

# “The Darkness”: Deprivation of sunlight as a form of torture

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## Key points of interest

- Deprivation of sunlight should be considered independently as a method of torture, given its prevalence in detention settings and the harms it can cause.
- Under-documentation presents a challenge in defining deprivation of sunlight as a form of torture, particularly in terms of the purposive element and proving the severity of suffering.
- Medical research suggests that adequate exposure to sunlight is critical to physical and mental health and is necessary to maintain sense of self within a person’s surroundings.

## Abstract

*Introduction.* Deprivation of sunlight (DoS) should be considered independently as a method of torture. We review the definition and the spectrum of DoS, and the harms it causes that may rise to the level of torture.

*Method.* We review relevant international case law, and highlight how the harms of DoS have historically not been fully considered in torture cases, possibly legitimizing its use.

*Conclusion.* A standardized definition of deprivation of sunlight be developed and included in the Torturing Environment Scale, we call for an explicit international prohibition of DoS.

*Keywords:* Sunlight deprivation, torture, no-touch torture

## Introduction

Sunshine is embedded in cultural references as synonymous with happiness and life. Without sunlight we wither and die. Depriving a person of sunlight has a host of physical and psychological deleterious consequences. Consequently, deprivation of sunlight (DoS) is employed in torturous environments to induce misery and suffering. DoS features strongly in many torture survivors’ stories of suffering, for example, in the CIA run “Darkness” Prison in Afghanistan (NYT, 2016). Yet it remains a topic that is rarely consid-

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ered on its own in the psychological and legal literature on torture. For example, it is not included in the *Torturing Environment Scale* (Human Rights Council, 2020).

DoS is sometimes implied among simultaneous conditions. Examples include: confinement in a cell for 23.5 hours a day, light and ventilation being restricted by welding steel sheets to bars outside windows in prisons in Georgia (UN Commission on Human Rights, 2005, § 47), and solitary confinement cells in Israel with a fluorescent bulb as the only source of light (Physicians for Human Rights, 2011). The European Committee for the Prevention of Torture criticised Greek authorities detaining irregular migrants “for weeks... in very poorly furnished and inadequately lit and/or ventilated premises, without offering them either the possibility of daily outdoor exercise or a minimum of activities... is unacceptable and could even amount to inhuman and degrading treatment” (European Committee for the Prevention of Torture, 2011).

Observations by preventive bodies, such as the Subcommittee for the Prevention of Torture and the European Committee for the Prevention of Torture, show varying approaches to DoS, but recommendations for natural lighting and time outdoors do not appear to be enforced.

While there is a history of deliberate use of DoS in interrogation and detention settings, there is a lack of an explicit condemnation or call for prohibition. This article is intended as an introduction to address the need for a focus on DoS as an independent torture method that should be specifically defined and documented, its effects further researched, and its use condemned.

This review examines the physical and psychological health consequences of DoS and these are placed within existing legal definitions of the prohibition on torture.

## Definitions

### *Torture*

This paper focusses on the UNCAT Article 1 definition of torture relating to severe pain and suffering caused by DoS irrespective of purpose or intentionality. This permits examination of detention settings that may not be considered torturous due to the hidden and complex “*institutional and organisational context in which torture occurs*” (Rejali, 2007). This paper rejects definitions of torture such as the legal interpretation posited by the US State Department to legitimise so called “enhanced interrogation” (US Defense Dept, 2003) that state that the psychological impact must result in prolonged mental harm to qualify as torture since such a definition ‘*would disqualify many severely tortured peoples’ experience as torture simply because they did not develop PTSD*’ (Basoglu, 2007). In this paper, we do not distinguish between cruel, inhuman, and degrading treatment (CIDT) and torture.

### *No Touch Torture*

DoS fits within definitions of physical, psychological, and no-touch torture. The authors prefer the term “no-touch torture” because the deleterious impacts are psychological and physical. They are psychological because DoS can negatively impact mood (Borchelt, 2005, p. 101), and has the potential to disrupt temporal and spatial orientation (McCoy, 2006). They are physical because DoS impacts on vital brain and body functioning via sensory organs including the skin. Melzer defines “*no touch torture*” as physical torture “*as long as “no-touch” techniques inflict severe physical pain or suffering of any kind*” situating the technique at “*the very interface between physical and psychological torture*” (Human Rights Council, 2020, § 28:§ 53). The physical effects of DoS

has the potential to inflict severe pain and suffering, however the effects are not immediate.

