476 910	46 271	430 853 855	36 414	116 623 055
By form of exploitation					
Sexual	372 957 919	56 288	291 501 256	43 994	81 456 663
Labour	74 708 019	25 256	60 364 488	20 407	14 343 531
Other	99 810 973	44 398	78 988 111	35 136	20 822 861
By sex of victim					
Female	425 596 499	52 020	333 616 686	40 778	91 979 812
Male	121 880 411	33 386	97 237 169	26 635	24 643 243
By age of victim					
Child	152 481 200	55 692	120 050 140	43 847	32 431 059
Adult	394 995 710	43 435	310 803 715	34 177	84 191 995

[a] *With child multiplier. See Chapter 8 of the main report for details.*

Table A2.7.6.2 Impact of discounting on estimated cost of long-term mental health harm, EU-27, EUR

EU-27	Total cost of long-term mental health harm [a]	Average cost per victim	Total cost of long-term mental health harm with discounting	Average cost per victim with discounting	DECREASE in total cost if discounting is applied
Total	393 527 161	49 025	309 069 501	38 504	84 457 660
By form of exploitation					
Sexual	287 625 129	55 988	224 805 754	43 760	62 819 375
Labour	27 381 428	24 365	22 124 344	19 687	5 257 084
Other	78 520 604	44 464	62 139 403	35 188	16 381 201
By sex of victim					
Female	323 104 717	52 595	253 156 094	41 209	69 948 622
Male	70 422 445	37 394	55 913 407	29 690	14 509 038
By age of victim					
Child	99 573 631	61 420	78 169 166	48 217	21 404 464
Adult	293 953 531	45 892	230 900 335	36 048	63 053 196

[a] *With child multiplier. See Chapter 8 of the main report for details.*

2.7.7 Number of victims of trafficking

The report is anchored on the number of registered victims of trafficking in 2016. This number is an underestimate of the total number of victims of trafficking.

Some aspects of this costing are not affected by the estimated number of victims (such as fixed costs related to co-ordination or law enforcement costs related to prosecutions). Other costs may apply less to unregistered

victims, for example unregistered victims will be less likely to utilise specialised services. However, most of the costs of trafficking relating to health, quality of life, and the long-term need for social protection. These costs are likely to be equally incurred by unregistered victims. Impact on quality of life may even tend to be greater on unregistered victims. An alternative approach would have been to base costs on an estimate of the total number of victims of trafficking in the EU.

The United Nations Office on Drugs and Crime in the 2014 *Global Report on Trafficking in Persons* resists producing an estimate of the total number of victims stating that **"Generating a methodologically sound estimate of the global number of trafficking victims is a commendable objective. Achieving it, however, would require significant resources and a long-term perspective."**[208]

[208] United Nations Office on Drugs and Crime (UNODC) (2014) *Global Report on Trafficking in Persons* https://www.unodc.org/unodc/en/data-and-analysis/glotip_2014.html p. 30

Table A2.7.7.1 The costs of trafficking in human beings per victim and total for registered victims and for all victims, EU-28

EU-28	Cost per registered victim (EUR)	Number of registered victims	Total cost for registered victims (EUR)	Cost per victim (including unregistered) (EUR)	Number of victims (including unregistered)	Total cost (including unregistered) (EUR)	INCREASE in costs when including unregistered (EUR)
Total cost	211 043	11 832	2 497 053 827	155 456	1 992 027	309 673 500 304	307 176 446 477
Service costs (applied to registered victims)							
Coordination and prevention	2 334	11 832	27 614 922	2 334	11,832	27 614 922	0
Law enforcement	43 934	11 832	519 828 268	43 934	11 832	519 828 268	0
Specialised victim services	9 650	11 832	114 184 488	9 650	11,832	114 184 488	0
Service costs (applied to all victims)							
Health and social protection	20 749	11 832	245 496 731	20 749	1 992 027	41 332 568 223	41 087 071 492
Lost economic output (applied to all victims)							
Lost economic output	59 537	11 832	704 449 058	59 537	1 992 027	118 599 987 777	117 895 538 719
Lost quality of life costs (applied to all victims)							
Lost quality of life	74 838	11 832	885 480 360	74 838	1 992 027	149 079 316 626	148 193 836 266

Table A2.7.7.2 The costs of trafficking in human beings per victim and total for registered victims and for all victims, EU-27

EU-27	Cost per registered victim EUR	Number of registered victims	Total cost for registered victims EUR	Cost per victim (including unregistered) EUR	Number of victims (including unregistered)	Total cost (including unregistered) EUR	INCREASE in costs when including unregistered EUR
Total cost	220 342	8 027	1 768 680 010	161 915	1 736 142	281 106 631 710	279 337 951 700
Service costs (applied to registered victims)							
Coordination and prevention	3 355	8 027	26 932 512	3 355	8 027	26 932 512	0
Law enforcement	43 934	8 027	352 659 018	43 934	8 027	352 659 018	0
Specialised victim services	11 409	8 027	91 582 788	11 409	8 027	91 582 788	0
Service costs (applied to all victims)							
Health and social protection	21 785	8 027	174 862 479	21 785	1 736 142	37 821 853 470	37 646 990 991
Lost economic output (applied to all victims)							
Lost economic output	59 795	8 027	479 973 675	59 795	1 736 142	103 812 866 976	103 332 893 301
Lost quality of life costs (applied to all victims)							
Lost quality of life	80 063	8 027	642 669 538	80 063	1 736 142	139 000 736 946	138 358 067 408

2.7.8 Value of a Life Year (VOLY)

Estimating the costs of reduced quality of life requires a monetary value to be place on one year of life in good health. The rationale is presented for selecting the VOLY used in these costings. Alternative options were available. The VOLY selected was that proposed in an European Commission report published in 2009. No inflation/deflation was applied to adjust this value to the 2016 prices. Inflation could have been applied, for example using the annual consumer price inflation rates provided by the international Monetary Fund.[209] Applying inflation would have resulted in a higher VOLY (EUR 85 061). However, in a recent European Commission Impact Assessment, a VOLY of EUR 44 000 was used. Tables A2.7.8.1 and A2.7.8.2 show the estimated quality of life costs had the VOLY with inflation applied been used (EUR 85 061), as well as the quality of life cost estimates had the lower VOLY (EUR 44 000) been applied.

Table A2.7.8.1 Impact of VOLY on estimated cost of long-term mental health harm, EU-28, EUR

EU-28	Total cost of long-term mental health harm (VOLY=EUR 75 000) [a]	Total cost of long-term mental health harm (VOLY=EUR 85 061)	Total cost of long-term mental health harm (VOLY=EUR 44 000)	RANGE (higher-lower estimate) (EUR)
Total	547 476 910	620 933 561	321 183 281	299 750 280
By form of exploitation				
Sexual	372 957 919	422 998 352	218 800 065	204 198 287
Labour	74 708 019	84 732 246	43 828 082	40 904 164
Other	99 810 973	113 202 963	58 555 134	54 647 829
By sex of victim				
Female	425 596 499	482 699 747	249 680 973	233 018 774
Male	121 880 411	138 233 814	71 502 308	66 731 506
By age of victim				
Child	152 481 200	172 940 080	89 454 747	83 485 332
Adult	394 995 710	447 993 482	231 728 534	216 264 948

[a] *with child multiplier. See Chapter 8 of the main report for details.*

Table A2.7.8.2 Impact of VOLY on estimated cost of long-term mental health harm, EU-27, EUR

EU-27	Total cost of long-term mental health harm (VOLY=EUR 75 000) [a]	Total cost of long-term mental health harm (VOLY=EUR 85 061)	Total cost of long-term mental health harm (VOLY=EUR 44 000)	RANGE (higher-lower estimate)
Total	393 527 161	446 327 733	230 867 063	215 460 670
Form of exploitation				
Sexual	287 625 129	326 216 309	168 738 600	157 477 709
Labour	27 381 428	31 055 434	16 063 543	14 991 890
Other	78 520 604	89 055 991	46 064 920	42 991 070
Sex of victim				
Female	323 104 717	366 456 380	189 553 031	176 903 349
Male	70 422 445	79 871 353	41 314 032	38 557 321
Age of victim				
Child	99 573 631	112 933 673	58 415 976	54 517 697
Adult	293 953 531	333 394 060	172 451 087	160 942 973

[a] *With child multiplier. See Chapter 8 of the main report for details.*

(209) 2010: 1.67%; 2011: 3.31%; 2012: 2.63%; 2013: 1.31%; 2014: 0.22%; 2015: -0.054%; 2016: 0.22%. Inflation, consumer prices, annual % for the European Union. World Bank Data (2019) *Inflation, Consumer Prices (annual %) European Union* https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?end=2016&locations=EU&start=2009&view=chart

2.7.9 Child multiplier

The impact of violence on healthcare and social protection use, economic output and quality of life across the life course is based on survey data with adult participants. The impact of adverse events in childhood is known to have greater and longer-term impacts on health and service utilisation. To take some account of this in estimating long-term costs, a multiplier of 1.3 was applied to the proportion of victims who were children when registered. The derivation of this multiplier is explained in Section 6.4.5. It is a conservative estimate, used in lieu of other more reliable estimates. The impact of the use of this multiplier is made explicit in the report, with costs provided with it included and not included. A case could have been made for a higher multiplier, which would have meant higher overall cost estimates.

In costing the quality of life lost due to homicide, no adjustment was made for the greater duration of years lost if the homicide victim was a child. This was because we do not know the age profile of trafficking-related homicide victims. Had the child multiplier been applied, the estimated quality of life costs associated with homicides would have increased by more than one and half million euros.

Table A2.7.9 Impact of child multiplier on estimated cost of lost quality of life, (EU-27 and EU-28), EUR

EU-28	N	Total	Total (with child multiplier)	INCREASE with child multiplier
Homicide	2	5 190 000	6 747 000	1 557 000

2.7.10 Duration

The average length of time spent in each phase of trafficking was estimated based on available data. Time spent in trafficking was based on the systematic review (Section 2). Time spent in services was based on information from responding National Rapporteurs and equivalent mechanisms (Section 4). And the duration of post-trafficking effects was based on analysis of survey data (Section 6). The length of each of these periods is an estimate. Table A2.2.3, for example, shows that the confidence interval around the 15.4-month average duration of trafficking for sexual exploitation ranged widely from 5.8 to 25.0 months.

2.7.11 Adding up harms from physical violence, sexual violence and threat

The costs associated with physical violence were added to the costs associated with sexual violence, as well as to costs associated with threat. In some approaches to cost modelling these costs would not have been summed due to concern about double-counting. Instead the highest of the three costs (that is, the costs for either sexual violence, physical violence, or threat) would have been used.

For this Study, such an approach was not considered appropriate. Firstly, some victims of trafficking experienced one type of violence only. Therefore, it was important that the harms associated with each type could be counted. Secondly, adjusted multipliers were used. The process for producing these is described in Section 6 of the Appendices. They were produced using multivariable regression analyses that controlled for a range of socioeconomic and other factors, including experience of other types of violence in childhood or adulthood. Such an approach allows us, to some extent, to isolate the harm associated with each type of violence. This allows us to take account of the cumulative impact of experiencing more than one type of violence.

To investigate the impact of this approach, the lost quality of life costs associated with trafficking were recalculated with unadjusted multipliers and counting only the type of violence with the highest costs for each subgroup. Unadjusted multipliers are presented in Section 6. The unadjusted quality of life multiplier for sexual violence is 2.6 (rather than the adjusted multiplier of 1.6); for physical violence is 2.1 (rather than 1.6); and for threat is 2.6 (rather than 1.7). In the recalculated model, no costs were included for threat as this was always a lower cost than for physical or sexual violence. For victims of sexual or other forms of exploitation, sexual violence costs were highest and therefore included in the modelling. For victims of labour exploitation, physical violence costs were highest, and included in the modelling. The impact of this approach would be to reduce the estimated costs of lost long-term quality of life by about a fifth. For the reasons outline above this approach was not used, as felt to not capture the range of types of violence that individuals experience.

Table A2.7.11.1 Impact of counting costs for one type of violence only on estimated cost of long-term mental health harm (EU-28), EUR

EU-28	Total mental health harm	Average cost per victim	Total mental health harm - costing one type of violence	Average cost per victim - costing one type of violence	DECREASE in total costs: if costing one type of violence	DECREASE in average per victim costs: if costing one type of violence
Total	547 476 910	46 271	436 374 126	36 881	111 102 784	9 390
Form of exploitation						
Sexual	372 957 919	56 288	312 637 922	47 184	60 319 997	9 104
Labour	74 708 019	25 256	51 992 937	17 577	22 715 081	7 679
Other	99 810 973	44 398	71 743 267	31 913	28 067 706	12 485
Sex of victim						
Female	425 596 499	52 020	347 271 021	42 447	78 325 477	9 574
Male	121 880 411	33 386	89 103 104	24 407	32 777 307	8 978
Age of victim						
Child	152 481 200	55 692	121 077 371	44 222	31 403 829	11 470
Adult	394 995 710	43 435	315 296 755	34 671	79 698 955	8 764

Table A2.7.11.2 Impact of counting costs for one type of violence only on estimated cost of long-term mental health harm (EU-27), EUR

EU-27	Total mental health harm	Average cost per victim	Total mental health harm - costing one type of violence	Average cost per victim - costing one type of violence	DECREASE in total costs: if costing one type of violence	DECREASE in average per victim costs: if costing one type of violence
Total	393 527 161	49 025	316 602 349	39 442	76 924 812	9 583
Form of exploitation						
Sexual	287 625 129	55 988	241 106 350	46 933	46 518 779	9 055
Labour	27 381 428	24 365	19 056 065	16 957	8 325 363	7 408
Other	78 520 604	44 464	56 439 934	31 960	22 080 671	12 504
Sex of victim						
Female	323 104 717	52 595	264 386 703	43 037	58 718 013	9 558
Male	70 422 445	37 394	52 215 645	27 727	18 206 799	9 668
Age of victim						
Child	99 573 631	61 420	79 980 959	49 335	19 592 671	12 085
Adult	293 953 531	45 892	236 621 390	36 942	57 332 141	8 951

2.7.12 Year of estimate

The costs relate to 2016, as the most recent year with the most complete data. The impact of selecting this year threads throughout the costing. For example, the number of victims registered each year varied. Having selected an earlier or later year would have resulted in higher or lower costs depending on the number of victims registered in that particular year.

For the costs in this report to be directly relevant to 2020, adjustment should be made for inflation/deflation in the EU since 2016. See Table A2.7.12.

Table A2.7.12 Impact on costs of trafficking in human beings of inflation/deflation adjustment from 2016 to 2020, EUR

EU-28	Per victim	Total
EU-28		
Total cost in 2016	211 043	2 497 053 827
Total cost with inflation/deflation adjustment [a]	223 947	2 649 737 718
INCREASE with inflation/deflation adjustment	12 904	152 683 892
EU-27		
Total cost in 2016	220 342	1 768 680 010
Total cost with inflation/deflation adjustment [a]	233 815	1 876 827 037
INCREASE with inflation/deflation adjustment	13 473	108 147 027

[a] *The following inflation rates have been applied for the European Union: 2016: 1.14; 2017: 1.64; 2018: 1.63; 2019: 1.57*[210].

2.7.13 Single year estimate

Costs are presented for a single year (2016). Had the decision been made to present costs for two years, the cost per victim would remain similar but the total cost would have doubled.

3 Coordination, prevention and improving knowledge

3.1 EU-funded Anti-trafficking projects

Data on the EU funded projects were taken from two sources.

Data for the period 2004 to 2015 are from the European Commission (2016a)[211] Study on the Comprehensive Policy Review of European Commission funded anti-trafficking projects. It includes direct grants of five Commission funding instruments for that period. The analysis included types of grant-holder, including by EU and non-EU location, and the location of the anti-trafficking work. "The focus of the study is on projects funded by the European Commission which address trafficking in human beings. The study developed a trafficking projects data set from documents and other relevant materials provided by the European Commission and through additional searches of the internet on European Commission-funded anti-trafficking projects commissioned by five Directorate Generals (DG) of the European Commission: DG International Cooperation and Development; DG Home Affairs and Migration; DG Justice; DG Neighbourhood and Enlargement Negotiations; and DG Research and Innovation, between 2004 and 2015. The final Trafficking Projects Data Set included 321 European Commission-funded projects with European Commission funding of EUR 158.5 million." European Commission (2016a: 7)[212].

Data for projects 2014-2020, including for 2016, was provided by the European Commission and cover DG HOME (Directorate General on Migration and Home Affairs)-funded projects from Asylum, Integration, Migration Fund (AMIF) and Internal Security Funds-Police (ISFP). These include both Union grants following calls for proposals addressing trafficking in human beings and projects in national programmes mainly in EU countries. The detail on national programmes are not published, no breakdown analysis has been carried out. The projects included have at least a component on trafficking in human beings; but were not always exclusively concerned with

(210) Statbureau, European Union: *The European Union Annual and Monthly Inflation Tables*. https://www.statbureau.org/en/european-union/inflation-tables

(211) European Commission (2016e) *Study on comprehensive policy review of anti-trafficking projects funded by the European Commission HOME/2014/ISFP/PR/THBX/0052*. https://ec.europa.eu/anti-trafficking/sites/antitrafficking/files/study_on_comprehensive_policy_review.pdf

(212) European Commission (2016e) *Study on comprehensive policy review of anti-trafficking projects funded by the European Commission HOME/2014/ISFP/PR/THBX/0052*. https://ec.europa.eu/anti-trafficking/sites/antitrafficking/files/study_on_comprehensive_policy_review.pdf

trafficking. Union grants were awarded over different periods (from 3 to 36 months), and the full amount of each grant is allocated to the year the project started. For the year 2016, there were 43 projects with grant funding of EUR 13,561,231.Data for 2016 came from the second source. The different sources mean that it is not possible to be confident as to any trends.

Table A3.1.1 European Commission-funded projects, 2004-2015[213]

Year	Number of projects	Total grants (EUR)
Total for 2004-2015	**321**	**158 591 764**

Sources: European Commission Comprehensive Review

3.2 EU Agencies

The activities of the EU Agencies are shown in Table A3.2.

Table A3.2 EU agency detailed activities

EU Agency	Activities
EU Law Enforcement Agency	In accordance with its mandate, Europol supports and strengthens action by the competent authorities of the Member States and their mutual cooperation in preventing and combating serious crime affecting two or more Member States. Europol is positioned at the heart of the European security architecture and offers a unique range of services in support of priority investigations conducted by MS. The Agency employs more than 100 criminal analysts, who are among the best-trained in Europe. Information exchange through secure channels, centralization of information and analysis are the core of Europol activities. Further to information exchange and analysis, the Europol toolbox in support of the THB investigations includes: coordination of investigations and operational actions; participation and contribution to Joint Investigation Teams; expertise and technical support for investigations and operations carried out within the EU, under the supervision and the legal responsibility of the Member States; forensic and analytical expertise that is offered, either from the HQ in The Hague or deployed on the spot. Incoming information is primarily used for the analytical support to priority investigations; at the same time, it provides accurate and up-to-date intelligence for the strategic overview of the crime situation in the EU. Strategic analysis is equally important and with long term impact in terms of prioritization, allocation of resources, early detection of an emerging threat, etc. Analysing information that receives from Member States and other sources, Europol produces every 4 years the EU Serious and Organised Crime Threat Assessment. This flagship strategic analysis product assesses the crime situation in the EU and proposes the priorities of the EU Policy Cycle, the EU-wide crime fighting mechanism. THB is a priority since the inception of the EU Policy Cycle in 2011.

(213) This dataset does not include allocations in the context of the response to the migration crisis.

EU Agency	Activities
EU Agency for Criminal Justice Cooperation	The role of Eurojust is to assist in the combatting of terrorism and serious **organised crime,** involving more than one EU country. They do this by: • Coordinating investigations and prosecutions that **involve at least 2 countries** • Helping to **resolve conflicts** of jurisdiction • Facilitating the drafting and implementation of **EU legal instruments,** such as European Arrest Warrants and confiscation and freezing orders. They facilitate this through: • Holding coordination meetings • Providing funding and expert input into joint investigation teams (JITs) • Organising coordination centres. Eurojust have the potential to quantify the costs they spend at a European level on THB. Secondly, as they fund and assist in the co-ordination of Joint Investigation Teams (JIT)[214] across Europe they are in a position to provide unique information on the structure and resources needed for the successful investigation and prosecution of THB. JIT's are defined as, *'An international cooperation tool based on an agreement between competent authorities – both judicial (judges, prosecutors, investigative judges.) and law enforcement – of two or more states, established for a limited duration and for a specific purpose, to carry out criminal investigations in one or more of the involved states'.* These teams are led by a member of the country in which it is based, with the law of that country governing its activities. The individual members of these JITs have access to the intelligence systems and procedures of their own country, which reduces the bureaucracy needed in cross border investigations. Investigators from EU member states can apply for financial support for such investigations, primarily from Eurojust. As such Eurojust are in a position to provide very specific information on the number and cost of staff involved in a case, as well as the type and duration of a case. This could provide accurate information on unit costs, from which wider European costs could be extrapolated.
European Border and Coast Guard Agency	Frontex works together with European Member States, to ensure safe and well-functioning secure external borders, which is critical when tackling THB. The agency facilitates cooperation between border authorities in each EU country, providing technical support and expertise. As such they can provide information in relation to border and security costs, rather than police costs. Statista state the annual budget for The European Border and Coast Guard Agency (FRONTEX)[215]. However, these figures are insufficient to establish what proportion of the budget directly relates to THB. Frontex did respond to the project team highlighting their efforts on the detection of child victims of THB at border posts, airports etc. In 2015 they published the "VEGA Handbook: Children at airports. Children at risk on the move. Guidelines for border guards" with advice on how to identify, and interview, vulnerable children and unaccompanied children. Ongoing publication costs for Vega Children at Sea Borders and Vega Children at Land Borders are estimated to be EUR 200 000. In addition, FRONTEX engage continuously in meetings, joint action days, awareness session as, training events, workshops, seminars and conferences, all of which are multipurpose but include trafficking in human beings as a major focus. Again, due to the multipurpose nature of this work, it is not possible to estimate the costs for trafficking in human beings, as such.
European Agency for Law Enforcement	CEPOL conducts many trainings and webinars on various aspects of criminal investigations into trafficking in human beings. So far this year topics covered have included "child trafficking"; "financial investigations"; "multidisciplinary approaches"; "labour exploitation"; "document fraud" and "intelligence".
European Asylum Support Office	EASO report a number of activities in relation to Trafficking in Human Beings. Specifically, their Centre of Asylum Knowledge organises activities such as the Thematic meetings on THB and international protection. The last thematic meeting on Trafficking in Human Beings and International Protection was held under the auspices of the EASO Vulnerability Experts Network in April 2019 and the Annual Conferences took place between 2014-2017. They also engage in interagency cooperation with other EU Agencies. A training module on Trafficking in Human Beings has been developed and there are costs of training sessions, including in neighbouring countries such as Western Balkans, Turkey and Egypt with a specific focus on Trafficking in Human Beings. In addition, EASO launched a communication project in Nigeria "The journey to Europe – things they don't tell you".
European Union Large Scale IT Systems for Freedom, Security and Justice	EU-LISA highlights tackling the trafficking in human beings in its current strategy. They engage in several ongoing activities with other European Agencies, such as CEPOL, EMCDDA, FRONTEX and EASO which also have an impact on Trafficking in Human Beings. They do not have a dedicated budget for this work; therefore, costs were unavailable.
European Monitoring Centre for Drugs and Drug Addiction	EMCDDA does not refer to any activities in relation to Trafficking in human beings on its websites. However, in response to a questionnaire they reported that their European Drug Markets Report, launched, includes references to the links between drugs trafficking and trafficking human beings. In addition, a researcher has been commissioned to examine the extent and nature of these links.

(214) Europol. *Joint investigation Teams (JIT)*, https://www.europol.europa.eu/activities-services/joint-investigation-teams.
(215) Statista (2019): *The annual budget of Frontex 2015 to 2018* https://www.statista.com/statistics/973052/annual-budget-frontex-eu/

EU Agency	Activities
European Institute for Gender Equality	EIGE produced a comprehensive report on "Gender-specific measures in anti-trafficking actions". The associated budget was included not only the report costs, but also quality assurance, salary costs and staff costs to attend relevant meetings. Beyond that, EIGE reports attending meetings of EU Agencies and the European Commission's anti-trafficking network three times a year
European Foundation for the improvement of living and working conditions	EUROFOUND published a report on "Regulation of labour market intermediaries and the role of social partners in preventing trafficking of labour". [216].
Fundamental Rights Agency	FRA has conducted research on severe labour exploitation and published the findings in reports. Together with the European Commission, they have published two handbooks relating to children who have been trafficked published. In addition, much of the work of FRA includes reference to trafficking in human beings, for example their report on fundamental rights at airports.

Source: EU agencies web-sites and email communication

3.3 Other coordination and prevention by member states

There is evidence of further expenditure on coordination and prevention, but the measurement is insufficiently robust to include in the estimates. This includes expenditure by Member States awarded by tender: Hungary reported expenditure on staff training, IT systems, study tours, awareness raising and campaigns of EUR 270 670, Sweden reported expenditure from its Gender Equality Unit of EUR 132 000.

4 Law enforcement

The costs of law enforcement were estimated using responses provided.

4.1 Responses from National Rapporteurs and equivalent mechanisms

The detailed responses from National Rapporteurs and equivalent mechanisms for the costs of police, prosecution and courts, are the basis of Tables 4.3.2, 4.3.3 and 4.3.4 and Tables A4.1.1, A4.1.2 and A4.1.3.

The following practices were used where information from rapporteurs was complicated or ambiguous:

- The text of the rapporteurs takes priority.
- Average: If a range or more than one data point is offered, the figure used is that half way between two data points or the mean average of multiple data points.
- A year is 365 days. Half a year is 183 days. 3 months is 91 days.
- How many working days in a year? Although there are 365 days in a year, we assume that people do not work weekends and have holidays, so there are 220 working days, following practice in EC funding proposals.
- Where 2016 is not available, the nearest available year for which data is available is selected.
- Where costs are different for adults and children we divide proportionately by the average for registered victims, for EU-28/27: 79%/21%.
- Where figures are offered for different kinds of courts, the figure used is for the lowest court, since this is where all cases go in the first instance.

[216] Personal communication with the Senior Research manager on 7.10.2019.

The National Rapporteur or equivalent mechanism were not always able to provide the data requested. Whilst two Member States did not respond, the rest replied with different levels of detail and completeness, some providing further clarifications on request.

Prosecution and Court Data: In one Member State the number of prosecutions and court cases is provided for 2014 rather than 2016, because this is the nearest available year for data on prosecutions and court cases in the Data Report.

Victims, prosecutions and court cases: While there are usually more victims than prosecutions and usually more prosecutions than court cases, this is not always the case. The Data Report found that while there is no discernible trend over time, there is some fluctuation in numbers between years.

Table A4.1.1 Police costs

EU Member State	Cost per day (EUR)	Number of days	Cost per victim (EUR)	Number of registered victims	Cost of police (EUR)
EU-28	201	352	70 945	11 832	839 426 356
EU-27	187	416	77 711	8 027	623 789 396

Sources: columns 1, 2 National Rapporteurs and equivalent mechanisms; column 4 Data Report Table 3.2.2.; columns 3, 5, our calculations

Table A4.1.2 Prosecution costs

EU Member State	Cost per day (EUR)	Number of days	Cost per prosecution (EUR)	Cost per victim (EUR)	Number of registered victims	Number of prosecutions	Cost of prosecutions (EUR)
EU-28	193	345	66 752	16 288	11 832	2 887	192 714 005
EU-27	208	272	56 379	19 210	8 027	2 735	154 196 901

Sources: columns 1, 2 National Rapporteurs and equivalent mechanisms; column 4 Data Report Table 3.2.2; column 5 Data Report Table 4.2.3 and Table 5.2.; columns 3, 6, our calculations.

Table A4.1.3 Court costs

EU Member State	Cost per day (EUR)	Number of days	Cost per conviction (EUR)	Cost per victim (EUR)	Number of registered victims	Number of court judgments	Number of convictions[b]	Cost of courts (EUR)
EU-28	288	183	52 838	6 060	11 832	1 697	1 357	71 701 610
EU-27	288	183	52 838	8 906	8 027	1 601	1 353	71 490 256

Sources: columns 1, 2 National Rapporteurs and equivalent mechanisms; column 4 Data Report Table 3.2.2; column 5 Data Report Table 4.2.6; column 6 Data Report Table 4.2.5; columns 3, 7, our calculations.

4.2 Alternative approach to the cost of the criminal justice system for trafficking

A second approach to the cost of the criminal justice system was attempted. This was not used in the estimates so is not reported in detail. The cost of the criminal justice system for trafficking in human beings is a proportion of the total cost of the criminal justice system in the EU. A top down approach was taken to estimate the cost of an average crime in the EU, using EU-level expenditure on public order and safety and the total number of police-recorded crime in the EU. A multiplier was then applied to the cost of an average crime in the EU to take into account that the criminal justice costs are higher for trafficking in human beings than they are for an average crime.

4.3 Civil Legal System

There are many forms of law that regulate those sites of activity in which trafficking in human beings may operate. These range from health and safety inspectors, to fire inspectors, insurance inspectors, food safety standards and environmental health officers, labour inspectors, zoning and planning officers to name a few. These regulations

can play an important role in preventing, or detecting, trafficking in human beings. Enforcement of these legal rules uses public resources.

It has not been possible to provide a robust estimate of these costs across all EU Member States.

5 Specialised services

5.1 National Rapporteurs and equivalent mechanisms responses

The detailed information from National Rapporteurs and equivalent mechanisms was the basis of Table 5.3 and in Table A5.1.

The following practices were used where information from rapporteurs was complicated or ambiguous:

- The text of the rapporteurs takes priority.
- Average: If a range or more than one data point is offered, the figure used is that half way between two data points or the mean average of multiple data points.
- A year is 365 days. Half a year is 183 days. 3 months is 91 days.
- How many working days in a year? Although there are 365 days in a year, we assume that people do not work weekends and have holidays, so there are 220 working days, following practice in EC funding proposals.
- Where 2016 is not available, the nearest available year for which data is available is selected.
- Where costs are different for adults and children we divide proportionately by the average for registered victims, for EU-28/27: 79%/21%

Table A5.1 Accommodation and associated specialised service costs

EU Member State	Cost per day (EUR)	Number of days	Cost per Victim (EUR)	Number of registered victims	Cost of services (EUR)
EU-28	70	137	9 614	11 832	113 750 742
EU-27	91	115	11 355	8 027	91 149 042

Sources: columns 1, 2 National Rapporteurs and equivalent mechanisms; column 4 Data Report Table 3.2.2.; columns 3, 5, our calculations

6 Health services and social protection

A number of different survey data resources were used to estimate the extent to which health and socioeconomic factors were associated with violence. Background to these surveys and some of the detailed analyses that underpin the Study costing are presented in this chapter. The surveys include the Adult Psychiatric Morbidity Survey (APMS, Section 6.1); the Crime Survey for England and Wales (CSEW, Section 6.2); the Avon Longitudinal Study of Parents and Children (ALSPAC, Section 6.3), and the Provider Responses, Treatment and Care for Trafficked people study (PROTECT, Section 6.4).

6.1 Mental Health Surveys

Background

This section presents new analyses of the extent and duration of the long-term effects of sexual violence, physical violence and threat.

Violence and long-term health

Exposure to violence can affect long-term health in many ways. In recent years there has been increased recognition of the long-term physical effects of violence.[217] [218] The biological impacts of violence affect the brain, neuroendocrine system, and immune response.[219] Multiple causal pathways have been identified. Stress-biology research shows that exposure to violence in childhood, for example, leads to biological alterations with increased risk for heart disease, metabolic diseases, immune diseases, and stroke in midlife.[220] [221] [222] A range of psychiatric disorders are associated with exposure to violence.[223] Evidence from prospective studies show violence contributes to the onset and duration of mental symptoms.[224] [225] [226] Rates of depression also appear to decline once violence stops.[227] Processes underpinning this are many and include the direct effect of violence on mental dispositions (fear, hopelessness, low self-esteem)[228] and on cognitions and coping styles.[229] Potential pathways linking violence and health include the association of violence with other risk factors for poor health, highlighting the importance and complexity of adjustment in analyses. People can be the victims of multiple forms of violence, and the health effects have been found to be cumulative.

Focus on sexual violence and health harms

The harms of sexual violence and abuse are an important part of the harms of trafficking in human beings. These are both the harms of unconsented sex during trafficking for sexual exploitation (56% of registered victims were trafficked for sexual exploitation, 95% of whom were female) and the harms of rape additional to this exploitation (for example, the increased rate of rape experienced by victims of trafficking for domestic servitude).

The mental health harms of coercion and violence, and particularly of sexual violence, are under-estimated in many studies of the cost of coercion and violence, and/or dependent upon expert judgement rather than scientific evidence. This section brings scientific evidence about the harms of violence to bear on the costing of coercion, violence and trafficking. It uses a quantitative dataset that specialises in mental health, with more robustly assessed mental health outcomes than other approaches have been able to provide.

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(217) Shonkoff, J. P. (2012) 'Leveraging the biology of adversity to address the roots of disparities in health and development.' *Proceedings of the National Academy of Sciences* 109, no. Supplement 2 (2012)

(218) Lupien, S. J., B. S. McEwen, M. R. Gunnar, and C. Heim. (2009) 'Effects of stress throughout the lifespan on the brain, behaviour and cognition.' *Nature reviews neuroscience* 10, no. 6 (2009)

(219) Rivara, F., Adhia, A., Lyons, V., Massey, A., Mills, B., Morgan, E., Simckes, M., Rowhani-Rahbar, A. (2019) 'The effects of violence on health.' *Health Affairs* 38, 10 (2019): 2106-2115

(220) Danese, A., and McEwen, B. S. (2012) 'Adverse childhood experiences, allostasis, allostatic load, and age-related disease.' *Physiology & Behavior* 106, no. 1 (2012): 29-39.

(221) Miller, G. E., Chen, E. and Parker, K. J. (2011) 'Psychological stress in childhood and susceptibility to the chronic diseases of aging: moving toward a model of behavioral and biological mechanisms.' *Psychological bulletin* 137, no. 6 (2011): 959.

(222) Taylor, S. E., Way, B. M., and Seeman, T. E., "Early adversity and adult health outcomes." *Development and psychopathology* 23, no. 3 (2011): 939-954.

(223) Trevillion, K., Byford, S., Cary, M., Rose, D., Oram, S., Feder, G., Agnew-Davies, R. and Howard., L. M. (2014) 'Linking abuse and recovery through advocacy: an observational study.' *Epidemiology and psychiatric sciences* 23, no. 1 (2014): 99-113.

(224) Ehrensaft, M. K., T. E. Moffitt, and A. Caspi (2006) 'Is domestic violence followed by an increased risk of psychiatric disorders among women but not among men? A longitudinal cohort study.' *American Journal of Psychiatry* 163, no. 5 (2006): 885-892.

(225) Moffitt, T. E. (2013) 'Childhood exposure to violence and lifelong health: Clinical intervention science and stress-biology research join forces.' *Development and Psychopathology* 25, no. 4pt2 (2013): 1619-1634.

(226) Howard L., Trevillion K, Khalifeh H, Woodall A, Agnew-Davies R, Feder G. (2010) 'Domestic violence and severe psychiatric disorders: prevalence and interventions.' *Psychol Med.* 2010 Jun; 40(6):881-93.

(227) Golding, J. M. (1999) 'Intimate partner violence as a risk factor for mental disorders: A meta-analysis.' *Journal of family violence* 14, no. 2 (1999): 99-132.

(228) Jonas, S., H. Khalifeh, P. E. Bebbington, S. McManus, T. Brugha, H. Meltzer, and L. M. Howard (2014) 'Gender differences in intimate partner violence and psychiatric disorders in England: results from the 2007 adult psychiatric morbidity survey.' *Epidemiology and Psychiatric Sciences* 23, no. 2 (2014): 189-199.

(229) Calvete, E., S. Corral, A. Estévez. (2007) 'Cognitive and coping mechanisms in eh interplay between intimate partner violence and depression.' *Anxiety Stress & Coping.* 20 (2007): 4.

This estimation of the association between violence and mental health uses the most recent Adult Psychiatric Morbidity Survey (APMS). The survey contains information on exposure to different types of violence (physical, sexual and threat, in childhood and adulthood) and many aspects of current circumstances including mental and physical health and socioeconomic and employment context.

The aims of this module were to estimate the extent to which people exposed to violence were more likely to experience worse health and socioeconomic outcomes, and for how long they were more likely to experience these outcomes.

We do not have the data to directly measure the long-term impact of exposure to violence on people who are trafficked. However, using APMS we can measure the harms associated with violence in the wider population, and from this we can extrapolate to people who have been trafficked and also experienced these forms of violence.

About the dataset

The APMS is a large epidemiological survey of the general population living in households in England.[230] The most recent survey in the series was conducted in 2014 with 7,546 participants. It was funded by the Department for Health and Social Care (DHSC) in England and commissioned by NHS Digital. Data use permission for this study was granted by the Data Access Request Service (DARS) at NHS Digital.

It uses a random probability sample. Weights are applied to adjust for survey design (stratification by region and clustering into primary sampling units) and patterns of non-response. This helps to ensure that the sample is representative of the household population. However, those living in refuges, institutional settings (such as care homes or offender institutions), in student halls of residence, or who are homeless were out of scope. Long interviews (averaging an hour and a half, but sometimes lasting up to three hours) were conducted in people's own homes, or elsewhere if they preferred, by trained research interviewers. The data were collected face to face, with some sensitive information self-completed by participants directly into the interviewer's laptop.

The primary aim of the survey series is to generate the official National Statistics on rates of treated and untreated mental disorder in the population. The survey therefore includes detailed assessments of a range of different types of mental disorder using not just brief screening tools, but detailed schedules applying clinical diagnostic criteria. The questionnaire covers the use of medical and psychological therapies, providing the only national data on rates of both treated and untreated mental disorder, and insight into the extent of and inequalities in treatment access. Another aim of the APMS series is to describe context and variations in mental health. Questions are therefore asked about factors known to be risks for poor mental health, including exposure to different types of violence and abuse. There is some lack of detail in the measurement of violence and abuse. These include a lack of information on repetition, frequency, and timing. The relatively small sample also limits the extent to which recent experiences of violence can be analysed, although past year exposure is covered on the Crime Survey for England and Wales with its much larger sample.

The survey has been conducted every seven years since 1993. The 2000[231], 2007[232] and 2014[233] waves included a comparable item (asked face to face) on domestic violence, and the two most recent waves included more detailed modules administered by self-completion. These covered experience of sexual and physical violence, threat and emotional abuse, and spanned experiences in childhood and adulthood. The analysis undertaken for this module builds on analyses of the previous surveys, updated with the more recent 2014 dataset and better

(230) McManus, S., P. Bebbington, R. Jenkins, Z. Morgan, L. Brown, D. Collinson, and T. Brugha (2019) 'Data Resource Profile: Adult Psychiatric Morbidity Survey', *International Journal of Epidemiology*.

(231) Singleton, N., Bumpstead, R., O'Brien, M., Lee, A., Meltzer, H. (2001) *Psychiatric Morbidity among adults living in private household, 2000*. HMSO: London.

(232) McManus, S., Meltzer, H., Brugha, T., Bebbington, P. and Jenkins, R. (2009) *Adult Psychiatric Morbidity in England, 2007: results of a household survey*. Leeds: health and Social Care Information Centre.

(233) McManus, S., Bebbington, P., Jenkins, R. and Brugha, T., (eds.) (2016) *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014*. Leeds: NHS Digital.

targeted for the purposes of this study.[234] [235] [236] [237] [238] A range of contextual factors were established, including demographics, socioeconomic circumstances (employment, tenure, debt, and benefit receipt), and use of treatment and health services.

It is important to note that this is a dataset of people in the general population and not of the trafficked population, there are assumptions that have been made in extrapolating from one population to the other; and the survey is cross-sectional in design, and any conclusions drawn on causal direction require caution.

Aims

The aims of these analyses were to:

- Estimate the prevalence of health conditions and service and social protection utilisation in people exposed to violence, compared with those not exposed
- Test whether these associations remain significant when potentially confounding factors are adjusted for
- Produce multipliers that reflect the extent of additional health service use, elevated need for social protection support, and lost earnings associated with violence
- Provide information to inform the estimation of quality-adjusted life years (QALYs) lost due to exposure to violence.

The detailed objectives were to estimate the prevalence of different indicators of harm:

- Limiting mental health condition (severe/limiting anxiety or depression, and/or screen positive for post-traumatic stress disorder (PTSD))
- Limiting physical health condition (any general/physical health condition which limits activities 'a lot')
- Any limiting health condition
- Health service use (for mental or physical health reason: including use of mental health medication, psychological therapies, and primary and secondary care health service use)
- Use of social protection: sickness and disability costs (disability/incapacity benefit receipt)
- Use of social protection: social exclusion costs (low income support)
- Unemployment or inability to work due to sickness or disability
- Employment (the proportion in paid employment)
- Drug dependence
- Alcohol dependence

(234) McManus, S. and Scott, S. (2016) *Joining the dots: The combined burden of violence, abuse and poverty in the lives of women.* Agenda. https://weareagenda.org/wp-content/uploads/2015/11/Joining-The-Dots-Report_Final_b_Exec-Summary.pdf

(235) Bebbington, P., Jonas, S., Brugha, T., Meltzer, H., Jenkins, R., Cooper, C., King, M., and McManus, S. (2011a) 'Child sexual abuse reported by an English national sample: characteristics and demography.' *Social Psychiatry and Psychiatric Epidemiology*, 46: 255–262

(236) Jonas, S., Bebbington, P., McManus, S., Meltzer, H., Jenkins, R., Kuipers, E., Cooper, C., King, M., and Brugha, T. (2010) 'Sexual abuse and psychiatric disorder in England: Results from the 2007 Adult Psychiatric Morbidity Survey.' *Psychological Medicine*, 10:1-11.

(237) Nimmo-Smith, V., Brugha, T., Kerr, M., McManus, S. and Rai, D (2016) 'Discrimination, domestic violence, abuse, and other adverse life events in people with epilepsy: Population-based study to assess the burden of these events and their contribution to psychopathology'. *Epilepsia.* 57(11):1870-1878. https://www.ncbi.nlm.nih.gov/pubmed/27634349

(238) Scott, S. and McManus, S. (2016) *Hidden Hurt: Violence, abuse and disadvantage in the lives of women.* London: Agenda. https://weareagenda.org/wp-content/uploads/2015/11/Hidden-Hurt-full-report1.pdf

Producing a rate for people exposed to each of the following types of violence, and a rate for people not exposed to each type:

- Sex without consent since age 16 (any perpetrator)
- Sex/sexual contact without consent since age 16 (any perpetrator)
- Physical violence in adulthood (including violence from a partner with or without injury, serious physical assault, violence from family member, violence at work)
- Threat in adulthood (experienced threatening behaviour at work in past 12 months; family member other than partner threaten with weapon and/or threaten to kill)
- Sex/sexual contact without consent before age 16 (any perpetrator)
- Physical violence in childhood
- Threat in childhood

With unadjusted comparisons (multipliers), and as well as comparisons which adjust for potential confounding factors, including:

- Demographics (age, sex, ethnic group)
- Socioeconomics (tenure, employment status, problem debt)
- Other types of violence.