#### *Deprivation of Sunlight Definition*

Various challenges are presented to answering the question of whether DoS is a form of torture. DoS is on a spectrum where a person is in an environment that significantly limits exposure to natural sunlight. Exposure to sunlight is experienced via the eyes and skin. The spectrum of sunlight deprivation involves several factors including the type of deprivation, and duration without exposure or with minimal exposure to sunlight. The harm caused by lack of sunlight is influenced by individual factors such as genetic differences and underlying health conditions. The harms will be enhanced when DoS is combined with other torture techniques. At one end of this spectrum are dark cells. At the other end lies restriction of daylight such as staying inside and being able to observe diurnal rhythms through windows but unable to absorb rays through the skin. Blindfolding/hooding is DoS, but the effects are different if a person is hooded indoors or out. Mid-range on the spectrum is employing unnatural lighting without access to diurnal rhythms.

There is currently little guidance on how to quantify the types of DoS, the harms caused by DoS, and at what point DoS constitutes torture. This paper takes a necessarily broad look at DoS to serve as an introduction to an underexplored topic.

#### **Conceptual questions**

We have established that there is a broad spectrum of environments that are classified as sunlight deprived. This article explores what factors should be considered in deciding when DoS becomes torture. To address this we ask: Does DoS cause pain and suffer-

ing? How does it cause harm and how can we measure the harm and severity? What other aspects should be considered to classify it as torture (for example intentionality)? Finally, what do we know about prevalence and how do we document it?

The UN Committee Against Torture has affirmed that both hooding and blindfolding, under certain conditions, constitute torture (Committee Against Torture, 2006). The medico-legal statement on hooding by the International Forensic Experts Group positions hooding (and equivalent practices such as blindfolding) as “*intentional forms of sensory deprivation which constitutes cruel, inhuman and degrading treatment or punishment and should be prohibited in interrogation and detention*” (International Forensic Expert Group, 2011). Ojeda (2008) categorises the phenomenon of torture as intentional infliction of suffering without resorting to direct physical violence to include: spatial disorientation (small, dark cells); temporal disorientation (denial of natural light; erratic scheduling of activity); sensory disorientation, sensory deprivation or under stimulation (hooding, blindfolding, darkness, soundproofing); sensory assault (overstimulation), among other manipulations. This analysis of torture from a psychological perspective presents the core intention of torture as the “*involuntary change or destruction of the subject*” (Doerr-Zegers, Hartman, Lira & Weinstein, 1992).

#### **Discussion**

##### *Harm from Deprivation of Sunlight*

This article recognises that the harm a practice inflicts depends on the context, intensity and duration a person is exposed to a potentially torturous method, and that attempts to quantify harm of one act in a torture environment is neither credible nor feasible (Başoğlu, 2007).

Furthermore, assessing whether DoS inflicts “*severe physical pain or suffering*” presents a challenge because the immediate and chronic effects of DoS are neither well documented nor studied. One way of making sense of the harm is separating harm caused in the short term from with harm caused due to extended periods of DoS. This helps to conceptualise aspects of the DoS spectrum where some aspects are immediately harmful, such as hooding, compared with other aspects which become harmful over an extended periods, such as restriction from natural lighting and going outdoors.

#### *Short - Medium Term Harm*

Completely blocking light through hooding or a dark cell potentially induces helplessness in an unpredictable environment. Decades of research have concluded that unpredictable and uncontrollable environments exert the greatest impact on anxiety and fear (Başoğlu, 2007; Mineka, 1989; Mineka, 2006). Dark cells, with no ability of the detainee to illuminate them, immediately induce fear, when there is the potential for horrific or physically threatening practices (Başoğlu, 1992). Darkness also induces spatial and temporal disorientation (Ojeda, 2008)

DoS is frequently combined with solitary confinement (Pérez Sales, 2017, p. 180). The International Committee of the Red Cross reported that detainees kept “*completely naked in totally empty concrete cells and in total darkness, allegedly for several days*” presented with amnesia, anomia, incoherent speech, acute anxiety and suicidal behaviours (International Committee of the Red Cross, 2004). Detainees in solitary confinement at Guantánamo who were denied outdoor exercise during daylight have described experiences of deteriorating mood, increasing frustration, rage, loneliness, despair, anxiety and depression (Borchelt, 2005, p. 101).