Estimates of length of time for which people experienced these higher rates of health conditions and service utilisation were estimated by subtracting the average age of people recently exposed to violence from the average age of people when reporting current circumstances. Further estimates of the duration of effects from exposure to violence in childhood were done by focusing analyses just on older people. These approaches are detailed in the methods section.

Methods overview

Measures

Exposure measures (types of violence):

Violence and abuse core questions were asked in the self-completion section of the interview, where participants keyed their responses directly into the interviewer's laptop. Reports in self-completion, especially for sensitive or stigmatised topics, tend to be higher than face-to-face reports for reasons of perceived increased privacy (Tourangeau, 2000)[239]. Exposure to different types of violence in adulthood were examined: sex without consent; sex/sexual contact without consent; any physical violence; and threat. For each two variables were produced: for recent exposure and for exposure in adulthood. Separate indicators were derived for exposure to each type of violence in childhood. The derivation for each measure is provided below.

1. Sex without consent in adulthood was based on the following question: 'Since the age of 16, has anyone had sexual intercourse with you without your consent?' If this was endorsed, participants were filtered to a question on when this had last occurred. Indicators were derived for any exposure in adulthood (including in the past 12 months), and for most recent exposure in the past 12 months. Too few cases reported sex without consent before the age of 16 for robust analysis.

[239] Tourangeau, R., Rips, L. and Rasinski, K. (2000) *The Psychology of Survey Response*, Cambridge University Press

2. Sex and/or other sexual contact without consent. An indicator was produced that combined any reports of unconsented sex with any reports of unconsented sexual contact. The latter was established with the following question: 'Since the age of 16, has anyone touched you, or got you to touch them, in a sexual way without your consent?' This combined category was produced in order to maximise comparability with the non-disaggregated sexual violence categories used in some studies of trafficking. Measures were produced for exposure any time in adulthood (since age 16, including in the past 12 months), and for most recent exposure in the past 12 months). A variable was also derived using similar questions but asking about sex and sexual contact before the age of 16.

3. Physical violence in adulthood was indicated if participants reported any of: physical partner violence, serious physical assault, violence at work; and/or physical violence from a family member (other than partner). Physical violence from a partner was indicated where a participant endorsed either (or both) of the following questions: 'Has a partner or ex-partner ever pushed you, held or pinned you down or slapped you?' and 'Has a current or ex-partner ever kicked you, bit you, or hit you with a fist or something else, or threw something at you that hurt you?' Questions were asked about violence from a family member (other than a partner): including having been strangled or choked by a family member or pushed, slapped, kicked, or bit. Those with experience of serious physical assault, from any type of perpetrator, were identified in a module of questions administered face to face, although using a numbered show card so that participants could avoid stating them out loud. This was asked about alongside other types of adversity using the List of Threatening Experiences (LTE) scale (Brugha & Cragg, 1990)[240]. The LTE was also used to identify experience of Violence at work. In contrast, physical violence in childhood was identified with a single question: 'Not including smacking, before you were 18, did an adult in your life hit, beat, kick, or physically hurt you in any way?'

4. Threat directly from a current or former partner was not asked on APMS 2014. However, a composite variable was derived which drew on the information that was available. This includes reports of threat received from particular perpetrators and/or in particular contexts. These included: responding yes to 'have you personally experienced bullying or harassment at work in the last 12 months' *and* that it took the form of 'threatening behaviour'; that a family member other than a partner had 'threatened you with a weapon,' and/or 'threatened to kill you'. These were combined with reports of having received – from a current or former partner – messages that were either threatening or obscene. Threat in childhood was indicated using a single question: 'Before you were 18, did you get scared or feel really bad because an adult in your life called you names, said mean things to you, or said they didn't want you?' It could be argued this measure maps more closely on to emotional abuse, rather than threat. This limitation should be noted when interpreting the results.

Outcome measures (health harm, service and social protection use):

For each type of violence, associations were examined with seven different indicators of current health or socio-economic harm. The derivation for each of these is detailed below.

1. Limiting mental health condition drew on two different assessment tools. Symptoms of common mental disorder (CMD) were assessed on the survey using the Clinical Interview Schedule – Revised (CIS-R). The CIS-R is an interviewer administered structured interview schedule covering the presence of non-psychotic symptoms, including depression and anxiety, in the week prior to interview. These were assessed according to diagnostic criteria from the World Health Organisation's International Classification of Disease. The outputs from the CIS-R include a continuous scale that reflects the overall severity of CMD psychopathology (Lewis et al. 1992)[241]. The process of scoring is complex and detailed elsewhere (Stansfeld et al. 2016)[242]. Post-traumatic stress disorder (PTSD) was screened for using the PTSD Checklist (PCL), a 17-item self-report measure reflecting the fourth Diagnostic Statistical manual (DSM-IV, APA 1994)[243] criteria for PTSD (Blanchard et al. 1996)[244]. The PCL-C (civilian) asks about symptoms in relation to generic stressful experiences. This version simplifies assessment based on multiple

(240) Brugha, T., and Cragg, D. (1990) 'The List of Threatening Experiences: the reliability and validity of a brief life events questionnaire.' *Acta Psychiatria Scandinavica* 82, 1: 77-81.

(241) Lewis, G., Pelosi, A. J., Araya, R., and Dunn, G. (1992) 'Measuring psychiatric disorder in the community; a standardised assessment for use by lay interviewers', *Psychological Medicine*, 22: 465–486.

(242) Stansfeld, S., Clark, C., Bebbington, P., King, M., Jenkins, R., Hinchliffe, S. (2016) 'Common mental disorders' in McManus Sally, Paul Bebbington, Rachel Jenkins, Traolach Brugha (eds) *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014* Leeds: NHS Digital

(243) American Psychiatric Association (1994) *Diagnostic and Statistical Manual for Mental Disorders. 4th Edition.*

(244) Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., and Forneris, C. A. (1996) 'Psychometric properties of the PTSD checklist (PCL)' *Behaviour Research and Therapy*, 34: 669–673

traumas because symptoms are not attributed to a specific event. A total symptom severity score was obtained. There are different ways of scoring the PCL. For this report, a positive screen was defined as a score of 50 or more, together with endorsement of the DSM-IV criteria, identified as positive responses to on re-experiencing, avoidance and numbing, and hyper-alertness (Fear et al. 2016)[245]. A positive screen for PTSD does not mean that someone necessarily has the disorder; instead it indicates that someone has sufficient symptoms to warrant a clinical assessment.

A limiting mental health condition was indicated by the presence of any of four different indicators of severe affective mental health problems. These included:

- A score on the Clinical Interview Schedule Revised (CIS-R), the survey's main tool for assessing symptoms of anxiety or depression, of 18 or more. This is a level of severe symptoms of anxiety or depression at which intervention would usually be deemed warranted.
- A CIS-R score of 12 or more *and* the participant reported that their mental health symptoms had either stopped them doing things or made doing things harder.
- Screening positive for PTSD using a less inclusive threshold.
- Screening positive for PTSD using a more inclusive threshold *and* the participant reported that their mental health symptoms had either stopped them doing things or made doing things harder.

2. Limiting physical health condition was indicated if the participant reported that they had any of 22 physical or general health conditions that were listed on a card, that it had been present in the past 12 months, was diagnosed by a doctor or health care professional, *and* that it limited their activities 'a lot'. This measure is more reliable than using a single open question on whether the participant has any limiting longstanding illness, as the specific condition is established and the extent to which it is limiting is asked, with the higher threshold (limiting 'a lot') being applied. In addition, the presence of some individual conditions known to be sequalae of violence were also examined: migraine, digestive problems and urinary problems.

3. Any limiting health condition was coded if the participant met the criteria for either – or both – a limiting mental or physical health conditions.

4. Health service use was indicated if any of the following were endorsed: current use of mental health medication or psychological therapy, outpatient visit or inpatient stay for a mental and/or physical health reason in past quarter, or a GP visit for a mental and/or physical health reason, or any community or day care service use in the past year. A show card prompt list of psychotropic medications was used to establish which participants were being prescribed to. People were also asked to show interviewers the packaging for each psychotropic medication reported, so that the interviewer could check it was correctly coded. Medications asked about include those commonly prescribed for depression, anxiety, psychosis, sleep disturbance, ADHD, bipolar disorder, epilepsy, dementia, and substance misuse. Receipt of psychological therapies was indicated where a participant responded yes to the following question: 'Are you currently having any counselling or therapy listed on this card for a mental, nervous or emotional problem?' Health service contact records were not examined in the survey. Primary care health service use for a mental health reason was indicated if a survey participant reported having spoken with a general practitioner (GP) about being anxious, depressed, or about a mental, nervous or emotional problem in the past two weeks and/or past year. Secondary health service use was coded where participants reported being an inpatient for a mental, nervous or emotional reason in the past quarter and/or being an outpatient or day patient for a mental, nervous or emotional reason in the past quarter. A question was also asked about whether participants had ever been admitted to a hospital or ward specialising in the treatment of mental disorder. Use of health services for a physical health reason using the same approach as for health service use for a mental health reason, health service use for a physical health reason was also coded, including talking with GP, inpatient care and outpatient care. Community care services included use of the following in the past year (where it had not already been reported as part of primary or secondary health care provision): a psychiatrist, psychologist,

[245] Fear, N., Bridges, S., Hatch, S., Hawkins, V., and Wessely, S. (2016) 'Posttraumatic stress disorder.' in McManus S., P. Bebbington, R. Jenkins, T. Brugha (eds) *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014*. Leeds: NHS Digital

community psychiatric nurse, community learning difficulty nurse, other nursing services, social worker, self-help/ support group, home help/ homecare worker or outreach worker. Day care service use included use of a community mental health centre, day activity centre, sheltered workshop and other nursing services in the past year.

5. Disability benefit indicated current receipt of Employment and Support Allowance (ESA) and/or Incapacity Benefit. While Incapacity Benefit was technically no longer available at the time of the survey, some participants in receipt of ESA would have still been more familiar with this term. While other disability benefits were also asked about, such as Attendance Allowance, these were not included as could have been received for another household member.

6. Low income support was indicated if the participant was in receipt of Housing Benefit and/or Income Support at the time of the interview. These government social protection benefits are provided to people living on a low income, even if they are employed.

7. Unemployed or unable to work due to sickness or disability was coded where the participant reported that they were currently unemployed and looking for work or were economically inactive but unable to seek work due to sickness or disability.

8. Employed was coded where the participant reported that they were currently (in the past 7 days) in paid employment.

9. Alcohol dependence was indicated with an Alcohol Use Disorder Identification Tool (AUDIT) score of 16 or more (Saunders et al., 1993)[246].

10. Signs of drug dependence was indicated by endorsement of one or more dependence indicators drawn from the Diagnostic Interview Schedule (Malgardy et al., 1992)[247].

Adjustment measures

Measures used for adjustment varied between models. The exact variables adjusted for were refined to be most relevant to the particular analysis. For example, when looking at employment as an outcome it was not appropriate to adjust for employment status. Also when looking at receipt of low income support, it was not appropriate to adjust for indicators of low income. The exact variables entered into each model is specified as a footnote to each table, but generally included:

1. Demographics such as age, sex and ethnic group were established using standardised measures. For these analyses, age was banded into: 16-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75 and over. Ethnic group was classified as White, Black/Black British, Asian/Asian British, Mixed/multiple/other (although the sample was too small, and therefore underpowered, to examine this in detail).

2. Socioeconomic context was adjusted for in regression analysis using tenure and employment status at the time of the interview and having been seriously in debt in the previous 12 months. Tenure was coded into where household members were owner-occupiers, renting from a social landlord, or renting from a private landlord. Employment status was classified as either employed, unemployed and looking for work, or economically inactive. The economically inactive category includes students, those unable to work due to health or disability, people looking after children, and the retired, so long as they were not in any paid employment. Debt and disconnection: an indicator identified people who had been in arrears with payments and financial obligations in the past year, referred to in the tables as being in debt/disconnected. The derived variable draws on having had gas, electricity or other fuel disconnected in the past year because the participant could not afford to pay, and/or being 'seriously behind in paying within the time allowed' for any of rent, gas, electricity, water, goods bought on hire purchase, mortgage repayments, council tax, credit card payments, mail order payments, telephone, other loans, TV license, road tax, social fund loan, and child support or maintenance.

(246) Saunders, J. B., Aasland, O. G., Babor, T. F., Dela Fuente, J. R., Grant M. (1993) 'Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption part II.' *Addiction*, 1993 88 791-804.

(247) Malgady R. G, Rogler, L. H. and Tryon, W. W. (1992) 'Issues of validity in the Diagnostic Interview Schedule', *Journal of Psychiatric Research*, 26, 59-67.

Analysis

Statistical software and weighting

Analyses used weighted data and took account of complex survey design and non-response, so that the results are representative of the household population aged 16 and over at the time the survey was conducted. Descriptive and correlational analyses were carried out using SPSS v25, with p-values and confidence intervals calculated at the 95% level for guidance (IBM, 2012)[248]. The results of the descriptive analyses are presented for all selected factors, irrespective of whether they reached statistical significance at the 95% confidence level. Stata v14 was used for the regression analyses (StataCorp, 2013)[249]. While the analyses have been weighted, all base sizes are presented unweighted. Associations noted in the text are generally significant at conventional levels ($p<0.05$) unless otherwise noted. Consideration was also taken of sample size. The term 'significant' refers to statistical significance and is not intended to denote substantive importance.

Adjusting for other factors

Many different factors are associated both with mental health and with violence and abuse. Regression analysis allowed us to study the independent effect of each characteristic in a model, while controlling for the influence of the other factors included in the model. In each regression model the dependent variable was a particular cost or harm outcome, such as health service utilisation or presence of a mental disorder. The independent variables included exposure to violence such as 'sex without consent since age 16', alongside demographic and socioeconomic factors and exposure to other forms of violence. These factors were entered into the models sequentially in blocks, so that the effect of controlling for each block of factors is evident. The factors being controlled for in each model are provided in a footnote to each table.

Association not causation

The patterns indicate associations, not causes. These variations in 'risk' were initially expressed as odds ratios (OR): the degree to which the odds of the outcome increases or decreases relative to the reference category. An OR greater than one indicates higher odds of being in the highest risk category, and odds ratios less than one indicate lower odds. As mentioned above, regression analyses were conducted in stages, firstly generating unadjusted OR, and then ORs for models progressively adjusting for additional blocks of factors. The first block introduced controlling for demographics (age, sex, ethnicity), and the second model controlled for demographics, as well as socioeconomic factors. The third (and usually final) model controlled for demographics, socioeconomics and also other forms of violence. This was done to identify the independent association with the form of violence being examined. The variables controlled for in each series of models varied slightly from topic to topic and are always specified in the footnotes of each regression table. Missing data was minimal and was excluded from analyses.

Adjusted marginal effects

Because ORs can be hard to interpret and apply, the results are instead presented as Average Marginal Effects (AMEs). AMEs are predicted values derived from multivariate analysis. They can be interpreted in a similar way to odds ratios from multiple logistic regression, though do not always necessarily give the same results as odds ratios.[250] AMEs take all variables entered into the model into account to derive the predicted percentage of a given outcome (e.g., mental disorder) for each variable. Like odds ratios, AMEs are presented relative to a reference category and show how much (if at all) the predicted prevalence varies from the reference group. This can then be converted to show what the predicted prevalence of the outcome is for each group, taking into account the other variables in the model. These have sometimes been presented alongside the odds ratios as they can help readers to better understand and interpret the results of multivariate models. They have also been produced to inform the generation of a 'multiplier' that allows the increased use of services associated with violence to be factored into costs and QALY estimations.

(248) IBM Corp (2012) *IBM SPSS Statistics for Windows, Version 21.0.* Armonk, NY: IBM Corp

(249) StataCorp (2013) *Stata Statistical Software: Release 13.* College Station, TX: StataCorp LP.

(250) It is not uncommon for AMEs to give slightly different results to odd ratios from logistic regressions. In these circumstances, the general recommendation is to focus on results from the regression models.

Multipliers

The multipliers were generated by taking the proportion for the exposed population and dividing it by the proportion for the population as a whole, producing a form of relative risk ratio (see below for how this differs). These were generated both unadjusted (for reference) and after adjusting for other factors (the multipliers applied in costing of health services, social protection and other costs. This approach is conservative, as it is likely to have included adjustment for factors on the causal pathway between exposure to the risk factor (e.g. sexual violence) and the outcome being measured (e.g. presence of a limiting mental health condition). However, adjustment also makes it easier to identify the increment more directly associated with a particular exposure.

Relative risks

Relative risks were generated in a similar way to the multipliers. While the multipliers were generated by taking the proportion for the exposed population and dividing it by the proportion for the population as a whole, for the relative risks the proportion for the exposed population was divided by the proportion for unexposed population. Both approaches used adjusted rates, controlling for social and economic circumstances. The relative risks were used in estimating the costs associated with reductions in quality of life.

Minimum duration estimates

The questionnaire did not include detailed questions on when violence was last experienced. The data however do enable us to calculate the average age of people with recent experience of each type of violence (past year), and the average age of people with experience of each type of violence when circumstances are reported in the survey. The mean average was calculated for each, and the difference between these provides an estimated minimum duration of effects at these levels. The approach is conservative as it takes no account of repetition, assuming that the most recent exposure was the only exposure. Too few participants reported sex without consent in the past year for this to be estimated robustly, therefore the duration estimate for sex/sexual contact without consent is used.

Results

Multipliers

Health conditions and health service use

People who had been exposed to sexual violence, physical violence, or threat were more likely to have limiting mental or physical health conditions and to use health services than those without such exposure (see Table A.6.1.1). This remained the case even after controlling for socioeconomic factors and exposure to other types of violence. The effect size was similar for each type of violence. Those exposed to violence were 1.6 times more likely to have a mental health condition than the population as a whole; 1.2-1.3 times more likely to have a physical health condition; and 1.1-1.2 times more likely to make use of health services.

Social protection

People exposed to sexual or physical violence were more likely to need different types of social protection. People exposed to physical violence were 1.2 times more likely than the rest of the population to be in receipt of disability benefits and income support. Those exposed to sexual violence were twice as likely to receive disability benefit, and a slight increased likelihood of income support receipt (1.1) was noted. Those exposed to threat also appeared more likely to need income support, although they were not significantly more likely to use all forms of social protection after adjustment for other factors.

Lost economic output

People exposed to violence were 1.2 to 1.7 times more likely to be unemployed or unable to work due to sickness than the population as a whole, although this did not reach significance for threat. Generally, this difference was not evident when focusing on the rate currently in employment.

Relative risk ratios

Similar values to the multipliers were generated for the limiting mental health outcome using the relative risk approach (see methods section). These were similar, but slightly larger, than the multipliers described above: 1.7 for sexual and physical violence, and 1.8 for threat.

Estimated minimum duration of harm

The estimated minimum number of years these multipliers and relative risks relate to varied greatly between types of violence. For threat these were 2.7 years, for physical violence 10.6 years, and for sexual violence 17.0 years (see Table A6.1.1). More detail on how these figures were derived are provided below.

Sexual violence

Among the 23 survey participants who reported unconsented sex or other sexual contact in the past year, the mean average age was 28.5 years. Due to the very small base size for this estimate, the confidence interval around it is wide (between 21.8 and 35.2 years). The mean average age of the 468 people reporting having ever experienced sex or other sexual contact without consent was higher, at 45.5 years. This estimate was much more precise, with a narrower confidence interval around it (43.8-47.2). These figures suggest that the lowest mean duration of time to which the elevated harms identified in this chapter apply is likely to be about 17.0 years. However, this figure should be considered a significant underestimate as it takes no account of repetition and assumes that people reporting unconsented sex and other sexual contact have experienced it once only.

Physical violence

Participants who reported physical violence in the past year had an average age of 33.8 years (95% CI: 31.2-36.4). The mean average age of the people reporting having ever experienced physical violence was higher, at 44.4 years (43.5-45.3). The lowest mean duration of time to which the mean elevated level of harms identified apply is likely to be about 10.6 years. This will be an underestimate as it takes no account of repetition and assumes that people reporting physical violence have experienced it once only (thereby ignoring duration associated with earlier events).

Threat

Among the participants who reported threat in the past year, the mean average age was 37.3 years (95% CI: 35.2-39.5). The mean average age of people reporting threat ever was 40.4 years (39.1-41.7). These figures suggest that the duration of time to which the elevated level of harms identified in this Section apply would be at least 2.7 years. The figure will be an underestimate as it takes no account of repetition and assumes that people reporting threat have experienced it once only (thereby ignoring any duration of harms associated with earlier events).

Exposure to violence in childhood

The analyses above draw on exposure to violence in adulthood. Further analyses were done comparing outcomes in later life for people exposed to violence in childhood (see Table A.6.1.2). While not all multipliers were statistically significant at the 95% level, elevated rates of limiting poor mental health conditions and health service use emerged for all types of violence, even after adjustment for potential confounding factors. This was significant at least 19 years after exposure to sexual violence in childhood, and at least 37 years after exposure in childhood to physical violence or threat.[251]

(251) Because these just indicate possible minimum duration of/delayed effects, it should not be concluded that sexual violence effects are of shorter duration. This was less reported, and the sample was smaller.

Summary Tables

Table A6.1.1 Adjusted multipliers and minimum duration for outcomes associated with exposure to violence in adulthood

Violence	Adjusted multipliers [a]								Min. duration (years)
	Limiting mental health condition	Limiting physical health condition	Any limiting health condition	Health Service use	Disability benefit receipt	Income support	Unemployed or unable to work due to sickness	Employed	
Sex without consent	1.6	1.4	1.5	1.2	1.7	1.1	1.5	0.9[b]	17.0[c]
Sex/ sexual contact w/o consent	1.6	1.2	1.4	1.2	2	1.1	1.5	0.9	17
Physical violence	1.6	1.3	1.4	1.1	1.2	1.2	1.2	1.0	10.6
Threat	1.7	1.3	1.4	1.1	1.0	1.3	1.7	1.1	2.7

[a] Variables adjusted for varied between outcomes and are detailed in Tables A6.1.3 to A6.1.34. They generally involved controlling for demographics (age, sex, ethnic group), socioeconomics (tenure, employment status, problem debt), and other forms of violence.
[B] Detailed significance statistics at the 95% level are presented in Tables A6.1.3 to A6.1.34
[c] Too few participants reported sex without consent in the past year for this to be estimated, therefore the duration estimate for sex/ sexual contact without consent is used here.

Table A6.1.2 Additional adjusted multipliers and minimum duration for outcomes associated with exposure to violence in childhood

Violence	Adjusted multipliers [a]								Min. duration (years)
	Limiting mental health condition	Limiting physical health condition	Any limiting health condition	Health Service use	Disability benefit receipt	Income support	Unemployed or unable to work due to sickness	Employed	
Sex/ sexual contact w/o consent	1.3	[1.0][b]	[1.1]	1.1	1.2	[1.0]	[1.1]	[1.0]	19
Physical violence	1.6	1.3	1.3	1.1	[0.8]	1.5	[1.2]	[1.0]	37
Threat	1.7	[1.2]	1.4	1.1	[1.8]	1.7	1.5	0.9	37

[a] Variables adjusted for varied between outcomes and are detailed in Tables A6.1.3 to A6.1.34. They generally involved controlling for demographics (age, sex, ethnic group), socioeconomics (tenure, employment status, problem debt), and other forms of violence.
[b] Square brackets indicate the result was not treated as significantly different from those not exposed to violence at the 95% level.

Detailed tables

1. Sex without consent: multipliers for exposure in adulthood

Table A6.1.3 Prevalence of limiting mental health condition by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	10.7	<0.001	9.8	11.5	10.9	<0.001	10.1	11.8	10.9	<0.001	10	11.8
Yes	38		31.1	44.9	21.2		15.8	26.5	18.6		13.9	23.3
Multiplier	**3.3**				**1.9**				**1.6**			
Risk ratio	**3.6**				**1.9**				**1.7**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.
Relative risk: rate for the group exposed to violence ratioed to the rate for the group not exposed to violence.

Table A6.1.4 Prevalence of limiting physical health condition by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	11.8	<0.001	10.9	12.7	11.9	0.011	11	12.8	11.9	0.051	11	12.9
Yes	26.1		18.7	33.6	19.3		12.7	25.9	17.4		11.3	23.5
Multiplier	**2.1**				**1.6**				**1.4**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.5 Prevalence of any limiting health condition by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	19	<0.001	17.9	20.2	19.3	<0.001	18.2	20.4	19.3	0.001	18.1	20.4
Yes	48.2		40.6	55.7	32.8		25.7	39.9	29.5		22.9	36.1
Multiplier	**2.4**				**1.7**				**1.5**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.6 Prevalence of health service use by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	67	<0.001	65.6	68.4	67.1	<0.001	65.7	68.6	67.2	0.001	65.8	68.6
Yes	87.7		82.5	92.8	83.5		76.7	90.2	82.5		75.5	89.6
Multiplier	**1.3**				**1.2**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.7 Prevalence of disability benefit receipt by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	3	<0.001	2.6	3.4	3.1	0.002	2.6	3.5	3.1	0.019	2.7	3.6
Yes	10.6		6.4	14.7	6.5		3.6	9.5	5.4		3.1	7.8
Multiplier	**3.3**				**2**				**1.7**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.8 Prevalence of income benefit receipt by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9	<0.001	8.2	9.8	9.2	0.018	8.4	10	9.4	0.034	8.6	10.2
Yes	24		18.4	29.7	13.6		9.5	17.7	10.1		7.2	13.1
Multiplier	**2.6**				**1.5**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.9 Prevalence of being unemployed or unable to work due to sickness by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	7.0	<0.001	6.3	7.8	7.0	0.002	6.3	7.8	7.1	0.044	6.4	7.8
Yes	16.8		11.5	22.1	12.6		8.3	17	10.7		7.2	14.1
Multiplier	**2.3**				**1.7**				**1.5**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.10 Prevalence of being in employment in 16-64 year olds by sex without consent since 16, unadjusted and adjusted marginal effect

Sex without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	66.8	0.003	65.5	68.1	66.9	0.014	65.5	68.2	67	0.102	65.7	68.4
Yes	55.2		47.4	62.9	58.5		51.5	65.4	61.7		55.2	68.2
Multiplier	**0.8**				**0.9**				**[0.9]**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

2. Sex and/or sexual contact without consent: multipliers for exposure in adulthood

Table A6.1.11 Prevalence of limiting mental health condition by sex/sexual contact without consent since 16, unadjusted and adjusted marginal effect

Sex/sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	10.3	<0.001	9.4	11.2	10.7	<0.001	9.8	11.6	10.6	<0.001	9.7	11.5
Yes	29.5		24.7	34.3	19.1		15.4	22.9	18.3		14.7	22.0
Multiplier	**2.6**				**1.7**				**1.6**			
Risk Ratio	**2.9**				**1.8**				**1.7**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.12 Prevalence of limiting physical health condition by sex/sexual contact without consent since 16, unadjusted and adjusted marginal effect

Sex/sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	11.7	<0.001	10.8	12.6	11.9	0.037	10.9	12.8	11.9	0.066	11	12.8
Yes	19.8		15.5	24	15.5		11.9	19.2	15		11.5	18.5
Multiplier	**1.6**				**1.3**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.13 Prevalence of any limiting health condition by sex/sexual contact without consent since 16, unadjusted and adjusted marginal effect

Sex/sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	18.6	<0.001	17.5	19.7	19.0	<0.001	17.9	20.2	19	<0.001	17.8	20.1
Yes	39.1		33.9	44.3	29.1		24.4	33.7	28.3		23.8	32.7
Multiplier	**2.0**				**1.5**				**1.4**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.14 Prevalence of health service use by sex/sexual contact without consent since 16, unadjusted and adjusted marginal effect

Sex/ sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	66.5	<0.001	65.1	68.0	66.8	<0.001	65.4	68.2	66.8	<0.001	65.4	68.3
Yes	83.8		79.5	88.1	80.0		75.0	85.0	79.8		74.8	84.8
Multiplier	**1.2**				**1.2**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.15 Prevalence of disability benefit receipt by sex/sexual contact without consent since 16, unadjusted and adjusted marginal effect

Sex/ sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	2.9	<0.001	2.4	3.3	2.9	<0.001	2.5	3.4	3.0	<0.001	2.5	3.4
Yes	8.8		6.0	11.7	6.5		4.2	8.7	6.3		4.2	8.4
Multiplier	**2.7**				**2.0**				**2.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.16 Prevalence of income benefit receipt by sex/sexual contact without consent since 16, unadjusted and adjusted marginal effect

Sex/ sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9.0	<0.001	8.2	9.8	9.3	0.556	8.5	10.1	9.3	0.68	8.5	10.1
Yes	15.7		12.5	19.0	10.1		7.7	12.5	10.2		7.7	12.7
Multiplier	**1.7**				**1.1**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.17 Prevalence of being unemployed or unable to work due to sickness by sex/sexual contact without consent since 16, unadjusted and adjusted marginal effect

Sex/ sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.9	<0.001	6.2	7.7	7.0	0.002	6.2	7.7	7.0	0.002	6.3	7.7
Yes	13.5		10.1	16.9	11.2		8.0	14.4	10.9		8.1	13.8
Multiplier	**1.8**				**1.5**				**1.5**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.18 Prevalence of being in employment in 16-64 year olds by sex without consent since 16, unadjusted and adjusted marginal effect

Sex/ sexual contact without consent	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	73.3	0.315	71.7	75.0	74.0	0.383	72.4	75.6	73.7	0.505	72.1	75.4
Yes	71.7		69.0	74.4	72.6		69.9	75.3	74.8		72.2	77.4
Multiplier	**1.0**				**1.0**				**1.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

3. Any physical violence: multipliers for exposure in adulthood

Table A6.1.19 Prevalence of limiting mental health condition by any physical violence, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted prevalence				Adjusted prevalence (Model 1)				Adjusted prevalence (Model 2)			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	8.3	<0.001	7.5	9.1	8.6	<0.001	7.7	9.5	10.6	<0.001	9.7	11.5
Yes	24.0		21.7	26.3	20.3		18.1	22.5	18.3		14.7	22.0
Multiplier	**2.1**				**1.7**				**1.6**			
Risk Ratio	**2.9**				**2.4**				**1.7**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.20 Prevalence of limiting physical health condition by any physical violence, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	11.4	<0.001	10.4	12.3	10.3	<0.001	9.3	11.2	10.6	<0.001	9.7	11.6
Yes	18.6		16.6	20.5	18.4		16.3	20.5	16.9		14.7	19.1
Multiplier	**1.4**				**1.4**				**1.3**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.21 Prevalence of any limiting health condition by any physical violence, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	16.9	<0.001	15.8	18.1	16.1	<0.001	14.9	17.3	16.4	<0.001	15.2	17.7
Yes	34.1		31.6	36.7	31.8		29.1	34.4	29.7		27.0	32.3
Multiplier	**1.7**				**1.5**				**1.4**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.22 Prevalence of health service use by any physical violence, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	65.9	<0.001	64.4	67.4	65.7	<0.001	64.1	67.2	65.8	<0.001	64.2	67.3
Yes	75.0		72.5	77.4	73.8		71.2	76.3	73.6		70.9	76.3
Multiplier	**1.1**				**1.1**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.23 Prevalence of disability benefit receipt by any physical violence, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	2.4	<0.001	2.0	2.9	2.4	0.003	1.9	2.9	2.7	0.005	2.2	3.2
Yes	6.9		5.6	8.2	5.4		4.3	6.5	4.2		3.3	5.2
Multiplier	**2.0**				**1.6**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.24 Prevalence of income benefit receipt by any physical, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.3	<0.001	5.5	7.1	6.0	<0.001	5.2	6.8	8.5	<0.001	7.7	9.4
Yes	12.9		11.1	14.7	11.1		9.4	12.8	11.7		10.4	13.0
Multiplier	**1.3**				**1.1**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.25 Prevalence of being unemployed or unable to work due to sickness by any physical violence, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.3	<0.001	5.5	7.1	6.0	<0.001	5.2	6.8	6.4	<0.001	5.5	7.2
Yes	12.9		11.1	14.7	11.1		9.4	12.8	9.5		8.0	11.0
Multiplier	**1.7**				**1.4**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.26 Prevalence of being employed by any physical violence in people aged 16-64, unadjusted and adjusted marginal effect

Any physical violence	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	65.4	0.385	63.9	67.0	67.0	0.207	65.5	68.5	66.7	0.766	65.2	68.3
Yes	66.8		64.2	69.4	65.1		62.6	67.7	67.2		64.7	69.6
Multiplier	**1.0**				**1.0**				**1.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

4. Threat: multipliers for exposure in adulthood

Table A6.1.27 Prevalence of limiting mental health condition by threat, unadjusted and adjusted marginal effect

Threat	Unadjusted prevalence				Adjusted prevalence (Model 1)				Adjusted prevalence (Model 2)			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	10.0	<0.001	9.1	10.9	10.5	<0.001	9.5	11.4	10.5	<0.001	9.6	10.0
Yes	30.0		26.3	33.7	20.3		17.1	23.5	19.0		15.9	30.0
Multiplier	**2.6**				**1.8**				**1.7**			**2.6**
Risk Ratio	3.0				1.9				1.8			3.0

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual or physical violence in adulthood.
Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.28 Prevalence of limiting physical health condition by threat, unadjusted and adjusted marginal effect

Threat	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	11.5	<0.001	10.7	12.4	11.6	0.002	10.7	12.5	11.7	0.015	10.8	12.6
Yes	18.0		15.0	21.0	16.0		13.0	19.0	15.5		12.2	18.8
Multiplier	**1.5**				**1.3**				**1.3**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual or physical violence in adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.29 Prevalence of any limiting health condition by threat, unadjusted and adjusted marginal effect

Threat	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	18.0	<0.001	16.9	19.1	18.4	<0.001	17.2	19.5	18.4	<0.001	17.3	19.6
Yes	37.8		34.1	41.5	29.7		26.0	33.3	28.2		24.6	31.8
Multiplier	**1.9**				**1.5**				**1.4**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual or physical violence in adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.30 Prevalence of health service use by threat, unadjusted and adjusted marginal effect

Threat	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	64.9	<0.001	63.4	66.5	65.4	0.001	63.8	66.9	65.5	0.005	64.0	67.1
Yes	75.8		72.3	79.4	72.8		68.7	76.8	71.8		67.7	76.0
Multiplier	**1.1**				**1.1**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual or physical violence in adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.31 Prevalence of disability benefit receipt by threat, unadjusted and adjusted marginal effect

Threat	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	3.1	<0.001	2.6	3.6	3.3	0.199	2.8	3.8	3.5	0.758	3.0	4.0
Yes	6.3		4.6	8.1	4.1		2.9	5.4	3.3		2.3	4.3
Multiplier	**2.0**				**1.3**				**1.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual or physical violence in adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.32 Prevalence of income benefit receipt by threat, unadjusted and adjusted marginal effect

Threat	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	8.1	<0.001	7.3	8.9	8.5	<0.001	7.7	0.0	8.6	0.001	7.7	9.4
Yes	17.6		14.8	20.4	12.4		10.1	0.0	12.1		9.9	14.4
Multiplier	**1.9**				**1.3**				**1.3**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, sexual or physical violence in adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.33 Prevalence of being unemployed or unable to work due to sickness by threat, unadjusted and adjusted marginal effect

Threat	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	7.5	0.003	6.7	8.4	7.9	0.849	7.0	8.8	8.6	0.228	7.7	9.4
Yes	11.1		8.5	13.6	8.1		5.9	10.3	12.1		9.9	14.4
Multiplier	**1.5**				**1.1**				**1.7**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, tenure, problem debt, sexual or physical violence in adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.34 Prevalence of being employed by threat in 16 to 64 year olds, unadjusted and adjusted marginal effect

Threat	Unadjusted				Model 1				Model 2			
	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	73.3	0.366	71.8	74.8	73.3	0.187	71.8	74.8	73.4	0.021	71.9	74.9
Yes	75.1		71.5	78.8	76.2		72.3	80.2	78.2		74.7	81.7
Multiplier	**1.0**				**1.0**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual or physical violence in adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual or physical violence in adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Summary table: long-term substance dependence and specific physical health condition outcomes

Table A6.1.35 Adjusted multipliers substance dependence and physical health condition outcomes associated with exposure to violence in adulthood

Violence	Adjusted multipliers [a]				
	Dependence on illicit drugs	Dependence on alcohol	Diagnosed migraine	Diagnosed digestive problems	Diagnosed urinary problems
Sex/sexual contact w/o consent	2.8	2.0	NS	NS	1.6
Physical violence	2.8	1.2	1.2	1.4	1.3
Threat	NS	NS	1.3	1.4	NS

[a] *Variables adjusted for varied between outcomes and are detailed in Appendix A, Tables 3 to 35. They generally involved controlling for demographics (age, sex, ethnic group), socioeconomics (tenure, employment status, problem debt), and other forms of violence.*
[b] *NS indicates not significantly different from those not exposed to violence at the 95% level.*

Detailed tables: long-term substance dependence and specific physical health condition outcomes

SEX AND/OR SEXUAL CONTACT WITHOUT CONSENT

For all tables in this section, the p value presented is for the adjusted logistic regression. Models are adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. The multiplier shows the rate for the group exposed to violence ratioed to the rate for the whole population. Tables only presented for significant factors.

Table A6.1.36 Prevalence of signs of dependence on drugs by sex without consent since 16, adjusted marginal effects

Sex/ual contact without consent	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	5.1	0.037	4.4	5.8
Yes	8.4		4.7	12.2
Multiplier:	**2.8**			

Table A6.1.37 Prevalence of signs of dependence on alcohol (AUDIT score 16+) by sex without consent since 16, adjusted marginal effects

Sex/ual contact without consent	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	2.9	0.001	2.4	3.4
Yes	6.4		3.4	9.4
Multiplier:	**2.0**			

Table A6.1.38 Prevalence of diagnosed urinary problems in the past 12 months by sex without consent since 16, adjusted marginal effects

Sex/ual contact without consent	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	4.3	0.013	3.8	4.8
Yes	7.2		4.4	10.0
Multiplier:	**1.6**			

PHYSICAL VIOLENCE

For all tables in this section, the p value presented is for the adjusted logistic regression. Models are adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. The multiplier shows the rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.39 Prevalence of signs of dependence on drugs by physical violence, adjusted marginal effects

Physical violence	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	4.3	<0.001	3.5	5.0
Yes	8.3		6.6	10.0
Multiplier:	**2.8**			

Table A6.1.40 Prevalence of signs of dependence on alcohol (AUDIT score 16+) by physical violence, adjusted marginal effects

Physical violence	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	2.4	<0.001	1.8	2.9
Yes	5.0		3.8	6.2
Multiplier:	**1.2**			

Table A6.1.41 Prevalence of diagnosed migraine in the past 12 months by physical violence, adjusted marginal effects

Physical violence	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	12.4	<0.001	11.3	13.4
Yes	16.5		14.4	18.5
Multiplier:	**1.2**			

Table A6.1.42 Prevalence of diagnosed digestive problems in the past 12 months by physical violence, adjusted marginal effects

Physical violence	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.2	<0.001	5.5	6.9
Yes	9.9		8.2	11.6
Multiplier:	**1.4**			

Table A6.1.43 Prevalence of diagnosed urinary problems in the past 12 months by physical violence, adjusted marginal effects

Physical violence	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	4.1	0.025	3.5	4.7
Yes	5.6		4.4	6.8
Multiplier:	**1.3**			

THREAT/COERCION

For all tables in this section, the p value presented is for the adjusted logistic regression. Models are adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical and sexual violence in adulthood. The multiplier shows the rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.44 Prevalence of diagnosed migraine by threat, adjusted marginal effects

Threat/coercion	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	12.8	0.005	11.8	13.9
Yes	17.1		14.1	20.2
Multiplier:	**1.3**			

Table A6.1.45 Prevalence of diagnosed digestive problems in past 12 months by threat, adjusted marginal effects

Threat/coercion	Adjusted prevalence			
	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.7	0.019	6.0	7.4
Yes	9.6		7.0	12.1
Multiplier:	**1.4**			

Minimum duration of effects for exposure to violence in adulthood

The average age of participants with recent (past year) experience each type of violence was calculated, as was the average age for reporting circumstances among participants who had ever experienced each type of violence. The difference between these ages provides a minimum estimate of the average duration of the effects of violence. The figure is a proxy measure and will be a conservative estimate as it takes no account of repetition, assuming that people reporting each type of violence experienced it just once. It also takes no account of effects that continue after the date of reporting.

Table A6.1.46 Estimated duration of effects

Type of violence	Age of those exposed to violence in past year			Age when reporting effects/circumstances			Minimum duration estimate (years)
	Average age (years)	Lower 95% CI [c]	Upper 95% CI	Average age (years)	Lower 95% CI	Upper 95% CI	
Sex without consent [a]	-	-	-	-	-	-	17.0
Sex/sexual contact without consent	28.5	21.8	35.2	45.5	43.8	47.2	17.0
Physical violence (any)	33.8	31.2	36.4	44.4	43.5	45.3	10.6
Threat	37.3	35.2	39.5	40.4	39.1	41.7	2.7

[a] Minimum duration could not be calculated robustly for sex without consent as only 10 participants reported having experienced this in the past year. We therefore use the same duration as that for sex/sexual contact in the past year. [b] The questionnaire did not establish whether physical violence with injury from a partner was experienced in the past year, only whether it had ever been experienced. [c] CI: confidence interval.