#### *Longer Term Consequences*

Sunlight exposure plays a role in healthy sleeping patterns via circadian rhythm. However, Kleitman and Richardson, who voluntarily isolated themselves from sunlight by living in a cave for 32 days, demonstrated that sunlight plays a relatively minor role in maintaining circadian rhythm (Kleitman, 1963). Nevertheless, it has been argued that not having a clear idea of whether it is night or day disrupts a person’s orientation, creating confusion and attacking “*the victim’s sense of time, by scrambling the biorhythms fundamental to every human’s daily life*” (McCoy, 2006). Ojeda categorises denial of natural light under temporal disorientation and refers to “*confinement in small places; small, darkened or otherwise non-functional windows*” as psychological torture (Ojeda, 2008). Survivors of torture have referred to the uncertainty of not knowing the time of day or night as being particularly unsettling (Pérez Sales, 2017, p. 35). Through this disruption of temporal and spatial sensory stimulation, DoS also represents a manipulation of a person’s environment, depriving a detainee of control and therefore “*elevating*” the control of the interrogator (McCoy, 2012). This disruption of a detainee’s temporal and spatial perception contributes to stress and disorientation (Doerr-Zegers, Hartman, Lira and Weinstein 1992).

Sunlight deprivation is associated with depression. It causes disruption to the circadian rhythm through the decrease in melatonin production which is dependent on the intensity of blue light (transmitted by sunlight) absorbed by photoreceptors in the eye (Holick, 2016).

Serotonin is a neurotransmitter with an essential role in regulating mood, sleep (through the production of melatonin) and appetite through the central nervous system, the mucosa of the gastrointestinal tract, blood

platelets and the skin. Lower light levels are associated with lower binding levels of serotonin in the cortical and subcortical limbic regions of the brain (Spindelegger, Stein, Wadsak & al., 2012). Lack of access to sunlight causes a decrease in the production of serotonin as photoreceptors in the eyes as well as the skin, cannot “pick up” enough light (Slo-minski, Worstman & Tobin, 2005). Individuals with pre-existing vulnerabilities including mood and anxiety disorders will be more susceptible to this effect. In addition, in individuals with depression, lower exposure to sunlight may be associated with cognitive impairment (Kent, 2009)

It is a fact that populations with less sun exposure have an increased risk for chronic diseases and mortality (Holick, 2016). Inadequate exposure to sunlight is considered a major cause of vitamin D deficiency around the world, and lack of Vitamin D from sunlight is associated with bone fragility and higher risk of fractures (Holick, 2016). Vitamin D deficiency is also linked to increased risks of colorectal cancer and cardiovascular disease by up to 62%, as well as to autoimmune diseases, infectious diseases and schizophrenia (Holick, 2008). The link between sunlight and a range of physical consequences merits further research with a focus on persons in torture environments.

DoS often occurs in tandem with poor ventilation, so separating the effects of DoS from poor ventilation is not always possible. Sunlight and ventilation are essential to general health in prisons, and to infection control (Møller, Stöver, Gatherer & Nikogolian, 2007). Lack of light in prisons has been linked to higher rates of cutaneous tuberculosis (Møller, Stöver, Gatherer & Nikogolian, 2007, p. 78). Minimum requirements for natural light, ventilation, space, nutrition, heating and sanitation, are all essential to

maintenance of good health (Møller, Stöver, Gatherer & Nikogolian, 2007, p. 11).

A detention setting that does not allow sufficient, consistent access to sunlight deprives a person of the physical benefits of sunlight and in its extreme form prevents a person from creating an accurate spatial and temporal picture of its environment. Further in-depth study is required of all health effects of DoS in torture environments.

### Legal standards

#### *International norms*

The international prohibition on torture is absolute: the peremptory norm proscribing all situations in which severe pain or suffering is intentionally inflicted on a person by a state representative, though not including “pain or suffering arising only from, inherent in or incidental to lawful sanctions” (UNCAT Article 1; ICCPR Article 7; ECHR Article 3; IACHR Article 5; IACPT Article 2; ACHPR Article 5). The difficulty of quantifying the severity of harm caused by, and the intentionality behind, DoS makes it challenging to automatically categorise it under this prohibition. The harms caused by DoS could be presented as inherent or incidental to sanctions in criminal detention settings.

International norms on detention standards, however, do require adequate levels of natural light. The Istanbul Protocol, a non-binding manual on investigating torture, recognises deprivation of “normal sensory stimulation, such as sound, light, sense of time, isolation, manipulation of brightness of the cell, abuse of physical needs...” as methods of torture (UN Officer of the High Commissioner for Human Rights, 2022). The United Nations Office on Drugs and Crime noted in 2014 that a variety of factors in detention, either individually or cumulatively, could

amount to degrading treatment, including examples of overcrowding, poor sanitary conditions, poor ventilation and lack of natural light (UNODC, 2006, p. 130).

Under the (non-binding) Nelson Mandela Rules on minimum standards for the treatment of prisoners, placing prisoners in dark or constantly lit cells is specifically prohibited when used as a restrictive or disciplinary action (Nelson Mandela Rules, 2016, Rule 42). Rule 14, like the European Prison Rules rule 18.2, considers adequate natural light to be necessary in detainees' living and working spaces as well, though the absolute prohibition applied to restrictive or disciplinary actions is not extended here, resulting in only a partial prohibition. In addition, "adequate" here refers to detainees being able to read and work; the Nelson Mandela Rules do not engage with the mental and physical health benefits of access to sunlight.

The Office of the High Commissioner for Human Rights refers to every person deprived of their liberty's right to enjoy daylight (2003, § 348). The International Centre for Prison Studies recommends a minimum of one hour in fresh air every day for all detainees, specifying that this outdoor time must not be in "small, walled yards" (Coyle, 2002, p. 47). This suggests that not only fresh air is important, but also light and optical stimulation, building a definition of what amount of light might constitute the adequate natural light required by the Nelson Mandela Rules no. 23.

Despite these rules and recommendations, prisons are still built and used without consideration of access to sunlight. In a striking example, CNN coverage of the "Administrative Maximum Facility" in Colorado, USA, details the architecture being used "as control", where prisoners "can't see the sky" from their cells, and where a recreation hour is spent "in an outdoor cage slightly larger than

the prison cells. Inside the cage, only the sky is visible" (CNN, 2015). Clearer international rules and recommendations prohibiting DoS in living areas, including where it is a feature of building design, are needed to prevent harms caused by DoS.

#### *International courts: different approaches to severity*

International and regional courts have considered the specific need for sunlight for physical and mental health to varying degrees. This section will consider how DoS has featured in a range of judgements by international courts: rather than compare the approaches of each court, it outlines the scale of attention given DoS in different cases. At one end of the scale, DoS is implied by the detention conditions described, alongside other forms of ill-treatment that amount to a violation of the prohibition of torture. At the other end, DoS is expressly, though briefly, considered in terms of its impacts on health and wellbeing.

#### *Implied DoS*

In *M.S.S v. Belgium and Greece*, conditions of detention amounted to a violation of Article 3 ECHR, based on the CPT's description of the victim spending one and a half months in cell with no access to fresh air, and to Amnesty International's description of three small cells with one window each (*M.S.S v. Belgium and Greece*, 2011, § 164 and 165). DoS is implied by the circumstances of overcrowding in small spaces with one window, and no access to the outdoors. UNHCR cited the lack of fresh air or possibility to take a walk in the open air (among other unsanitary conditions) (*M.S.S v. Belgium and Greece*, 2011, § 213). Although there is no direct mention, deprivation of direct sunlight is implied by the impossibility of spending time out of the cell, let alone outdoors. Overcrowding in cells may also imply

difficulty to access adequate indirect sunlight through a window. Similarly, without specifically discussing DoS, The Human Rights Committee found confinement to a tiny cell for 22 hours a day in enforced darkness sufficient to find violations of ICCPR Articles 7 and 10 in *Freemantle v Jamaica* (2000, § 3.5). Similar examples are found in *Kennedy v Trinidad and Tobago* (2002, § 3.10), *Torres-Ramírez v Uruguay* (1977, § 2), *Viollane v Finland* (1989, § 2.6), or *Womah Mukong v Cameroon* (1994, § 9.4).

#### *Explicit mention of DoS*

Moving up the scale, international claimants and courts have also explicitly mentioned lack of sunlight or natural light as part of a wider series of conditions and treatments that influence the court's conclusion of a violation. In *Peers v Greece*, the Court makes reference to access to natural light being "at best, mediocre" in the segregation wing under consideration in the case, describing small and high cells, with one window in the roof "that did not open and was so dirty that no light could pass through" (*Peers v Greece*, 2001, § 21 and 133). DoS is clearly a factor in the court's considerations, but its specific harms are not considered in detail.