Sex/sexual contact without consent before the age of 16: multipliers for exposure in childhood

This table is based on people aged 35 or more – so providing an estimated minimum duration of effects of about 19 years. And for presence of limiting mental health condition the association is significant even after controlling for exposure to physical and sexual violence in adulthood, generating **an adjusted multiplier of 1.3 over 19 years.**

Table A6.1.47 Prevalence of limiting mental health by sex or sexual contact without consent before age 16 in people aged 35 and over, unadjusted and adjusted marginal effect

All aged 35 and over	Unadjusted				Model 1				Model 2			
Sex/sexual contact without consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9.3	0.000	8.3	10.2	9.8	0.000	8.8	10.8	9.9	0.002	8.9	10.9
Yes	22.6		18.8	26.4	14.9		11.8	17.9	14.3		11.3	17.3
Multiplier	**2.1**				**1.4**				**1.3**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood and adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood and adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.48 Prevalence of limiting physical health condition by sex/sexual contact without consent before 16 in people aged 35 and over, unadjusted and adjusted marginal effect

All aged 35 and over	Unadjusted				Model 1				Model 2			
Sex/sexual contact without consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	14.6	0.050	13.5	15.8	14.9	0.860	13.7	16.0	14.9	0.785	13.7	16.1
Yes	18.0		14.5	21.6	14.6		11.5	17.7	14.5		11.4	17.5
Multiplier:	**1.2**				**1.0**				**1.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood and adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.49 Prevalence of any limiting health condition by sex/sexual contact without consent before 16 in people aged 35 and over, unadjusted and adjusted marginal effect

All aged 35 and over	Unadjusted				Model 1				Model 2			
Sex/sexual contact w/o consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	20.1	0.000	18.8	21.4	20.7	0.083	19.4	22.0	20.7	0.131	19.4	22.1
Yes	31.6		27.3	35.9	24.0		20.2	27.9	23.6		19.8	27.5
Multiplier	**1.5**				**1.1**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.50 Prevalence of health service use by sex/sexual contact without consent before 16 in people aged 35 and over, unadjusted and adjusted marginal effect

All aged 35 and over	Unadjusted				Model 1				Model 2			
Sex/sexual contact without consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	71.3	0.000	69.8	72.8	71.6	0.020	70.0	73.1	71.6	0.02	70.1	73.1
Yes	80.3		76.2	84.5	77.6		73.0	82.3	77.6		73.0	82.3
Multiplier	**1.1**				**1.1**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.51 Prevalence of disability benefit receipt by sex/sexual contact without consent before 16 in people aged 35 and over, unadjusted and adjusted marginal effect

All aged 35 and over	Unadjusted				Model 1				Model 2			
Sex/sexual contact without consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	3.4	0.000	2.8	4.0	3.5	0.088	2.9	4.1	3.6	0.22	3.0	4.2
Yes	7.0		4.6	9.3	4.9		3.2	6.6	4.5		3.0	6.0
Multiplier	**1.9**				**1.3**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.52 Prevalence of income benefit receipt by sex/sexual contact without consent before 16 in people aged 35 and over, unadjusted and adjusted marginal effect

All aged 35 and over	Unadjusted				Model 1				Model 2			
Sex/sexual contact without consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9.3	0.013	8.4	10.2	9.6	0.861	8.7	10.6	9.7	0.731	8.7	10.6
Yes	12.8		9.8	15.7	9.4		7.0	11.8	9.2		6.8	11.6
Multiplier	**1.3**				**1.0**				**1.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.53 Prevalence of being unemployed or unable to work due to sickness by sex/sexual contact without consent before 16 in people aged 35 and over, unadjusted and adjusted marginal effect

All aged 35 and over	Unadjusted				Model 1				Model 2			
Sex/sexual contact without consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.3	0.000	5.5	7.1	6.6	0.180	5.8	7.4	6.7	0.418	5.9	7.5
Yes	11.0		8.1	13.9	8.0		5.8	10.2	7.5		5.5	9.5
Multiplier	**1.6**				**1.2**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.54 Prevalence of being in employment among 35-64-year olds by sex/sexual contact without consent before age 16, unadjusted and adjusted marginal effect

35 to 64 year olds	Unadjusted				Model 1				Model 2			
Sex/sexual contact without consent before 16	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	64.2	0.234	62.7	65.8	64.1	0.996	62.5	65.6	64.2	0.78	62.6	65.7
Yes	61.2		56.5	66.0	64.1		59.6	68.5	64.8		60.5	69.1
Multiplier	**1.0**				**1.0**				**1.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, physical violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, physical violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Physical violence before the age of 18: multipliers for exposure in childhood

People who have experienced physical violence from an adult before the age of 18 are 1.6 times more likely to have a limiting mental health condition 37 years or more later, after adjusting for potential confounders like experience of sexual abuse or violence.

Table A6.1.55 Prevalence of limiting mental health by physical violence from an adult before age 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.9	0.000	5.8	7.9	7.0	0.000	5.9	8.1	7.1	0.001	6.1	8.2
Yes	15.7		11.7	19.7	13.3		9.6	17.0	12.4		9.0	15.8
Multiplier	**2.0**				**1.7**				**1.6**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood and adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood and adulthood.
Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.56 Prevalence of limiting physical health condition by physical violence from an adult before 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3081)	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	17.6	0.003	16.1	19.2	17.2	0.001	15.7	18.7	17.4	0.012	15.9	19.0
Yes	24.5		19.7	29.4	25.5		20.3	30.6	23.5		18.5	28.5
Multiplier	**1.3**				**1.4**				**1.3**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood and adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.57 Prevalence of any limiting health condition by physical violence from an adult before 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3081)	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	21.0	0.000	19.4	22.7	20.7	0.000	19.0	22.3	21.0	0.000	19.3	22.7
Yes	32.2		26.9	37.6	32.2		26.6	37.7	30.2		24.9	35.4
Multiplier	**1.4**				**1.4**				**1.3**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.58 Prevalence of health service use by physical violence from an adult before 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3081)	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	75.2	0.018	73.4	77.0	75.2	0.000	73.4	77.0	75.2	0.033	73.4	77.1
Yes	81.3		76.9	85.6	81.1		76.8	85.5	80.7		76.3	85.1
Multiplier:	**1.1**				**1.1**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.59 Prevalence of disability benefit receipt by physical violence from an adult before 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3081)	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	2.7	0.215	2.1	3.3	2.9	0.882	2.2	3.6	3.0	0.381	2.3	3.7
Yes	3.9		1.8	5.9	2.7		1.1	4.3	2.3		1.0	3.6
Multiplier:	**1.4**				**1.0**				**0.8**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Also tested for with other age filters, while significant for those aged 45+ unadjusted and in Model 1, it was not significant in the final adjusted model.

Table A6.1.60 Prevalence of income benefit receipt by physical violence from an adult before 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3081)	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9.6	0.003	8.5	10.7	9.5	0.002	8.4	10.7	9.5	0.002	8.4	10.7
Yes	14.6		10.9	18.3	15.1		11.1	19.0	15.0		11.1	18.9
Multiplier:	**1.4**				**1.5**				**1.5**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.61 Prevalence of being unemployed or unable to work due to sickness by physical violence from an adult before 18 in people aged 45-64, unadjusted and adjusted marginal effect

All aged 45-64 and over (2352)	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9.3	0.000	8.0	10.6	9.3	0.002	8.0	10.7	9.8	0.083	8.4	11.3
Yes	16.7		12.6	20.8	15.2		11.2	19.2	12.7		9.6	15.8
Multiplier:	**1.6**				**1.5**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.62 Prevalence of being in employment among 45-64-year olds by physical violence from an adult before 18, unadjusted and adjusted marginal effect

45 to 64 year olds (n=2352)	Unadjusted				Model 1				Model 2			
Physical violence from adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	73.2	0.002	71.2	75.3	73.2	0.006	71.1	75.3	73.1	0.092	71.0	75.2
Yes	64.7		59.4	69.9	65.3		59.9	70.7	68.4		63.3	73.6
Multiplier:	**0.9**				**0.9**				**1.0**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual abuse/violence in childhood or adulthood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual abuse/violence in childhood or adulthood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Threat/emotional abuse before the age of 18: multipliers for exposure in childhood

Table A6.1.63 Prevalence of limiting mental health condition by having been threatened by an adult before age 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	6.8	0.000	5.9	7.8	7.1	0.000	6.0	8.1	7.2	0.001	6.2	8.2
Yes	22.1		16.1	28.1	15.4		10.0	20.8	13.8		9.0	18.6
Multiplier:	**2.8**				**1.9**				**1.7**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.64 Prevalence of limiting physical health condition by having been threatened by an adult before age 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3114)	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	17.7	0.000	16.2	19.2	17.6	0.012	16.0	19.1	17.8	0.172	16.3	19.4
Yes	28.7		22.2	35.3	25.7		18.9	32.5	22.1		15.8	28.3
Multiplier:	**1.6**				**1.4**				**1.2**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.65 Prevalence of any limiting health condition by having been threatened by an adult before age 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	21.0	0.000	19.4	22.7	21.0	0.000	19.3	22.6	21.3	0.002	19.6	22.9
Yes	40.6		33.4	47.7	35.4		27.8	43.1	31.6		24.8	38.4
Multiplier:	**1.8**				**1.6**				**1.4**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.66 Prevalence of health service use by having been threatened by an adult before age 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3146)	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	75.1	0.000	73.4	76.8	75.1	0.002	73.3	76.9	75.2	0.003	73.4	76.9
Yes	86.9		82.3	91.5	85.8		80.6	91.1	85.6		80.1	91.0
Multiplier:	**1.1**				**1.1**				**1.1**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.67 Prevalence of disability benefit receipt by having been threatened by an adult before age 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3146)	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	2.5	0.000	1.9	3.1	2.5	0.000	1.9	3.2	2.6	0.063	1.9	3.2
Yes	7.0		3.5	10.5	6.3		2.4	10.1	5.0		2.0	7.9
Multiplier:	**2.5**				**2.2**				**1.8**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, employment status, tenure, problem debt, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.68 Prevalence of income support by having been threatened by an adult before age 18 in people aged 55 and over, unadjusted and adjusted marginal effect

All aged 55 and over (n=3146)	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9.5	0.000	8.4	10.6	9.6	0.003	8.5	10.7	9.6	0.003	8.5	10.7
Yes	19.2		13.7	24.6	17.7		11.4	24.1	17.8		11.3	24.3
Multiplier:	**1.9**				**1.7**				**1.7**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.69 Prevalence of being unemployed or unable to work due to sickness by having been threatened by an adult before age 18 in people aged 45-64 and over, unadjusted and adjusted marginal effect

All aged 45-64 (n=2389)	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	9.1	0.000	7.8	10.4	9.2	0.000	7.9	10.5	9.5	0.004	8.1	10.8
Yes	21.0		16.0	26.1	18.2		12.7	23.8	16.1		11.2	21.0
Multiplier:	**2.0**				**1.7**				**1.5**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, tenure, problem debt, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

Table A6.1.70 Prevalence of being employed by having been threatened by an adult before age 18 in people aged 45-64 and over, unadjusted and adjusted marginal effect

All aged 45-64 (n=2389)	Unadjusted				Model 1				Model 2			
Threatened by an adult before 18	%	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI	Predicted %	P value	Lower 95% CI	Upper 95% CI
No	73.4	0.000	71.3	75.4	73.2	0.000	71.0	75.3	73.3	0.029	71.2	75.4
Yes	60.1		53.6	66.6	63.3		56.3	70.3	65.3		58.4	72.2
Multiplier:	**0.8**				**0.9**				**0.9**			

P value for the logistic regression. Model 1: adjusted for age, sex, sexual and physical abuse in childhood. Model 2: adjusted for age, sex, ethnic group, tenure, problem debt, sexual and physical abuse in childhood. Multiplier: rate for the group exposed to violence ratioed to the rate for the whole population.

6.2 Crime Surveys

This section presents new analysis of combined waves of a national crime survey.

Since there is no survey that reliably identifies the extent and harms of trafficking in human beings, we gather data from surveys that provide information about overlapping harms. While these surveys do not provide statistically reliable information on victims of trafficking, they do provide information on overlapping harms that offers important contributions to the analysis. Relevant surveys have taken place focused crime and on health in some European countries. EU level surveys have, so far, focused on socio-economic matters, rather than crime and health. Relevant data on our topic, within Europe, is only collected by nationally specific surveys. In this section, data is reported from a large crime survey, the best such survey in Europe. **The data it reports are to be similar to that in any European country.**

The estimation of harms will be further advanced by analysing data about the harms of violence and coercion from a large data set compiled from crime surveys. The data set is a merger of 10 consecutive years and contains a combined sample size of around 300,000 people. Its size allows for analysis of some fine-grained aspects of the harms of coercion and violence that smaller, although more specialised, data sets cannot provide. The data is from the only survey in Europe which contains the relevant information and has the requisite sample size to allow for the necessary analysis - the Crime Survey for England and Wales (CSEW).

Methods

Constructing the dataset for violence and coercion

The CSEW asks respondents about their experiences of victimisation of different forms of crime in the last 12 months. For each offence reported, the victim completes a separate Victim Form. The respondent may complete up to six Victim Forms. A Victim Form may relate to a single incident, or a series incident where the victim has experienced the same incident multiple times. The design of the questions on victimisation in the CSEW and associated harms directly links harms and service use with the offence. The survey questions relevant to each measure use in this analysis is given in the appendix.

As the CSEW does not ask questions on experiences of trafficking in human beings, a new variable was created in the merged dataset to combine the forms of violence and coercion associated with trafficking in human beings that are measured in the survey. The definitions of violence and coercion and included offence types are given below in the measures of violence and coercion. Categories of violence were defined to align as best possible with the categories defined in the APMS analysis of the mental health harms of violence. The combined variable was used to filter the dataset to only include offences of violence and coercion and to exclude all other offence types. Each victim represents a unit of measurement in the analysis.

Descriptive analysis

Descriptive analyses were conducted in SPSS v 25.0 to estimate the percentage of victims that suffered physical and mental harm and used immediate health services as a result of the violence they experienced. Due to the structure of the CSEW, victims may have completed more than one Victim Form relating to different forms of violence and coercion. In each analysis the data were appropriately filtered to ensure harms were attributed to the reported offence.

Measures of violence and coercion

Offences are defined by the CSEW using offence codes that the survey derives from questions asked of the respondent about their victimisation in the last 12 months. Offence codes were combined in the dataset to define forms of violence that closely align with the exposure measures (types of violence) used in the APMS analysis.

1. Sex without consent (rape)

Includes only the offence of rape.

2. Sex violence (including sex without consent)

Combines offences of:

- Serious wounding with sexual motive
- Other wounding with sexual motive
- Rape
- Attempted rape
- Sexual assault

3. Physical violence (with or without injury)

Combines offences of:

- Serious wounding
- Other wounding
- Common assault
- Attempted assault

4. Physical violence with injury

Includes offences of physical violence that resulted in injury, identified by survey question: 'Were you bruised, scratched, cut or injured in any way?'

5. Threat(s)

Combines offences of:

- Threat to kill/assault made against, but not necessarily to respondent
- Sexual threat made against, but not necessarily to respondent
- Other threat or intimidation made against, but not necessarily to respondent
- Threats against others made to respondent.

Measures of physical and emotional harm

Physical harm was defined in the violence dataset as physical injury suffered by the victim as a result of the reported offence.

The CSEW asks the victim whether they received a physical injury as a result of the reported offence(s). If the victim did receive an injury as a result of the offence, they are then asked to disclose the type of injuries they received. Victims can disclose multiple injuries per offence. For analyses, individual injuries measured by the CSEW were graded as minor, less severe, and severe injury.

Severe injury

- Puncture or stab wounds
- Broken/cracked/fractured bones

- Broken nose
- Broken/lost tooth
- Concussion or loss of consciousness
- Facial/head injuries
- Internal injuries
- Eye/facial injuries caused by acid, paint, sand, etc. being thrown in face

Less severe injury

- Severe bruising
- Cuts
- Nose bleed
- Chipped teeth
- Dislocation of joints

Minor injury

- Minor bruising or black eye
- Scratches

Emotional harm is defined by the CSEW violence dataset as emotional reactions experienced by the victim as a result of the reported offence. The CSEW asks the victim whether they experienced an emotional reaction as a result of the reported offence(s). If the victim did experience an emotional reaction, they are they asked to disclose the type of reaction(s) they experienced. Victims can disclose multiple emotional reactions per offence. For analyses, emotional reactions have been categorised as long-term emotional harm and short-term emotional reactions.

Long-term emotional harm

- Depression
- Anxiety/panic attacks

Short-term emotional reactions

- Anger
- Shock
- Fear
- Loss of confidence/feeling vulnerable
- Difficulty sleeping
- Crying/tears
- Annoyance

Measures of health service use

The CSEW provides measures of victims' use of immediate health services as a result of the offence, which allows the victimisation to be linked directly to the use of health services.

A victim's use of health services due to victimisation has been defined from the CSEW as receiving medical attention as a direct result of the reported offence, and/or visiting a hospital as a direct result of the reported offence. The CSEW asks victims whether they received medical attention from any of the people in the list below as a result of the offence, or whether they received no medical attention.

Medical attention

- A trained first aider/St John's Ambulance
- A paramedic
- A nurse
- A doctor
- A dentist

For analyses, the above sources of medical attention have been aggregated into one measure of a victim receiving medical attention as a direct result of the reported offence.

Hospital visit

The CSEW then asks whether the victim visited an accident and emergency (A&E) department within 24 hours as a result of the offence. If the victim did receive medical attention and/or visit A&E within 24 hours of the offence.

Weighting

Figures published by the CSEW are based on weighted data. The CSEW data provide two weights, a household weight for the core sample and an individual adult weight for the core sample. Weights are use in the CSEW to compensate for unequal selection probabilities, for differential response which can occur between different geographical areas and between different age and gender subgroups, and to make sure the year quarters are equally weighted for analyses that combine data from more than one quarter (ONS, 2017).

Analyses of the CSEW for this study weighted data using the individual adult weight. Each victim was multiplied by their individual weight. Weighting improves the representativeness of the survey sample to the general population of England and Wales. Within the violence and coercion dataset, the mean individual weight per respondent was 1 359. All figures and percentages presented from the CSEW for this study are based on the weighted data.

Results

Table A.6.2 gives the percentage of victims of each form of violence that experienced physical injury, long-term emotional harm (depression and/or panic attacks), received medical attention and visited an accident and emergency (A&E) department within 24 hours as a direct result of the offence.

Table A6.2 Percentage of victims of violence and coercion 2006/07 – 2016/17 that experienced physical harm or emotional harm and accessed immediate health services

	Physical injury	Depression and/or anxiety/panic attacks	Received medical attention	Visited A&E within 24 hours
Physical violence	60	14	18	12
Physical violence with injury	100	17	31	22
Sexual violence	29	35	16	5
Sex without consent	56	60	48	14
Threat	<1	18	<1	<1

6.3 Longitudinal Surveys

This section presents new analysis of The Avon Longitudinal Study of Parents and Children (ALSPAC) mothers' cohort data.

Aim

To investigate the long-term effects of inter-partner violence and abuse (IPVA) on women's health and labour market outcomes. We provide estimates that can be used to quantify the long-term effects of violence more generally on a range of different outcomes and detail the assumptions underpinning this work.

Data

Data were taken from The Avon Longitudinal Study of Parents and Children (ALSPAC) mothers' cohort.[252] ALSPAC was established to understand how genetic and environmental characteristics influence health and development in parents and children. All pregnant women resident in a defined area in the South West of England, with an expected date of delivery between 1st April 1991 and 31st December 1992, were eligible and 13761 women (contributing 13,867 pregnancies) were recruited. These women have been followed over the last 19–22 years and have completed up to 20 questionnaires, have had detailed data abstracted from their medical records and have information on health and other events

Variables

Exposure measure

Our exposure measure is parental IPVA experienced either during or just after pregnancy. Mothers were asked at 18 weeks gestation whether their partner had hurt them physically since they became pregnant, and again at eight weeks post-partum whether their partner had hurt them 'since the middle of pregnancy'. If the mother responded 'yes' to either or both questions, or 'yes' to one question and the other was missing, then they were included in the exposed group. If they responded 'no' to both questions they were included in the not exposed group. If they responded 'no' to one questionnaire and were missing the other, they were excluded from the analysis.

Outcome measures

We analysed the association between the IPVA measure and the following measures. In each case, the outcome was measured at three time points; during pregnancy, 9-11 years after birth, and 18-21 years after birth. Unless otherwise indicated the measures were all self-reported.

- Obesity, defined as body mass index ≥30 kg/m^2.
    - Obese at 12 weeks gestation.
    - Obese at 9 years post-birth.
    - Obese at 18 years post-birth (height and weight measured in clinic).

(252) Fraser, A., Macdonald-Wallis, C, Tilling, K, et al. (2013) 'Cohort Profile: the Avon Longitudinal Study of Parents and Children: ALSPAC mothers cohort'. *International Journal of Epidemiology*. 2013;42(1):97–110. doi:10.1093/ije/dys066

- Smoking, defined as being a current smoker.
  - Current smoker during pregnancy.
  - Current smoker at 11 years post-birth.
  - Current smoker at 21 years post-birth.
- Employment
  - Not employed at 32 weeks gestation.
  - Not employed at 10 years post-birth.
  - Not employed at 21 years post-birth.
- Depression
  - Depressed/antidepressants during pregnancy (scored 10 or more on the Edinburgh Postnatal Depression Scale[253]; or reported use of antidepressants during pregnancy).
  - Depressed/antidepressants at 10 years post birth (reports use of antidepressants at 9 years or 10 years, or self-reports depression in the past year at 11 years).
  - Antidepressant medication at 18 years post birth.
- Anxiety
  - Took anxiety medication during pregnancy.
  - Took anxiety medication at 10 years post birth.
  - Reports feeling 'anxious/worried for no good reason' at 20-22 years post birth.

Analysis

We evaluated the proportion of participants reporting the outcomes at each time point in the exposed and not exposed groups. The proportions are unadjusted. There was substantial variation in the extent of missing data across the outcomes, ranging from 0% to 74%; observations with missing data were excluded – not included in either the numerators or the denominators of the proportions. We used bootstrapping to calculate 95% uncertainty intervals around the central estimates of the percentage values for the exposed and not exposed groups. Since all the outcomes were binary, categorical measures, we used Beta distributions, with alpha and beta parameters taken from the raw data used to compute the original (deterministic) percentage values. A random value from the Beta distribution was selected and used to calculate the percentage values of each outcome of the exposed and not exposed groups. This was repeated 1000 times and mean probabilistic values were calculated, alongside 95% uncertainty intervals, which were computed as the 2.5th and 97.5th percentiles of the simulated values. We also calculated the difference in points of participants reporting the outcomes in the exposed and not exposed groups at each time point, as well as the ratio between these.

Results

Overall, the total number of participants included in the baseline analysis was 10 532 (Table A6.3.1), of whom 357 met the criteria for inclusion in the exposed group (3.4%).

[253] Cox, J. L., Holden, J. M., and Sagovsky, R. (1987) 'Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale'. *British Journal of Psychiatry* 150:782-786.

Women who experienced IPV during pregnancy continued to have similar levels of obesity to women who were not exposed to IPV at that time (Table A6.3.2).