In a case dealing with incommunicado detention, *Cantoral Benavides v. Peru*, the inter-American Court mentions detention in small cells for 23.5 hours a day, with just half an hour in sunlight, demonstrating a recognition that deprivation of natural light played a part in an environment violating the prohibition on torture (*Cantoral Benavides v. Peru*, 2000, § 43a, 63k, 85 and 89). In *Antonaccio v Uruguay*, the Human Rights Committee explicitly considers how Antonaccio was kept in an underground cell with no fresh air or sunlight, the cell having no window, the door being always closed, and Antonaccio being

blindfolded on the few instances he was taken out of his cell (*Amonaccio v Peru*, 1981, § 2.2 and 6). In *Gomez de Voituret v Uruguay*, the Committee found a violation of Article 10, considering the claimant's detention in cell without natural light on arrest, and being hooded and forced to walk without interruption when allowed outside her cell following her trial (*Gomez de Voituret v Uruguay*, 1984, § 2.2 and 12.2). These cases deal more with the victim's inability to observe sunlight, alongside other ill-treatment, engaging with Ojeda's work on temporal and spatial disorientation, and Başoğlu's considerations of psychological torture. Similar examples include *Polay Campos v Peru* (*Polay Campos v Peru*, 1994, § 2.4 and 8.7), and *Teesdale v Trinidad and Tobago* (*Teesdale v Trinidad and Tobago*, 1996, § 3.10).

#### *Consideration of the impacts of DoS*

In a few cases, deprivation of sunlight or natural light is explicitly considered in terms of its impacts on physical or mental functioning. These cases are useful to compile a legal precedent of DoS being a form of torture. However, such examples do not yet consider the short term or chronic health impacts caused by a lack of sunlight. In *Loayza Tamayo v Peru*, the Inter-American Court refers to Loayza Tamayo's deteriorating health as a result of 23.5 hours' incarceration per day without direct ventilation or direct light (*Loayza Tamayo v Peru*, 1997, § 29 and 46k). The Human Rights Committee considered, in *Boodoo v Trinidad and Tobago*, the recommendation by the prison doctor for the claimant to spend at least three hours a day in sunlight for his eyesight (*Boodoo v Trinidad and Tobago*, 2002, § 2.3), considering access to sunlight in terms of its physical health impacts. The role of lack of sunshine in the breakdown of the physical and mental health of the claimant is considered briefly, alongside other ill-

treatment, by the Committee in *Cámpora Schweizer v Uruguay* (1990, § 11).

Through international norms and case law, an awareness that DoS contributes to torturous conditions is visible to varying extents. Deprivation of light is considered as a possible sign of torture or CIDT, but consideration in terms of its specific torturous effects is limited. A common definition of DoS and a body of work exploring its harms could lead to more specific considerations by courts, by addressing under-documentation to create higher awareness of its prevalence and a more specific review of harms. The precedents discussed in this section, and the harms discussed in the previous section, offer a starting point for this work.

### DoS in practice

A common definition exploring whether, where and to what extent DoS is a form of torture could have important implications for conditions in all detention settings. A spectrum from zero mention to explicit concern raised about lack of access to direct natural light is found regarding criminal and administrative detention, where DoS can be a byproduct of architecture and other poor conditions. These could impose the same harms to qualify under the UNCAT definition (though if they are undocumented this will be hard to prove) but may face difficulty under the purposive element. Engaging with this element of the UNCAT definition, interrogation practices and protocols can reflect an assumption that the harms caused by DoS may influence the interrogation process.

There are some clear examples of states intentionally depriving interrogation subjects of sunlight to induce a more cooperative state. This section will explore examples from the UK and the USA, looking at how intentional deprivation of light has created a torture envi-

ronment. A torture environment is understood as one in which conditions (of accommodation, of treatment) elevate one actor, giving them control and “significantly increasing the fear level” to break down a second actor, the detainee (McCoy, 2012, p. 106). The temporal and spatial disorientation of acute deprivation of sunlight fit into this definition by restricting a person’s access to the physical changes in their surroundings that enable them to stay orientated, retain control and judge, understand and freely make decisions (Pérez Sales, 2017, p. 8).