Women exposed to IPV were twice as likely as other women to smoke during pregnancy. After 21 years they remained nearly twice as likely to smoke (although due to small sample sizes the uncertainty intervals overlapped, the difference therefore is not considered statistically significant).

Women exposed to IPV were slightly more likely than other women to not be employed during pregnancy. After 21 years the observed differential became more pronounced: with women exposed to IPV becoming nearly twice as likely to not be employed (although again, likely due to reduction in sample size, this did not meet statistical significance).

Women experiencing IPV were nearly three times more likely than other women to be identified by the survey measures as depressed during pregnancy. At follow-up this effect reduced but remained evident, with rates nearly twice as high as for women not exposed to IPV (although uncertainty intervals overlapped).

Increased levels of anxiety were evident in women exposed to IPV during pregnancy, but the pattern was less clear and not significant at follow-up. 21 years post pregnancy, 47% of women exposed to IPV took anxiety medication compared with 38% of women not exposed to IPV during pregnancy.

Summary

At baseline, mothers exposed to IPV during pregnancy were more likely to smoke, not be employed, and experience depression and anxiety than mothers not exposed to IPV. When relying on non-overlapping confidence intervals to indicate significant differences, none of these outcomes remained elevated beyond 11 years. However, a visual comparison of observed rates indicates that differences between these groups persist longer: with those exposed to IPV in pregnancy being about twice as likely to be depressed, smoke, and not employed two decades after exposure. It is important to note that these results have not been adjusted, therefore it is possible that these patterns could be explained by confounding factors.

Limitations

There are several important limitations with these provisional analyses. The first is the limited number and scope of the outcome measures. There were high proportions of missing values for certain variables, two thirds of the sample were generally missing from the final wave of data. This could be partially dealt with using appropriate statistical techniques in substantive future analyses. It also meant that some estimates were based on small sample sizes, for example, the depression rate in the exposed group at 18 years is based on 58 women. The extent of sample attrition also varied between the exposed and unexposed groups, affecting comparability. Longitudinal survey weights were not used. Likewise, the measures themselves made best use of available data, but were not always consistently derived across waves. Reliance on use of medication as an indication of presence of depression or anxiety is problematic, as women experiencing these conditions may not be identified by doctors or may chose non-drug treatments. The ALSPAC sample draws on one, untypical region. ALSPAC does contains data on several other health, health care and labour market outcomes that could be considered in future research. A major limitation of this analysis is that we have not adjusted for observed factors that might explain the observed differences in the outcomes between the exposed and not exposed groups (e.g., ethnic group, marital status, other measures of adversity). Further research would be beneficial to analyse the relationship between exposure to IPVA and the outcomes considered here using a regression framework with covariate adjustment for potential confounding factors. Another limitation to note is that our longitudinal dataset does not comprise repeat measures of the identical group of women.

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Table A6.3.1 Summary of raw data for exposed and unexposed groups

Variable	Category	Total number	Exposed number	Not exposed number
Total		10 532	357	10 175
Obese at 12 weeks gestation	No	9 022	276	8746
	Yes	513	12	501
	Missing (%)	997	69	928
Obese at 9 years post-birth	No	5 112	102	5 010
	Yes	691	21	670
	Missing (%)	4 729	234	4 495
Obese at 18 years post-birth	No	3 251	68	3 183
	Yes	854	24	830
	Missing (%)	6 427	265	6 162
Current smoker during pregnancy	No	7 950	176	7 774
	Yes	2 575	174	2 401
	Missing (%)	7 (0)	7	0
Current smoker at 11 years post-birth	No	1 676	35	1 641
	Yes	1 112	41	1 071
	Missing (%)	7 744	281	7 463
Current smoker at 21 years post-birth	No	3 625	58	3 567
	Yes	367	12	355
	Missing (%)	6 540	287	6 253
Not employed at 32 weeks gestation	No	4 271	81	4 190
	Yes	5 950	225	5 725
	Missing (%)	311	51	260
Not employed at 10 years post-birth	No	4 925	91	4 834
	Yes	71	<5	67
	Missing (%)	5 536	262	5 274
Not employed at 21 years post-birth	No	2 935	46	2 889
	Yes	358	11	347
	Missing (%)	7 239	300	6 939
Depressed/depression medication during pregnancy	No	8 086	137	7 949
	Yes	2 274	178	2 096
	Missing (%)	172	42	130
Depressed/depression medication at 10 years post birth	No	5 556	102	5 454
	Yes	946	34	912
	Missing (%)	4 030	221	3 809
Depression medication at 18 years post birth	No	3 156	47	3 109
	Yes	382	11	371
	Missing (%)	6 994	299	6 695
Anxiety medication during pregnancy	No	10 348	326	10 022
	Yes	113	10	103
	Missing (%)	71	21	50
Anxiety medication at 10 years post birth	No	6 591	134	6 457
	Yes	246	<5	242
	Missing (%)	3 695	219	3 476
Reported anxiety/worry at 20 years post birth	No	2 426	36	2 390
	Yes	1 521	32	1 489
	Missing (%)	6 585	289	6 296

Table A6.3.2 Differences in outcomes between exposed and unexposed groups

Violence	Exposed				Not exposed				
	Deterministic[a]	Mean probabilistic[b]	2.5th centile	97.5th centile	Deterministic[a]	Mean probabilistics	2.5th centile	97.5th centile	Ratio
Obese at 12 weeks' gestation	4.2	4.2	2.1	6.6	5.4	5.4	5.0	5.9	0.76
Obese at 9 years post-birth	17.1	17.1	11.3	24.0	11.8	11.8	11.0	12.6	1.44
Obese at 18 years post-birth	26.1	26.1	18.1	35.3	20.7	20.7	19.5	21.9	1.26
Current smoker during pregnancy	49.7	49.7	44.8	54.8	23.6	23.6	22.8	24.4	2.11
Current smoker at 11 years post-birth	53.9	54.0	43.4	64.7	39.5	39.5	37.8	41.3	1.36
Current smoker at 21 years post-birth	17.1	17.2	9.7	26.5	9.1	9.1	8.2	9.9	1.88
Not employed at 32 weeks' gestation	73.5	73.6	68.8	78.2	57.7	57.7	56.8	58.7	1.27
Not employed at 10 years post-birth	4.2	4.2	1.3	8.9	1.4	1.4	1.1	1.7	2.95
Not employed at 21 years post-birth	19.3	19.5	10.7	30.1	10.7	10.7	9.7	11.8	1.78
Depressed during pregnancy	56.5	56.6	51.3	61.8	20.9	20.9	20.1	21.6	2.71
Depressed at 10 years post birth	25.0	25.0	18.5	32.4	14.3	14.3	13.5	15.2	1.74
Depression medication at 18 years post birth	19.0	19.0	10.5	29.6	10.7	10.7	9.7	11.7	1.76
Reported anxiety during pregnancy	3.0	3.0	1.5	5.0	1.0	1.0	0.8	1.2	2.87
Took anxiety medication at 10 years post birth	2.9	2.9	0.9	6.2	3.6	3.6	3.2	4.1	0.78
Took anxiety medication at 20 years post birth	47.1	47.1	36.1	58.6	38.4	38.4	37.0	39.9	1.22

Rows highlighted in grey indicate that the 2.5th-97.5th percentile ranges for the exposed and not exposed groups do not overlap.
[a] Percentages based on raw data in table 6.3.1.
[b] Percentages based on mean values from the 1([1000000 simulations.
[c] Ratio calculated as the mean of the ratios from each of the 1 000 simulations.

6.4 Survey of Survivors of Human Trafficking

This section presents new analysis on the mental health of victims of trafficking using a survey of trafficking survivors.

Background

Studies with survivors of human trafficking have identified both a high prevalence of exposure to physical and sexual violence and a high prevalence of mental health harms, in particular of depression, anxiety, and post-traumatic stress disorder (PTSD). The level of disaggregation typically presented in studies is often not sufficiently fine grained to support the efforts being undertaken in this report to estimate the costs associated with human trafficking. **This module aims to address by presenting a re-analysis of existing datasets, focusing on the mental health harms associated with physical and sexual violence while trafficked. Where possible, estimates are provided disaggregated by sex, type of exploitation, and type of mental health harm**.

PROTECT - about the dataset

The PROTECT dataset is a cross-sectional survey of victims of trafficking in human beings in contact with post-trafficking support services in England in 2013-14. It was funded by the National Institute of Health Research Policy Research Programme and led by King's College London. The primary aim of the survey was to describe the health needs of victims of trafficking in human beings in contact with post-trafficking support services in England.

Recruitment was via non-governmental organisations (NGOs) that provided post-trafficking support to survivors on either a residential or outreach basis. Participating organizations approached a convenience sample of eligible participants and provided them with information about the study. The research team conducted informed consent procedures and interviews face-to-face either at the offices of participating organizations or at participant homes. Professional interpreters were used where the participant could not speak English sufficiently well to complete the survey in English.

Eligibility criteria required that participants were aged 18 years or older, had been identified as a victim of trafficking by statutory or voluntary agencies, and had previously received or were currently receiving assistance from one[254] or more statutory or voluntary agencies. Human trafficking was defined in accordance with the United Nations Protocol to Prevent, Suppress, and Punish Trafficking in Persons, Especially Women and Girls (United Nations Palermo Protocoll 2000). Potential participants were excluded if they were still in a situation of exploitation, were to unwell or distressed to participate, or if they were unable to provide informed consent. There were no restrictions placed on the type of exploitation suffered, the time since exploitation, the country of origin, or language spoken.

In total 150 interviews we conducted, with 98 women and 42 men. Almost half of the sample used an interpreter to complete the study (48%), with more men (82%) than women (29%) requiring interpretation. People had been trafficked from more than 30 countries; the most common countries of origin were Nigeria, Albania, Poland, and Slovakia. Men were predominantly trafficked for labour exploitation (88.2%), with fewer trafficked for domestic servitude (9.8%) or sexual exploitation (2.0%). Women were predominantly trafficked for either sexual exploitation (44.2%) or domestic servitude (41.1%), with fewer trafficked for labour exploitation (14.7%).

The dataset is one of the few surveys of trafficking victims incorporating mental health measures globally. However, there is some lack of detail in the measurement of violence and abuse. This includes a lack of information on the frequency and severity of physical violence, the frequency of sexual violence, and of types of sexual violence other than unwanted sex. The small sample size limits the extent to which adjusted analyses of associations between violence and mental health harms can be explored.

It is important to note that this is a dataset of victims in contact with post-trafficking support services and not of the entire population of trafficking victims in England. Survivors in contact with post-trafficking support services are likely to vary systematically from victims not in contact with post-trafficking support services. The lack of data on victims not in contact with post-trafficking support services means that it is not possible to assess the extent or direction of likely bias. If victims in contact with such post-trafficking services have more severe experiences and higher levels of need, dataset may over-estimate the violence exposure and mental health harms experienced by victims of trafficking. However, the consistency of findings on prevalence of violence and of mental health harms with other studies suggests that findings may generalize to victims in contact with post-trafficking support services in other settings. As data are drawn from a cross-sectional survey, caution should be exercised in drawing conclusions regarding causality.

Aims

The aims of the re-analysis of the PROTECT dataset were to:

- Estimate the prevalence of mental health harms in trafficking survivors who have experienced physical and sexual violence,[255] compared with those who have not

(254) United Nations Palermo Protocol (2000) *To Prevent, Suppress and Punish Trafficking in Persons* https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XVIII-12-a&chapter=18&lang=en

(255) The initial terminology used in the survey is kept.

- Describe the association between mental health harms and exposure to physical and sexual violence experienced while trafficked.
- Test whether these associations remain significant when potentially confounding factors are controlled for.

Measures

The survey included the following measures of mental health problems:

- Depression – The Patient Health Questionnaire 9 was used to measure depression in the last two weeks, with probable depressive disorder defined as a score of 10 or more.
- Anxiety – The Generalised Anxiety Disorder 7 was used to measure anxiety in the last two weeks, with probable anxiety disorder defined as a score of 10 or more.
- Post-traumatic stress disorder (PTSD) – The 4 item version of the PTSD Checklist-Civilian was used to measure PTSD in the past four weeks, with probable PTSD defined as a score of 3 or more.
- Self-harm and suicidal ideation – The Revised Clinical Interview Schedule was used to assess suicidality. Specific items from the schedule have been extracted to report on self-harm and suicidal ideation in the past week: in the past week have you deliberately harmed yourself in any way but not with the intention of killing yourself, and in the past week have you thought about killing yourself.
- High-risk alcohol use – The Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) was used to assess high-risk alcohol use, with high-risk alcohol use defined as a score of 5 or more.

Questions were also asked about experience of physical and sexual violence prior to and during trafficking. The questions were as follows:

- Physical violence prior to trafficking: Did anyone ever hit, kick, or otherwise physically hurt you before you were trafficked?
- Physical violence while trafficked: In the most recent trafficking situation, did anyone hit, kick, or otherwise physically hurt you?
- Made to have sex prior to trafficking: Before you were trafficked did anyone ever make you have sex when you didn't want to?
- Made to have sex while trafficked: In the most recent trafficking situation, did anyone make you have sex when you didn't want to?

Analysis

Descriptive analyses and logistic regressions were carried out using STATA 15 IC. Regression analyses are presented first as unadjusted analyses. Adjusted analyses were also conducted, with potential confounders (age and exposure to other forms of violence prior to and/or during trafficking) entered in blocks. P values and confidence intervals were calculated at the 95% level. The results of the descriptive analyses are presented for all analyses, regardless of whether they reached statistical significance.

Results

1. Made to have sex while trafficked

Prevalence of 'made to have sex when you didn't want to' while trafficked

Unwanted sex while trafficked was reported by 67 of the 139 participants who answered this question. Of the 11 participants who did not answer this question, 10 were male and 1 was female.

Table A6.4.1 Made to have sex, by sex of participant

Made to have sex	Men (n=42)		Women (n=97)		Total (n=139)	
	n	%	n	%	n	%
Yes	2	4.8	65	67	67	48.2

Table A.6.4.1 shows that overall, 48% of participants made to have sex when they didn't want to. This was more commonly reported by women (67.0%) than by men (4.8%). As 'made to have when you didn't want to' while trafficked was reported by only 2 men, these data are not disaggregated further in the tables below. Table A6.4.2 shows the prevalence of unwanted sex while trafficked among women, by type of exploitation. Prevalence was highest among women trafficked for sexual exploitation (95.1%), followed by domestic servitude (53.9%), and other forms of labour exploitation (21.4%). These included exploitation in agriculture, restaurants, factories, hotels, and benefits claims.

Table A6.4.2 Made to have sex, by type of exploitation (women only)

Made to have sex	Women (n=94)	
	n	%
Sexual exploitation	39	95.1
Domestic servitude	21	53.9
Other labour exploitation	3	21.4

Prevalence of mental health harms by unwanted sex while trafficked

The mental health of participants who reported having been subjected to unwanted sex while trafficked was compared to that of people did not report having been subjected to unwanted sex while trafficked (Table A6.4.3). For all mental health harms examined, prevalence was significantly higher in the exposed group.

Probable depression was evident in 64.4% of people who were made to have sex when they didn't want to sex while trafficked compared with 33.3% of people who were not. Probable anxiety was evident among 62.1% of people exposed to unwanted sex while trafficked compared with 22.7% of people who were not. Probable PTSD was evident among 73.1% of people made to have sex when they didn't want to while trafficked compared with 30.8% among people who were not.

Weaker but still significant associations were found between unwanted sex while trafficked and suicidal thoughts in the past week and self-harm in the past week. Suicidal thoughts in the past week were reported by 26.2% of people made to have sex when they didn't want to while trafficked compared with 10.3% of people who were not. Self-harm in the past week was reported by 9.1% of people made to have sex when they didn't want to while trafficked compared with 1.5% of those who were not.

Table A6.4.3 Mental health harms, by made to have sex

Mental health harm	Made to have sex when you didn't want to			P value
	Yes	No	Total	
	%	%	%	
Depression	64.4	33.3	48.4	0.001
Anxiety	62.1	22.7	42.4	<0.001
PTSD	73.1	30.8	52.3	<0.001
Suicidal thoughts in past week	26.2	10.3	18.1	0.017
Self-harm in past week	9.1	1.5	5.2	0.045

The mental health profile of those who were and were not made to have sex when they didn't want to while trafficked was produced separately for women (Table A6.4.4). Due to the very small number of men reporting unwanted sex while trafficked (n=2), a corresponding analysis was not conducted for men and the prevalence estimates shown in Table A6.4.4 vary only very slightly from those in Table A6.4.3. However, due to the smaller

sample size and loss of statistical power, statistical significance is reduced and, with respect to suicidal thoughts in the past week and self-harm in the past week, falls below the commonly used threshold value of p=0.05.

Table A6.4.4 Mental health harms, by made to have sex, among women

Mental health harm	Made to have sex			P value
	Yes	No	Total	
Depression	63.8	44.8	57.5	0.092
Anxiety	62.5	26.7	51.1	0.001
PTSD	73.9	34.5	61.7	<0.001
Suicidal thoughts in past week	27	12.9	22.3	0.123
Self-harm in past week	7.8	3.2	6.3	0.389

Made to have sex: regression analyses

Made to have sex as a predictor for mental health harms, unadjusted and adjusted.

To provide context for the regression analyses presented in the rest of this section, we first look at the prevalence of unwanted sex while trafficked among people with different levels of depression and anxiety. As shown in Table A6.4.5, being made to have sex when you didn't want to while trafficked is strongly associated with depression (p=0.001) and anxiety (p<0.001).

Overall, 67% of women reported unwanted sex while trafficked in this data set. However, 90.9% women with the most severe depression (a PHQ-9 score of 20 or more) reported this (Table A6.4.5) as did 82.5% of women with the most severe anxiety (GAD-7 score of 15 or more) (Table A6.4.6).

Table A6.4.5 Made to have sex, by symptoms of depression, by participant sex

Made to have sex	Categorical depression score				
	None	Mild	Moderate	Moderately severe	Severe
	%	%	%	%	%
Men	0	0	20	0	0
Women	26.7	77.3	66.7	71.4	90.9

Table A6.4.6 Made to have sex, by symptoms of anxiety, by participant sex

Made to have sex	Categorical anxiety score				
	None	Mild	Moderate	Moderately severe	Severe
	%	%	%	%	%
Men	0	6.7	0	25	0
Women	44	61.9	84	82.6	44

As shown in Table A6.4.7, in unadjusted analyses, participants subjected to unwanted sex while trafficked had odds of current depression 3.6 times that of people not subjected to unwanted sex while trafficked. Controlling for sex reduces this to 2.44 times (as both unwanted sex and depression are more commonly reported by women). Due to missing data, controlling for unwanted sex prior to being trafficked reduced the sample size for models 2 and 3 below 100 observations. Statistical significance was lost when controlling for unwanted sex prior to trafficking (OR 2.84 95% CI 0.93-8.63, model 2) and both unwanted sex prior to trafficking and physical violence while trafficked (OR 2.21 95% CI 0.69-7.14, model 3.

Table A6.4.7 Made to have sex as a predictor of depression

Regression analyses	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	**3.62**	1.71	7.64	>0.001
Model 1: adjusted for sex	**2.44**	1.00	5.94	0.049

Regression analyses	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Model 2: model 1 adjusted additionally or sexual violence before being trafficked	**2.84**	0.93	8.63	0.067
Model 3: model 2 adjusted additionally for physical violence while trafficked	**2.21**	0.69	7.14	0.184

A stronger association was observed between unwanted sex while trafficked and current anxiety, as shown in Table A6.4.8. In unadjusted analyses, participants subjected to unwanted sex while trafficked had odds of current anxiety 5.58 times that of people not subjected to unwanted sex while trafficked. Controlling for sex reduces this to 4.54 times (as both unwanted sex and anxiety are more commonly reported by women). Although, controlling for unwanted sex prior to being trafficked again reduced the sample size below 100 observations, statistical significance was reduced but not lost. An odds ratio of 3.94 (95% CI 1.38-11.25) was observed when controlling for both participant sex and unwanted sex prior to trafficking (model 2) and of 3.80 (1.24-11.63) when controlling for participant sex, unwanted sex prior to trafficking and physical violence while trafficked (model 3).

Table A6.4.8 Made to have sex as a predictor of anxiety

Regression analyses	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	5.58	2.61	11.93	>0.001
Model 1: adjusted for sex	4.54	1.84	11.22	0.001
Model 2: model 1 additionally adjusted for made to have sex before being trafficked	3.94	1.38	11.25	0.010
Model 3: model 2 additionally adjusted for physical violence while trafficked	3.80	1.24	11.63	0.019

Due to high levels of comorbid depression and anxiety, analyses were replicated for the association between unwanted sex while trafficked and either depression or anxiety (Table A6.4.9). In unadjusted analyses, participants subjected to unwanted sex while trafficked had odds of current anxiety or depression 4.33 times that of people not subjected to unwanted sex while trafficked. Controlling for sex reduced this to 3.12 times. An odds ratio of 3.67 (95% CI 1.25-10.78) was observed when controlling for both participant sex and unwanted sex prior to trafficking (model 2) and of 3.66 (1.19-11.28) when controlling for participant sex, unwanted sex prior to trafficking and physical violence while trafficked (model 3).

Table A6.4.9 Made to have sex as a predictor of anxiety or depression

Regression analyses	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	4.33	2.03	9.21	>0.001
Model 1: adjusted for gender	3.12	1.29	7.47	0.011
Model 2: model 1 adjusted for made to have sex before being trafficked	3.67	1.25	10.78	0.018
Model 3: model 2 adjusted for physical violence while trafficked	3.66	1.19	11.28	0.024

Finally, analysis was conducted to investigate the association between unwanted sex while trafficked and current PTSD. In unadjusted analyses, participants subjected to unwanted sex while trafficked had odds of current PTSD 6.13 times that of people not subjected to unwanted sex while trafficked. Controlling for sex reduces this to 5.01 times (as both unwanted sex and PTSD were more commonly reported by women). An odds ratio of 5.52 (95% CI 1.88-16.24) was observed when controlling for both participant sex and unwanted sex prior to trafficking (model 2) and of 4.81 (1.56-14.83) when controlling for participant sex, unwanted sex prior to trafficking and physical violence while trafficked (model 3).