Despite the spatial disorientation of darkness being found to be CIDT when used alongside other mistreatment (for example, *Ireland v United Kingdom*, 1978, § 7), states have continued to exploit the use of deprivation of light in interrogations. In 2003, UK forces used the “five techniques” (hooding, prolonged wall-standing, subjection to noise, deprivation of sleep, deprivation of food and drink) on civilians in Iraq, to disorient and prolong capture shock of detainees (McCoy, 2012, p. 45). Newbery refers to support for the “five techniques” in response to security priorities, with a strong emphasis on effectiveness in intelligence gathering (Newbery, 2009).

Among the degrading treatment noted by Mr. Justice Leggatt regarding individual claimants, were “periods of complete deprivation of sight and hearing” (*Alseran, Al-Waheed, MRE & KSU v. Ministry of Defence*, 2017, § 17(ii)(c)). This treatment was at the time “permitted by the MOD but [...] has since been banned by the British army” (§ 668). The Court found that, despite contradicting published military doctrine, this practice was adopted “as a form of deliberate ‘conditioning’, in order to maximise vulnerability” (*Alseran, Al-Waheed, MRE & KSU v. Ministry of Defence*, 2017, § 665). The long-term harm caused by the lack of light did not receive explicit focus, limiting

our ability to quantify the negative impacts of deprivation of natural light.

In the USA a series of leaked memos by the US Office of Legal Counsel on the CIA's interrogation programme in the wake of the "War on Terror" of the early 2000s relied on the distinction outlined by the Court in *Ireland v. UK* between torture and inhuman and degrading treatment (Green, 2018). The CIA's 1963 Counterintelligence Interrogation manual (KUBARK manual), 1983 'Honduran Handbook', the 1987 Army Field Manual and the 21<sup>st</sup> Century 'Torture Memos' all build a "systematic attack on all human stimuli, psychological and biological" (McCoy, 2012, p. 106). The "Enhanced Interrogation Techniques" endorsed by declassified CIA manuals condemn "physical torture" but advise depriving detainees of sleep, food, water, sunlight and medical attention as legitimate techniques to break detainees' resistance (Van Natta, 2003).

The KUBARK Manual recommends using cells that have "no light (or weak artificial light which never varies), to induce a susceptible state in detainees in which the subject has a growing need for physical and social stimuli, and in which some subjects rapidly lose touch with reality, focus inwardly, and produce delusions, hallucinations, and other pathological effects" (Central Intelligence Agency, 1963, p. 87). The use of goggles, earmuffs, mittens, and darkened cells can quickly create psychotic states that are sometimes permanent in subjects (Pérez Sales, 2017, p. 87). The manual describes the extremes of stress and anxiety that can be induced as unbearable (Central Intelligence Agency, 1983), encompassing a lack of stimulation "impairing the activity of the cortex so that the brain behaves abnormally", or disrupting spatial and temporal awareness (McCoy, 2006, p. 37). Twenty years later, the *Human Resources Exploitation Training Manual* originally advised causing "disorientation re-

garding day and night", which was later annotated with the words "is illegal and against policy to use them to produce regression" (McCoy, 2012, p. 29). Deprivation of light and sleep, and temporarily withholding access to sunlight, medical attention and food and water are said to still be accepted as interrogation techniques by senior American officials (Central Intelligence Agency, 1963, p. 90).

In a recent case in the USA, the dark conditions of detention in *Salim v Mitchell* (2017), alongside under-nutrition, water torture and stress positions were specifically highlighted as means to break him into a "broken", "cooperative" state (*Salim v Mitchell*, 2017, § 104). Salim was detained for four years in a constantly artificially lit cage with no time outside, under the defendant's recommendations for a physical environment designed for disorientation to undermine resistance in interrogations (*Salim v Mitchell*, 2017, § 24-25).

These texts appear to satisfy the purposive and severity elements of the UNCAT definition of torture. However, DoS is a feature not just of interrogation, counter-terror and armed conflict settings, but appears in domestic detention for criminal and administrative purposes through architecture and a lack of attention to adequate living conditions. While causing possibly the same harms, the UNCAT Article 1 exception "it does not include pain or suffering arising only from, inherent in or incidental to lawful sanctions" might restrict its classification as torture, but preventive and judicial bodies should still bear the harms explored in mind. A spectrum from zero mention to explicit concern raised about DoS can be observed regarding criminal and administrative detention settings.