Table A6.4.10 Made to have sex as a predictor of PTSD

Regression analyses	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	6.13	2.88	13.03	>0.001
Model 1: adjusted for sex	5.01	2.05	12.27	>0.001

Regression analyses	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Model 2: model 1 additionally adjusted for made to have sex before being trafficked	5.52	1.88	16.24	0.002
Model 3: model 2 additionally adjusted for physical violence while trafficked	4.81	1.56	14.83	0.006

2. Physical violence while trafficked

Prevalence of physical violence while trafficked

Physical violence while trafficked was reported by 97 of the 146 participants who answered this question. Of the 4 participants who did not answer this question, 2 were male and 2 were female.

Table A6.4.11 shows that overall, 66.4% of participants had been subjected to physical violence while trafficked. **Physical violence was more commonly reported by women (78.1%) than by men (44.0%).**

Table A6.4.11 Physical violence while trafficked, by sex of participant

Physical violence while trafficked	Men (n=50)		Women (n=96)		Total (n=146)	
	n	%	n	%	n	%
Yes	22	44.0	75	78.1	97	66.4

Table A6.4.12 disaggregates the prevalence of physical violence while trafficked by both sex and type of exploitation. Small numbers of men trafficked for sexual exploitation and domestic servitude means a prevalence calculated was calculated only for men trafficked for labour exploitation: 44.2% of men trafficked for this type of exploitation (which included agriculture, construction, factory work, restaurant work, fishing, car washing, and cannabis cultivation) reported physical violence while trafficked. **The highest prevalence of physical violence while trafficked was reported among women trafficked for sexual exploitation (88.1%) and domestic servitude (79.5%).** The prevalence of physical violence while trafficked among women trafficked for labour exploitation was comparable to that of men trafficked for labour exploitation at 42.9%.

Table A6.4.12 Physical violence while trafficked, by sex of participant and type of exploitation

Physical violence while trafficked	Men (n=49)		Women (n=95)	
	n	%	n	%
Sexual exploitation	-	-	37	88.1
Domestic servitude	-	-	31	79.5
Labour exploitation	19	44.2	6	42.9

The mental health of participants who reported having been subjected to physical violence while trafficked was compared to that of people did not report having been subjected to physical violence while trafficked (Table A6.4.13). Among the mental health harms examined, prevalence was significantly higher in the exposed group for depression (p=0.029) and PTSD (0.001) only.

Probable depression was evident in 51.7% of people exposed to physical violence while trafficked compared with 30.8% of people not exposed. Probable PTSD was evident among 59.6% of people exposed to physical violence while trafficked compared with 29.6% of people not exposed.

Prevalence of physical violence while trafficked was higher among people with anxiety, suicidal thoughts in the past week, and self-harm in the past week, but not significantly so. Probable anxiety was evident among 45.7% of people exposed to physical violence while trafficked compared with 31.1% of people not exposed. Suicidal thoughts in the past week were reported by 20.2% of people exposed to physical violence while trafficked compared with 10.9% of people not exposed. Self-harm in the past week was reported by 6.3% of people exposed to physical violence while trafficked compared with 2.2% of people not exposed.

Table A6.4.13 Mental health harm, by physical violence while trafficked

All	Physically hurt while trafficked			
	Yes	No	Total	P value
	%	%	%	
Depression	51.7	30.8	45.3	0.029
Anxiety	45.7	31.1	40.9	0.104
PTSD	59.6	29.6	50.0	0.001
Suicidal thoughts in past week	20.2	10.9	17.1	0.168
Self-harm in past week	6.3	2.2	4.9	0.294

The mental health profile of those with and without exposure to physical violence while trafficked was produced separately for men and for women (Table A6.4.14). An elevated rate of mental disorders in those exposed to physical violence while trafficked was observed across most mental health harms for men and for women, but this was not statistically significant (with the exception of PTSD among women).

Table A6.4.14 Mental health harm, by physical violence while trafficked and sex

Sex	Physically hurt while trafficked			
	Yes (%)	No (%)	Total (%)	P value
Men				
Depression	30.0	18.2	23.8	0.369
Anxiety	20.0	20.8	20.5	0.946
PTSD	38.1	20.8	28.9	0.202
Suicidal thoughts in past week	5.0	7.4	6.4	0.739
Self-harm in past week	0	3.7	2.1	0.373
Women				
Depression	58.0	47.1	55.8	0.417
Anxiety	52.8	42.9	50.5	0.424
PTSD	65.8	40.0	60.2	0.037
Suicidal thoughts in past week	24.3	15.8	22.6	0.427
Self-harm in past week	8.0	0.0	6.4	0.203

Physical violence while trafficked: regression analyses

Physical violence while trafficked as a predictor for mental health harms, unadjusted and adjusted.

To provide context for the regression analyses presented in the rest of this section, we first look at the prevalence of physical violence while trafficked among people with different levels of depression and anxiety. As shown in Table A6.4.15, being subjected to physical violence while trafficked was associated with depression (p=0.029) and but not with anxiety (p=0.104). Tables A6.4.15 and A6.4.16 show no clear evidence of a trend for higher prevalence of physical violence while trafficked with higher levels of depression or anxiety, among either men or women.

Table A6.4.15 Physical violence while trafficked, by symptoms of depression and by participant sex

Physically hurt while trafficked	Categorical depression score				
Sex	None	Mild	Moderate	Moderately severe	Severe
	%	%	%	%	%
Men	45.8	37.5	60.0	33.3	100.0
Women	73.3	78.3	68.8	90.5	90.9

Table A6.4.16 Physical violence while trafficked, by symptoms of anxiety and by participant sex

Physically hurt while trafficked	Categorical anxiety score			
Sex	None	Mild	Moderate	Severe
	%	%	%	%
Men	46.7	45.0	50.0	40.0
Women	76.9	70.0	80.0	81.8

As shown in Table A6.4.17, in unadjusted analyses, participants subjected to physical violence while trafficked had odds of current depression 2.41 times that of people not subjected to physical violence while trafficked. Statistical significance was lost when controlling sex (OR 1.68, 95% CI 0.71-3.95, model 1) and when additionally controlling for unwanted sex prior to or during trafficking.

Table A6.4.17 Physical violence while trafficked as a predictor of depression

Physically hurt while trafficked	Physically hurt while trafficked			
Sex	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	2.41	1.09	5.34	0.031
Model 1: adjusted for sex	1.68	0.71	3.95	0.237
Model 2: model 1 additionally adjusted for made to have sex prior to or during trafficking.	2.25	0.62	8.23	0.220

Physical violence while trafficked was not associated with either current anxiety or with current anxiety or depression in unadjusted analyses (Table A6.4.18); additional analyses to adjust estimates for sex and unwanted sex prior to or during trafficking were therefore not conducted.

Table A6.4.18 Physical violence while trafficked as a predictor of anxiety

Physically hurt while trafficked	Physically hurt while trafficked			
Sex	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	1.86	0.88	3.95	0.106

Table A6.4.19 Physical violence while trafficked as a predictor of anxiety or depression

Physically hurt while trafficked	Physically hurt while trafficked			
Sex	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	1.73	0.83	3.62	0.147

As shown in Table A6.4.20, in unadjusted analyses, participants subjected to physical violence while trafficked had odds of current PTSD 3.51 times that of people not subjected to physical violence while trafficked; this reduced to 2.67 times when controlling for sex. Statistical significance was lost when additionally controlling for unwanted sex prior to or during trafficking (OR 1.52, 95% CI 0.48-4.79)

Table A6.4.20 Physical violence while trafficked as a predictor of PTSD

Physically hurt while trafficked Sex	Physically hurt while trafficked			
	Odds ratio (OR)	Lower 95% CI	Upper 95% CI	P value
Unadjusted	3.51	1.63	7.57	0.001
Model 1: adjusted for sex	2.67	1.19	5.97	0.017
Model 2: model 1 additionally adjusted for made to have sex prior to or during trafficking.	1.52	0.48	4.79	0.476

Conclusion

This module suggests that findings from the analysis of the mental health harms of violence using mental health survey data are broadly generalizable to victims of trafficking. The **module demonstrates that victims of trafficking people report a high prevalence of physical violence and, among women, unwanted sex**. As has also been shown using mental health survey data, experience of unwanted sex and, although evidence was more mixed, **physical violence is associated with mental health harm.** Comparing the findings from these two datasets, our assessment is that – assuming the higher prevalence of unwanted sex and physical violence among trafficked people is recognised - findings from the analysis of mental health survey data can be applied to analyses relating to victims of trafficking.

7 Lost economic output

There are two parts to Appendix 7. The first provides an account of the profits of traffickers. The second provides an account as to why trafficking is not included in the GDP.

7.1 Exploring the impact of criminal proceeds generated from trafficking of human beings

Introduction

As the European Commission notes, trafficking in human beings "brings high profits to the perpetrators, who abuse people's vulnerabilities and exploit the demand for the services provided by the victims. It results in irreversible harm to its victims, our societies and economies." "The complex interplay of supply and demand amongst perpetrators, abusers, profit-takers, exploiters and users creates a long chain of actors, whether they are knowingly or unknowingly involved."[256] This section addresses the 'profits' from trafficking in human beings. These are not 'costs' to society in the sense addressed in the rest of this Study. Nevertheless, considering 'profits' is relevant to wider thinking about the monetary dimension of trafficking in human beings. Hence this aspect is included in the Report as an appendix.

At the outset of this discussion it is useful to address the term 'profit'. Whilst many commentators use this expression when analyzing cash flows (see ILO, 2014; Centre for the Study of Democracy, 2019; Belser, 2005; Europol, 2015)[257],

(256) European Commission (2018b) *Second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_com-2018-777-report_en.pdf

(257) International Labour Organization (2014) *Profits and Poverty: The Economics of Forced Labour* https://www.ilo.org/global/topics/forced-labour/publications/profits-of-forced-labour-2014/lang--en/index.htm
Centre for the Study of Democracy (2019) *Financing Organised Crime activities- Focus on human trafficking*: A. Rusev, N. Stoynova, F. Terenghi, A. Di Nicola, J. Janssens, M. Faion, A. Kojouharov, M. Sabev, S. Raets. https://biblio.ugent.be/publication/8601388/file/8601393.pdf
Belser, P. (2005) *ILO, Forced Labour and Human trafficking: Estimating the profits* https://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1016&context=forcedlabor;
Europol (2015) *The trafficking in human beings Financial Business Model, Assessing the current State of Knowledge.* https://ec.europa.eu/anti-trafficking/eu-policy/thb-financial-business-model_en)

the word remains problematic for two reasons. First, there is little discussion about the cost allied to the actual crime of trafficking in human beings offences (i.e. transport, security) against the use of broader or other concepts and as such an overall yield is difficult to establish. Secondly, whilst trafficking in human beings offenders are said to generate significant financial benefit, the overall criminal process creates a considerable loss to wider sections of society. As such this document will use other terms unless specifically identified in the source document.

While the measurement of trafficking in human beings is challenging, there is a view in law enforcement agencies that organised crime is increasing (Europol, 2016)[258]. The reasons for this are beyond the remit of this note; but may include changes in securitization and global integration of economies that enable transnational criminal networks to grow.

The UNODC (2011, 2014)[259] offers estimates of the scale of transnational organized crime. During 2009 the proceeds of crime associated with transnational organized crime were estimated as $870 USD billion per annum, nearly 7% of all world export merchandise (UNODC, 2011)[260]. Whilst drug trafficking is thought to generate the most criminal revenue, at over $320 billion USD per annum (UNODC, 2014), "Human Trafficking is one of the fastest growing forms of international crime (CNN Business, 2019; FATF-APG, 2018:3)[261]. It is described as the second most lucrative business for Organised Crime Groups (OCGs).

Criminal proceeds associated with trafficking in human beings

The financial aspects of trafficking in human beings have been documented. Unlike drugs, which can be sold once by the dealer to the consumer, human beings can be 'sold' on multiple occasions allowing victims to be exploited in a variety of ways (Europol, 2016)[262].

Due to methodological challenges, it is unsurprising that different studies attribute different costs to trafficking in human beings. Europol (2015:12)[263], in the 'trafficking in human beings Financial Business Model', state their analysis is based on readily available open sources. They estimate the following proceeds involved in trafficking in human beings across Europe:

- The sale of a 'sex worker' in Southern Europe: EUR 36-71 000;
- The average selling price of a child victim in Western Europe: EUR 23 000;
- The average fee for a 'sex worker' in Western Europe: EUR 180-250;
- The average fee for a 'sex worker' in Eastern Europe: EUR 23;
- The average annual income for 'Intermediary': EUR 62 000;
- The average annual income for trafficker: EUR 70 000.

As the European Commission`s Second progress report[264] noted that **"trafficking is crime fuelled by the profits it brings to perpetrators and by the demand for services exacted by the victims."** It also highlighted based on

(258) Europol (2016) *Situation Report: Trafficking in human beings in the EU* (doc.ref. 765175), The Hague.

(259) United Nations Office on Drugs and Crime (UNODC) (2014) *Global Report on Trafficking in Persons* https://www.unodc.org/unodc/en/data-and-analysis/glotip_2014.html
United Nations Office on Drugs and Crime (UNODC) (2011) 'Estimating illicit financial flows resulting from drug trafficking and other transnational organised crimes: Research report' (Vienna, October 2011). www.unodc.org/documents/data-and-analysis/Studies/Illicit_financial_flows_2011_web.pdf.

(260) United Nations Office on Drugs and Crime (UNODC) (2011) 'Estimating illicit financial flows resulting from drug trafficking and other transnational organised crimes: Research report' (Vienna, October 2011). www.unodc.org/documents/data-and-analysis/Studies/Illicit_financial_flows_2011_web.pdf.

(261) CNN Business (2019) *Human trafficking is a global epidemic. And we can all help fight it.* https://edition.cnn.com/2019/01/14/perspectives/human-trafficking-fight/index.html
Financial Action Task Force (FATF) (2018) *Financial Flows from Human Trafficking*: https://www.fatf-gafi.org/media/fatf/content/images/Human-Trafficking-2018.pdf

(262) Europol (2016) *Situation Report: Trafficking in human beings in the EU* (doc.ref. 765175), The Hague.

(263) Europol (2015) *The trafficking in human beings Financial Business Model, Assessing the current State of Knowledge*. https://ec.europa.eu/anti-trafficking/eu-policy/thb-financial-business-model_en

(264) European Commission (2018c) *Accompanying document to the second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims*. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_swd-2018-473-commission-staff-working-document_en.pdf

Europol's operational intelligence[265] in some EU Member States, where prostitution is legal, suspects were able to exploit children alongside adults victims in legal businesses such as brothels, red light districts, sex clubs, often with the support of the business managers, since prostitution of minors can be very profitable, as 'clients' are generally prone to pay more to have sex with a child.

The Second progress report [266]also highlights, based on Europol`s analysis that " the use of legal businesses to cover the exploitative activities is quite common for traffickers. Suspects often buy, rent and make use of legal companies to cover their illicit activities and launder the profits. Among the cases reported, restaurants, hotels, cocktail bars, dance clubs, shops, car retailers, car washes, etc., were used to organise sexual encounters and for money laundering purposes. Some of the reported groups systematically used complicit employment companies to obtain legitimate work contracts for their victims. In countries where prostitution is legal, suspects were able to exploit minors alongside adults in window prostitution, sex studios, nightclubs, etc., often with the support of the business managers, as prostitution of minors can be very profitable for human traffickers, as clients are generally prone to pay more to have sex with a child." Frontex Risk Analysis 2018[267] highlights 'trafficking in human beings is currently one of the most profitable forms of organised crime, generating billions of euros for traffickers. Europe, which comprises some of the wealthiest nations in the world, has long been an important market for the exploitation of victims, particularly through sexual exploitation, forced labour, exploitation of criminal activities, begging and illegal adoption. The high levels of supplying origin countries, coupled with the demand for cheap labour and sexual services in the destination countries, are among the most common root causes of human trafficking'.[268]

Europol informs[269] that **organised crime groups involved in trafficking in human beings have successfully combined illicit practices with strong business and technical skills**. This makes them highly profitable, low risk and resilient to law enforcement actions.[270]

The implications of criminal proceeds associated with trafficking in human beings

The illicit revenue from trafficking in human beings is associated with various forms of harm.

Organised crime groups (OCG) in trafficking in human beings can lead to a growth in linked forms of criminality and erosion of good governance. The more successful an OCG is in evading detection the more likely they are to spread. Social network analysis shows a small number of people are responsible for a large proportion of serious crime. As participants become more criminally skilled, they form more illicit contacts and potentially face increased hostility from rivals. Individuals concentrate in social networks meeting like-minded people through this routine activity (Bichler, 2019)[271]. They are able to access information not available to other offenders.

Europol notes that, "Organised Crime Groups involved in trafficking in human beings have successfully combined illicit practices with strong business and technical skills. This makes them highly profitable, low risk and resilient to law enforcement actions" (Europol, 2015: 4). Further, the Center for the Study of Democracy (CSD, 2019)[272] drawing upon research from Belgium, Bulgaria, Italy, France, Germany, The Netherlands, Romania, Spain, and the UK, suggest that "Reinvestment of criminal proceeds is reported as the main form for the financing of the criminal

(265) Europol (2018) *Situation Report: Criminal Networks Involved In The Trafficking And Exploitation Of Underage Victims In The European Union* (doc.ref. 1001370), The Hague https://www.europol.europa.eu/publications-documents/criminal-networks-involved-in-trafficking-and-exploitation-of-underage-victims-in-eu

(266) European Commission (2018c) *Accompanying document to the second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_swd-2018-473-commission-staff-working-document_en.pdf

(267) European Border and Coastguard Agency (FRONTEX) (2018) *Risk Analysis for 2018.* https://frontex.europa.eu/assets/Publications/Risk_Analysis/Risk_Analysis/Risk_Analysis_for_2018.pdf

(268) European Commission (2018c) *Accompanying document to the second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_swd-2018-473-commission-staff-working-document_en.pdf

(269) Europol (2015) *The THB financial business model.* (doc.ref. 766920), The Hague. https://www.europol.europa.eu/publications-documents/trafficking-in-human-beings-financial-business-model

(270) European Commission (2018c) *Accompanying document to the second report on the progress made in the fight against trafficking in human beings as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims.* https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20181204_swd-2018-473-commission-staff-working-document_en.pdf

(271) Bichler, G. (2019) *Understanding Criminal Networks: A research guide.* Oakland: University of California Press.

(272) Centre for the Study of Democracy (2019) *Financing Organised Crime activities - Focus on human trafficking*: A. Rusev, N. Stoynova, F. Terenghi, A. Di Nicola, J. Janssens, M. Faion, A. Kojouharov, M. Sabev, S. Raets. https://biblio.ugent.be/publication/8601388/file/8601393.pdf

operations with shared investment schemes widely spread for all supply chain levels and across different markets." (CSD, 2019:8)[273]. Trafficking in human beings generates wider harm to society in four ways:

Firstly, if traffickers in human beings invest in identifying trafficking routes there is every chance that they will use the same routes to traffic drugs or other commodities. Studies show organised crime offenders are generally motivated by financial gain with few offenders specialising (Francis et al. 2013). Europol (2016)[274] points out that a large number of the OCGs involved in trafficking in human beings are polycriminal, engaging in a variety of other offences, including drug production and trafficking, organised property crime, counterfeiting, illegal possession and trafficking of firearms, facilitation of illegal immigration and fraud. The European Commission (2017a)[275] have called for more research between trafficking in human beings and other crimes, including: terrorism, corruption, migrant smuggling, drug trafficking, cybercrime, online sexual exploitation, child pornography, financial crime and fraud.

Second, the crime committed by trafficking in human beings offenders is supported by a wider illicit infrastructure, which creates secondary crime to facilitate the primary offences. Such offences include corruption; forgery (to obtain a variety of identification documents to facilitate movement of victims); violence (to defend their territory and financial return); rape (to intimidate victims); fraud (to dupe victims and a diversity of other people their business affects); drug offences (to maintain control of victims); and theft of vehicles and other property (to facilitate transportation).

Third, growth in profits from trafficking in human beings can lead to spiraling growth of these activities. For example, offenders can force victims of trafficking in human beings to engage in a variety of other crimes including begging, various offences of fraud, robbery, burglary, shoplifting and pickpocketing (Europol, 2015: 10)[276].

Fourth, this criminality has wider implications for society and governance. The negative impact of serious crime is seen at a community level and can include: the generation of inappropriate role models to young people (Hales & Hobbs, 2010); discarded equipment associated with drug and sexual activity; and public disorder in the form of beatings and shootings (Crocker et al., 2017)[277]. Organised Crime Group behaviour is said to create a 'pervasive atmosphere of fear and menace', which deters residents from co-operating with the Criminal Justice System (Crocker et al., 2017:29)[278]. These factors impinge on community confidence, damage community reputation, and make regeneration more difficult (Lupton et al. 2002; Kirby et al. 2017)[279]. The European Parliamentary Research Service (European Parliament, 2016)[280] found that there was a mutually reinforcing relationship between organized crime and corruption. It suggested that the corruption of officials was central to the success of organized crime. Further, "Corruption undermines the rule of law, which in turn provides more opportunities for organized criminal to expand their control over the legal economy and politics or even to take over governance tasks in regions and communities" (European Parliament, 2016: 2)[281]. Whilst noting that the cost of corruption is difficult to measure, they estimate it generates an economic loss to Gross Domestic Product of between EUR 218 - 282 billion per annum. Further, it appears there are wider social and political costs surrounding organized crime and corruption.