#### *Implied DoS*

Slovenia's National Preventive Mechanism notes extremely limited time out of cell - 120

minutes - (Human Rights Ombudsman of Slovenia NPM, 2022). Though not engaging with whether or not prisoners lacked access to sunlight, the very restricted time allowed in fresh air implies that complete immersion in sunlight is not regular or extended.

*DoS explicitly noted*

A 2016 review of immigration detention in the UK called for a government review into access to natural light and open air in Immigration Removal Centres, and notes that sunlight is an important aspect of welfare (Shaw 2016, § 6.152, Recommendation 33). The 2018 follow-up report notes that “there continued to be no natural light in any of the terminal holding rooms” (Shaw 2018, § 109) in one centre, and windows were still covered in another, allowing very little natural light (§ 317).

Bulgaria’s NPM has registered concern about lack of access to natural light (alongside lack of access to ventilation and of service facilities) in police-department 24-hour detention for ten years (Ombudsman of the Republic of Bulgaria, 2022). Its 2021 report mentioned also a medical centre being found to be unsatisfactory for being underground and with no windows, while a detention centre in Varna had unsatisfactory access to daylight, though there was central ventilation (Ombudsman of the Republic of Bulgaria, 2022). Though not expanding on the exact harms of DoS, the separation from ventilation here goes a step further than the Rules on Minimum Standards for Prisons, highlighting the need for sunlight, rather than its coincidence with fresh air. Natural light was also deemed not to be sufficient in some residential and some so-called “safe and solitary” cells in Georgia, while 15 temporary detention facilities did not have adequate light due to small windows (Public Defender of Georgia, 2022). Recom-

mendations by the Serbian NPM included improving the amount of natural light available in a disciplinary room, while a police station was praised for installing windows that would block a view into a room, without impeding the flow of sunlight (Republic of Serbia Protector of Citizens, 2022). Lack of access to natural light continued to be a “general shortcoming” in detention sites in Spain, despite a 2016 CPT recommendation that all new detention centres make natural light accessible (Defensor del Pueblo, 2022).

*DoS considered as torturous*

The Austrian NPM’s 2021 report suggests a case of temporal disorientation in the case of a detainee at risk of suicide being held in “a specially secured cell with constant neon light for 19 days, unable to distinguish between night and day”, calling the effects “tantamount to torture” (Austrian National Preventive Mechanism, 2022). In more general detention conditions, the NPM expresses concern over lock-up times of 23 hours a day continuing to be “the depressing reality” (Austrian National Preventive Mechanism, 2022).

*Gaps in the legal system*

DoS occurs in interrogation, prisons, military detention, police custody, and immigration detention in a number of states, although clinical experience suggests that the issue is more prevalent than these references suggest, and the true prevalence is unknown. The circumstantiality of DoS, both that it can be a product of a restrictive detention regime, of architecture, and that it so often occurs alongside other treatment carrying health risks, can make it difficult to prove as a form of torture. However, the examples of its use in interrogation satisfy the purposive element in such cases. Though arguably incidental to lawful sanctions in prisons, a dedicated documen-

tation tool would help to establish whether the harms are consistent with torture. DoS is matter of concern for preventive bodies, and should receive more attention by decision makers.

### Conclusion

This article presents that DoS under certain conditions independently meets the criteria for torture and exacerbates the harm of other torture methods.

DoS appears in cases of torture that reach international human rights tribunals although it is rarely focussed on in depth in case law. Medical research suggests that adequate exposure to sunlight is critical to physical and mental health and is necessary to maintain sense of self within a person's surroundings.

There is limited data on the harmful effects of sunlight deprivation applied in detention settings and torture environments; further dedicated research is needed to describe and quantify both the short and long term effects of all forms of sunlight deprivation.

A standardized definition of deprivation of sunlight should be developed for use by monitoring bodies and included in the Torturing Environment Scale. The definition should include a spectrum of deprivation of sunlight ranging from complete darkness to the use of artificial lighting without natural sunlight and define at what point DoS becomes torture.

Documentation of sunlight deprivation should be performed by all monitoring bodies in places of interrogation and detention and should include detailed conditions of sunlight deprivation along with any reported psychological or physical effects. Stronger prohibition of sunlight deprivation in detention guidelines will ensure that it is investigated in both preventive and *post facto* situations.

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