(273) Centre for the Study of Democracy (2019) *Financing Organised Crime activities - Focus on human trafficking*: A. Rusev, N. Stoynova, F. Terenghi, A. Di Nicola, J. Janssens, M. Faion, A. Kojouharov, M. Sabev, S. Raets. https://biblio.ugent.be/publication/8601388/file/8601393.pdf

(274) Europol (2016) *Situation Report: Trafficking in human beings in the EU* (doc.ref. 765175), The Hague.

(275) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf

(276) Europol (2015) *The trafficking in human beings Financial Business Model, Assessing the current State of Knowledge*. https://ec.europa.eu/anti-trafficking/eu-policy/thb-financial-business-model_en

(277) Crocker, R., Garner, S., Webb, S. & Skidmore, M. (2017) *The impact of organized crime in local communities*. http://www.police-foundation.org.uk/2017/wp-content/uploads/2017/10/oc_in_local_communities_final.pdf

(278) Crocker, R., Garner, S., Webb, S. & Skidmore, M. (2017) *The impact of organized crime in local communities*.http://www.police-foundation.org.uk/2017/wp-content/uploads/2017/10/oc_in_local_communities_final.pdf

(279) Lupton, R., Wilson A., May, T., Warburton, H., Turnball, P. (2002) *A rock and hard place: drug markets in deprived neighbourhoods. Home Office research study 240*. London: Home Office;
Kirby, S., McManus, M., & Bolton, L. (2017) 'Examining the demographic profile and attitudes of citizens in areas where Organised Crime proliferates.' *Trends in Organised Crime* 21(2), 172-188.

(280) European Parliament (2016) *Organised crime and corruption. Cost of Non-Europe Report*. http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_IDA(2016)558779

(281) European Parliament (2016) *Organised crime and corruption. Cost of Non-Europe Report*. http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_IDA(2016)558779

For example, where corruption flourishes there exist more unequal societies, it can lead to reduced voter turnout, lower trust in institutions and weaker governance.

In summary, the continued existence of this crime, can seriously affect the administration of law, which plays a central role in all democracies. The enforcement of legislation should operate on behalf of the public and in its general interest.

In its 2017 Communication[282], the European Commission identified "disrupting the business model and untangling the trafficking chain " as a key EU priority, noting that "Profits on lawful and illicit markets and demand for the services and goods provided by victims of trafficking in human beings remain high wherever a culture of impunity for both perpetrators and users prevails. The analysis in the Commission's 'Users' Report, which assesses the impact of existing relevant national legislation, reveals a diverse legal landscape within the EU. National law fails to effectively contribute to discourage demand for services which are the objects of exploitation of trafficking in human beings." Therefore one of the key action is to further encourage those EU Member States, to the extent they have not done so, to criminalise those knowingly using services exacted from victims of trafficking."

In addition, in its 2017 Communication[283], the European Commission encourages following the money throughout the trafficking chain to turning trafficking in human beings into a 'high-risk, low-return' crime. Intensifying investigations and prosecutions and facilitating proactive financial and intelligence-led investigations, asset recovery, freezing and confiscation of profits, are essential. Moreover, in line with the spirit of the Anti-trafficking Directive, the European Commission continues to promote the use of available instruments and to consider the use of seized and confiscated instrumentalities and the proceeds from the trafficking offences to support victims' assistance and protection, including compensation of victims.

7.2 GDP and illegal activities

National accounts are statistics that provide an overview of the structure and evolution of the economies of countries. They are the source of various other economic indicators, of which the Gross Domestic Product (GDP) is one of the most well-known. GDP provides a measure of the monetary value of the goods and services that a country produces in a specific year. The issue of GDP is relevant to the Study as some criminal activities have been included within GDP calculations and costs for lost economic output in the Study are derived using GDP per capita. Although trafficking is a loss to the legal economy, it is not a loss to the illegal and criminal economy. As such, the Study examined the reasons for inclusion and exclusion of different kinds of illegal activities to investigate whether the economic output of a person while they are in trafficking should be included in the GDP. As noted in section 7.1 of the report, it was found that the economic output of individuals while they are in trafficking should not be included in GDP.

Guidelines for including illegal activities in national accounts

Even though the inclusion of some illegal activities such as drug production and prostitution in GDP calculations has gained attention over the past couple of years, often as a result of media attention, this requirement is not a recent change (van de Ven, 2015, Vanoli, 2017; European Commission, 2014b; Eurostat, 2018)[284]. National accounts

(282) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf

(283) European Commission (2017a) *Reporting on the follow up to the EU strategy towards the eradication of trafficking in human beings and identifying further concrete actions* (Communication from the Commission to the European Parliament and the Council). https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/organized-crime-and-human-trafficking/trafficking-in-human-beings/docs/20171204_communication_reporting_on_follow-up_to_the_eu_strategy_towards_the_eradication_of_trafficking_in_human_beings.pdf

(284) van de Ven, P. (2015) 'New standards for compiling national accounts: what's the impact on GDP and other macro-economic indicators.' *Statistics Brief* Paris: OECD
Vanoli, A. (2017) 'The Future of the SNA in a Broad Information System Perspective.' *Review of Income and Wealth*, *63*, pp.S238-S265
European Commission (2014b) *MEMO: Questions and Answers: European System of Accounts 2010*. Brussels: European Commission
Eurostat (2018) *Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments 2018 edition*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec

are produced in line with international standards and the inclusion of certain illegal activities in national accounts was already stipulated by the United Nations System of National Accounts 1993 (SNA 93)[285]. This framework was jointly published by the United Nations, the Commission of the European Communities, the International Monetary Fund, the Organisation for Economic Co-operation and Development, and the World Bank.[286] The inclusion of illegal activities in national accounts was also stipulated by the SNA 93's European counterpart, the European System of Accounts 1995 (ESA 95)[287]. The ESA 95 is consistent with the SNA 93 and is enforced for EU Member States through regulation.

Section 6.30 of SNA 93 states the following:

'There are two kinds of illegal production:

(a) The production of goods or services whose sale, distribution or possession is forbidden by law;

(b) Production activities which are usually legal but which become illegal when carried out by unauthorized producers; e.g., unlicensed medical practitioners.'

Section 6.31. goes on to explain that 'Both kinds of production are included within the production boundary of the System provided they are genuine production processes whose outputs consist of goods or services for which there is an effective market demand.' Section 3.54 of the 1993 SNA specified that '[i]llegal actions that fit the characteristics of transactions – notably the characteristic that there is mutual agreement between the parties – are treated the same way as legal actions.' The same idea is outlined in section 1.42 of ESA 95 which outlines that '[i]llegal economic actions are transactions only when all units involved enter the actions voluntarily'. As such, the inclusion of illegal transactions which involve the consent of all involved units was stipulated for inclusion in national accounts already in the 1990s.

Extensive changes in economies over time have resulted in the SNA 93 being updated to become the SNA 2008. The European counterpart, ESA 95, was subsequently revised to become ESA 2010. The standards in relation to inclusion of illegal activities in national accounts in the updated versions of the frameworks were very similar to those from the 1990s, using much of the same language.

Reasons for inclusion

As outlined in the SNA 2008, reasons for including illegal economic activities in national accounts (and hence GDP) relate to the need for exhaustive and accurate national accounts, which aim to consider all productive activities. As such, national accounts need to include elements of the non-observed economy, including those that are underground, illegal, informal, part of household production for own final use, or missing due to deficiencies in the data collection system (OECD, 2002)[288]. For example, if GDP figures do not include the money consumers spend on illegal activities such as drugs, total consumer spending would be underestimated. The manner in which GDP is calculated means that all monetary transactions need to be included to avoid errors in the overall national account. Incomes derived from the illegal production of drugs will often be spent on goods and services that are legal; not including them would result in inconsistencies and an underestimation of household disposable income.

Other reasons for including illegal economic activities relate to comparability of GDP figures (van de Ven, 2015; OECD, 2002; Eurostat, 2018)[289]. The aim of GDP is for it to provide insight into economic activity which is comparable across time and across countries. GDP levels would not be comparable across countries if they included

(285) Previous versions of the SNA from 1953 and 1968 did not address how countries should address illegal economic activities in their national accounts.

(286) CEC, IMF, OECD, UN and World Bank (1993) *System of National Accounts 1993*. Brussels/Luxembourg, New York, Paris, Washington: Commission of the European Communities-Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank.

(287) Eurostat (1995*). European System of Accounts 1995*. Luxembourg: Office for Official Publications of the European Communities.

(288) Organisation for Economic Co-operation and Development (OECD) (2002) *Measuring the Non-Observed Economy: A Handbook*. OECD, Paris: France. http://www.oecd.org/sdd/na/measuringthenon-observedeconomy-ahandbook.htm

(289) van de Ven, P. (2015). *New standards for compiling national accounts: what's the impact on GDP and other macro-economic indicators*. Statistics Brief. Paris: OECD;
Organisation for Economic Co-operation and Development (OECD) (2002) *Measuring the Non-Observed Economy: A Handbook*. OECD, Paris: France. http://www.oecd.org/sdd/na/measuringthenon-observedeconomy-ahandbook.htm
Eurostat (2018) *Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments 2018 edition*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec

activities based on national legal definitions, because some activities are illegal in some countries yet legal in others. Similarly, comparability of GDP levels across years requires GDP calculations to include relevant economic activity regardless of whether this is illegal or not, as changes in legislation could otherwise result in sudden changes in a country's GDP levels which would not be reflective of actual economic activity.

A main criticism of including illegal activities in GDP is that these do not benefit society. In response to this however, it is noted that the purpose of GDP is to measure economic activity, rather than the economic well-being of a country. Although GDP is often used as a measure of the economic well-being, this is not what the indicator was initially designed for (van de Ven, 2015; 2019)[290]. GDP measurement should therefore not involve the making of moral judgements and should include all productive activity, not just that does not only need which is beneficial to society. GDP has received criticism for not being a measure of economic well-being for other reasons as well. For example, GDP does not take into consideration the environmental damage caused by the economic activity included in GDP measurements, and GDP per capita figures hide potential inequality among country populations (Aguado et al., 2015; van de Ven, 2019)[291]. This has resulted in the demand for indicators that more accurately reflect economic well-being that is sustainable in the long-term (ibid).

Changes in legislation

Despite the requirements of including illegal economic activities having been in place since the 1990s, countries vary in whether they have included these, and indeed which activities have been included. Reasons for this include methodological difficulties involved in measuring illegal activity and a lack of guidelines and minimum standards outlining how measurement should be conducted.

In Europe, work attempting to address this has been ongoing since the ESA 95. Accurate national accounts are crucial for EU Member States, as total Member State contributions to the EU budget draw upon Gross National Income (GNI), an economic indicator very close to GDP (van de Ven, 2015)[292]. A Task Force on the GNP Committee on Illegal Activities was set up in 2001, who in their final report concluded that the three activities of greatest importance to the GDP/GNI of Member States would be trafficking of drugs, prostitution and smuggling of alcohol and tobacco (Eurostat, 2012)[293]. As a result, Member States were encouraged to develop research and pilot the inclusion of these activities in national accounts. The results of these actions by Member States were discussed and considered by the GNI Committee over multiple years so as to agree minimum standards and areas of improvement (Abramsky and Drew, 2014; Eurostat, 2018)[294]. To support consistency in measuring illegal activities across Member States, methodological guidelines were eventually agreed between the European Commission and Member States for the measuring of trafficking of drugs, prostitution and smuggling of alcohol and tobacco. Member States were required to include these illegal activities in their national accounts by September 2014 (European Commission, 2014b)[295].

(290) van de Ven, P. (2015). *New standards for compiling national accounts: what's the impact on GDP and other macro-economic indicators*. Statistics Brief. Paris: OECD.
van de Ven, P. (2019) 'Measuring economic well-being and sustainability: a practical agenda for the present and the future.' *Eurostat Review on National Accounts and Macroeconomic Indicators 1/2019*. Luxembourg: Publications Office of the European Union, pp. 7-42

(291) Aguado, R., Alcaniz, L. and Retolaza, J.L. (2015) *'A new role for the firm incorporating sustainability and human dignity. Conceptualization and measurement'. Human Systems Management*, *34*(1), pp.43-56.
van de Ven, P. (2019) 'Measuring economic well-being and sustainability: a practical agenda for the present and the future.' *Eurostat Review on National Accounts and Macroeconomic Indicators 1/2019*. Luxembourg: Publications Office of the European Union, pp. 7-42

(292) van de Ven, P. (2015) 'New standards for compiling national accounts: what's the impact on GDP and other macro-economic indicators.' *Statistics Brief* Paris: OECD

(293) Eurostat (2012). *Illegal Activities in National Accounts – 24th GNI Committee, July 2012* – Reference 230. Available on CIRCA.

(294) Abramsky, J. and Drew, S. (2014). *Changes to National Accounts: Inclusion of illegal drugs and prostitution in the UK National Accounts*. London, UK: Office for National Statistics;
Eurostat (2018) *Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments 2018 edition*. Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec

(295) European Commission (2014b) *MEMO: Questions and Answers: European System of Accounts 2010*. Brussels: European Commission.

GDP and trafficking in human beings

The requirement to including illegal economic activities within GDP calculations raises the question of where trafficking in human beings is situated in this. In 2018, Eurostat published a handbook that details which statistics on illegal economic activities should be included within national accounts, how this data should be compiled, and which data sources and statistical techniques could be used to record illegal economic activities. The handbook includes guidance on including migrant smuggling in national accounts; and includes a discussion of the differences between migrant smuggling and "human trafficking", specifically around the concept of consent (Eurostat, 2018)[296]. As outlined above, the SNA 2008 and the ESA 2010 (and their earlier counterparts) both require that units involved in the economic transaction have entered by mutual agreement for this transaction to be included in national accounts. By its very definition, as provided in the Palermo Protocol[297] and in the Anti-trafficking Directive[298], trafficking in human beings cannot involve mutual agreement, and so should not be included in GDP calculations. Migrant smuggling however, involves the consent of the person being smuggled and should therefore be included in GDP calculations.

Furthermore, the handbook clarifies that '[h]uman trafficking and forced prostitution is not estimated, even if two parties (excluding the trafficking individual or forced prostitute) enter into a transaction under conditions of mutual agreement, because a human does not fit the definition of a good or a capital item, so the exchange of currency in these circumstances is a household-to-household current transfer, rather than a transaction in goods. As this transfer has no impact on the production account (and thereby GDP) and no material consequences for the sector accounts, there is no need for an estimate' (Eurostat 2018, p. 18)[299].

The EU anti-trafficking directive (Directive 2011/36/EU) stipulates that the consent of the victim of trafficking in human beings is irrelevant, when the specific means of trafficking have been used. Trafficking for the purpose of sexual exploitation is the most widely reported form of exploitation in the EU and the overwhelming majority of its victims are women and girls. Per se, trafficking in human beings should be excluded from GDP calculations. It is highly likely that economic activity by victims of trafficking is still included where it is not known that someone is a victim of trafficking. In such instances, the handbook stipulates that in instances in which human trafficking is identified, these economic activities are to be removed from estimates.

(296) Eurostat (2018) *Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments 2018 edition.* Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec

(297) (a) "Trafficking in persons" shall mean the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs;
(b) The consent of a victim of trafficking in persons to the intended exploitation set forth in subparagraph (a) of this article shall be irrelevant where any of the means set forth in subparagraph (a) have been used.

(298) See also Article 2(1)(4) and (5) of *Directive 2011/36/EU of the European Parliament and the Council of 5 April 2011 on Preventing and Combating Trafficking in Human Beings and Protecting its Victims and replacing council Framework Decision 2002/629/JHA* https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0001:0011:EN:PDF

(299) Eurostat (2018) *Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments 2018 edition.* Luxembourg: Publications Office of the European Union. https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec

8 Measuring intangibles: quality of life

Approaches to measuring lost quality of life

The cost of trafficking includes not only 'tangible' costs of service use and lost economic output, but also the more 'intangible' costs of harm to the quality of life. People place a value on these intangible harms; and the public is willing to pay to avoid them. Methodologies for cost-benefit analysis routinely include the value the public places on harm to the quality of life since to exclude this would distort the priorities for public expenditure. For comparability during decision-making on public expenditure, it is important to include a component in the costing for the intangible harms associated with trafficking in human beings.

The EU approach to measuring these important intangibles, specified in a document on impact assessment, is followed here (European Commission 2009; European Commission 2015a)[300]. We adopt their methodology and valuation of key items. This approach was used in the EU review of the methodology of measuring the cost of gender-based violence (European Institute for Gender Equality 2014)[301].

The measurement of these intangible harms includes two elements: the collection and evaluation of objective scientific evidence of harm; and, the public's subjective prioritisation of which harms are worse. There are several approaches, including 'Willingness to Pay' (WTP) (examples of use in crime, and transport), the loss of quality adjusted life years and disability adjusted life years (used in health). Violence and coercion are addressed in both crime-led and health-led approaches to the cost of lost quality of life. The violence and coercion found in trafficking in human beings has historically been addressed in crime-led approaches; however, the expansive development of the health-led field is leading towards convergence. There is ongoing development of the evidence base using reviews of the literature and original analysis of data; where data are missing, expert judgement has been used to fill the gaps (Brand and Price 2000; Walby 2004; Dubourg and Hamed 2005; Dolan 2005; Reed et al 2018; Heeks et al 2018; Shiroiwa et al. 2013)[302].

The rapidly developing GBD approach appears to be becoming dominant in the health field. We offer an application of its methodology to trafficking in human beings. The concept of QALY refers to the loss of quality adjusted life years. The concept of DALY includes not only these years of living with the health state, but also the years of life lost by the shortening of time a person lives.

The 'Global Burden of Diseases, Injuries and Risk Factors Study' (GBD) (Murray et al 2018; Salomon et al. 2012; GBD 2017, 2019)[303]. The GBD collects and analyses data on the extent and patterns in the prevalence, incidence and duration of disease and injury world-wide. It has become widely used in the health field to assist decision-making

(300) European Commission (2009) Annexes to Impact Assessment Guidelines https://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/iag_2009_annex_en.pdf;
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Walby, S. (2004) *The Cost of Domestic Violence* London, Department of Trade and Industry, Women and Equality Unit, http://www.devon.gov.uk/de/text/cost_of_dv_report_sept04.pdf
Dubourg, R., and Hamed, J. (2005). *The Economic and Social Costs of Crime against Individuals and Households 2003/04*. Online Report 30/05. London: Home Office.;
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Reed, S., Roe, S., Grimshaw, S. and Oliver, R. (2018) *The Economic and Social Costs of Modern Slavery*. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729836/economic-and-social-costs-of-modern-slavery-horr100.pdf;
Heeks, M., Reed, S., Tafsiri, M., and Prince, S. (2018) *The Economic and Social Costs of Crime*. 2nd edn. Research Report 99. London: Home Office. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf;
Shiroiwa, T., Igarashi, A., Fukuda, T. and Ikeda, S. (2013) 'Willingness To Pay (WTP) for a Quality-adujusted Life Year (QALY) and health states: More money for severer health states?' *Cost Effectiveness and Resource Allocation*, 11: 22

(303) Murray, C. J. L. et al. (2018) 'Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017', *Lancet*, 392: 1923-94.
Salomon, J., Vos, T., Hogan, D .R. et al. (2012) 'Supplementary appendix: Common values in assessing health outcomes from disease and injury: disability weights measurement study for the Global Burden of Disease Study 2010." *Lancet*, 380: 2129–2143.

over medical interventions. It is supported by the World Bank, World Health Organisation, and Gates Foundation, which has engaged the work of more than a thousand researchers world-wide.

In the 'global burden of disease' approach, there is a distinction between causes (risk factors) and outcomes (health states, or sequelae). Risk factors increase the likelihood of an 'outcome' that is a disease or injury; a person may be 'exposed' to a risk factor. Health states, or sequelae, are the outcomes of disease: the same health state may be the outcome of more than one disease; any one disease may generate more than one health state. The data is organised hierarchically, with five levels. There are three kinds of diseases and injuries: communicable, non-communicable, and injuries.

The *GBD 2017* (GBD 2018, 2019)[304] includes injuries, alongside communicable and non-communicable diseases, as one of three high-level categories of 'causes'. This means inter-personal violence is treated as a cause of health outcomes. The GBD thus extends its causal framework beyond the diseases that have traditionally been the focus of health. It is this extension that facilitates its use here in the cost of trafficking in human beings.

The GBD amasses the scholarship and data that enables the estimation of the DALYs and their duration for each health state. This includes: review of scientific literature, collection of data, and modelling. This is a dynamic and developing school, which integrates new categories (for risk and outcome) and new data (including more countries) every year.

WTP and QALY approaches to sexual violence

T**he lost quality of life associated with sexual violence (sex and sexual contact without consent) may receive a different valuation under the approach based on health-led QALYs and the approach based on willingness to pay.** It is found by Shirowa et al (2013)[305] that people are more 'willing to pay' to avoid severer health states than would be estimated by QALYs. **In the case of sexual violence, the value placed on this by a 'willingness to pay' to avoid that is greater than the value placed on the damage to health.** There are issues on which people place a value that are not fully encompassed by health. **Rape is a violation that has a value in its own right whether or not it harms health a lot or a little or not at all. In this Study, we stay within the QALY approach to measuring the lost quality of life associated with sexual violence. There is no available quantified measure of the public's willingness to pay to avoid rape and other forms of sexual violence.** We recommend that one is developed.

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(304) Global Burden of Disease (GBD) (2019) 'Disease, Injuries and Risk Factors in Child and Adolescent Health 1990 – 2017'. *JAMA Pediatr.* 2019; 173(6):e190337. Doi: 10.1001/jamapediatrics.2019.0337

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