



Erlangsen, A., Fleischer, E., Gunnell, D., & Nordentoft, M. (2021). Characteristics of Survivors of Suicide Seeking Counseling From an NGO in Denmark: analyses of a national database. *Archives of Suicide Research*. Advance online publication. <https://doi.org/10.1080/13811118.2021.1903636>

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Link to published version (if available):
[10.1080/13811118.2021.1903636](https://doi.org/10.1080/13811118.2021.1903636)

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Characteristics of survivors of suicide seeking counselling from an NGO in Denmark: analyses of a national database

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Objective

The loss of a friend or family member to suicide, i.e. surviving suicide, can be devastating. Yet, little is known regarding the support received by survivors of suicide. We aimed to examine the characteristics of survivors of suicide who sought counselling from a Danish volunteer organization.

Method

Data on all users of the Danish Network for those Affected by Suicidal Behavior (NASB) were obtained during 2012-2018. Information on age, sex, relation, time of loss, municipality was analyzed, and geographical driving distances calculated.

Results

Altogether, 1,268 survivors of suicide (mean age 43.3; 29.8% of all suicides) received counselling from NASB. In all, 81.8% of service users had lost a partner or first-degree relative; those being spouses/partners (15.3%), parents (28.5%), children (19.0%), and siblings (15.4%). Female service users (71.1%) outnumbered males (28.7%). A third of users sought counselling within 6-months of the death. A help-seeking rate of 6 users per 10 suicide deaths was found within close proximity to a counseling venue; equivalent of 5.5 (CI-95%: 5.0-6.0) users per 100,000 inhabitants. Each additional 10 km of driving distance was associated with a 15% lower rate of use (b: -0.015; CI-95%: 0.027 to 0.003; p=0.013).

Conclusion

Geographical proximity to help centers was important and could suggest that support might be lacking in some parts of the country. It seems likely that more than 0.6 persons per suicide might seek counselling from volunteer organizations if services were available within short driving distance.

Keywords: survivors of suicide; bereaved by suicide; postvention; counsellor-led support groups; volunteer-based counselling

HIGHLIGHTS

- More than one out of three who sought support after a suicide death were partners or first-degree relatives and only a third of users who sought counselling did so within 6-months of the death. Also, female sought counselling more frequently than males.
- Approximately 5.5 people per 100,000 inhabitants sought help after a suicide in areas where a counselling venue was within short driving distance.
- Based on the region with most counseling venues, 6 survivors would seek support per 10 suicide deaths.

Introduction

Each year, around 817,000 people die by suicide across the world (Naghavi, 2019). Relatives and other next-of-kin (“survivors”) often struggle with the devastating grief following the death of a suicide (Dunne-Maxim, 1986; Shneidman, 1965). According to representative surveys, about 50% of the general population have at some point in their lives experienced a suicide by someone they knew (Cerel et al., 2016b; Feigelman et al., 2018) and meta-analyses suggest a past year prevalence of 4.3% (Andriessen et al., 2017). Around one in three who was exposed to a suicide of a person they knew indicated that they experienced moderate to severe emotional distress due to the loss (Cerel et al., 2016a; Feigelman et al., 2018).

Losing a close person to suicide may set off a range of complex emotions, including grief, shock, denial, anger, guilt, shame, and relief (Dunne-Maxim, 1986; McIntosh, 1993). For some survivors of suicide, the grief may take on a pathological or chronic character, also referred to as complicated grief (Shear & Shair, 2005). National linkage studies have shown that people exposed to a suicide of a relative were themselves, at higher risk of adverse events, ranging from depression and other mental disorders to suicidal behavior (Burrell et al., 2018; Erlangsen et al., 2017; Guldin et al., 2015; Pitman et al., 2014; Rostila et al., 2013; Tidemalm et al., 2011; Wilcox et al., 2010). Such associations have, for instance, been demonstrated for spouses, partners or first degree family members, i.e. children, siblings, and parents (Bolton et al., 2013; Erlangsen et al., 2017; Pitman et al., 2014; Wilcox et al., 2010). Similar findings have been reported for second degree relatives, such as half-siblings and grandchildren, and third degree relatives, such as cousins of those who have died by suicide (Tidemalm et al., 2011). Adolescents may also experience severe psychosocial distress after the

suicide of a friend or acquaintance (Bartik et al., 2013; Melhem et al., 2004); the same applies for friends and work colleagues (Berman, 2011; Brent et al., 1993). While the time immediately after the loss might be the most challenging period for adults to navigate (Erlangsen et al., 2017), children who experience a suicide at a young age may display a different response pattern (Kuramoto et al., 2013). Survivors may also experience external stressors; as some survivors of suicide reported having had to go through distressing official procedures at the time of the loss as well as experiences of stigmatization and social sanctions by their community (Hanschmidt et al., 2016; Hawton & Simkin, 2003; Pitman, Hunt, et al., 2017; Pitman, Stevenson, et al., 2018).

Little is known regarding help-seeking of survivors of suicide. Findings from self-selected (non-representative) samples suggest that as many as half of survivors of suicide may have received formal support after the loss (Pitman, Rantell, Marston, et al., 2017; Provini et al., 2000) but their needs for help are not always met (Dyregrov, 2002; Wilson & Marshall, 2010). Although not specific for survivors of suicide, women are generally known to seek counselling for mental and emotional distress at higher rates than men (Kessler et al., 1981). Much of the evidence regarding help-seeking by survivors of suicide stems from cross sectional surveys (Cerel et al., 2013; Drapeau et al., 2016; Pitman, Rantell, Moran, et al., 2017; Provini et al., 2000; Westerlund, 2018), qualitative studies (Hawton et al., 2012; Ross et al., 2019), or sub-samples (Pitman, Hunt, et al., 2017), implying possible selection bias. Consequently, findings based on national and unselected data is lacking.

Support for survivors of suicide exists in many countries and is mainly provided by NGOs (McIntosh et al., 2017). While some organizations facilitate self-help groups or user-led support groups, others offer support by trained counsellors (Cerel et al., 2009; Erlangsen & Fleischer, 2017;

Hawton & Simkin, 2003). In Denmark, there is no public, specialized support for people bereaved by suicide. Through the free public health care system, people who were recently bereaved by a sudden death have the option of requesting a referral from the general practitioner to therapy from a private psychologist (Erlangsen & Fleischer, 2017). Only few survivors are aware of this option, to which a co-payment of approximately 40% is expected and only if they request support within 6 months of the loss (Erlangsen & Fleischer, 2017). Since 2004, the Danish Network for those Affected by Suicidal Behavior (NASB) has offered support to people affected by suicidal behavior, including those who have lost a close person to suicide or were affected by a suicide attempt (Erlangsen & Fleischer, 2017). NASB's support consists of volunteer-based, face-to-face counselling and participation in counsellor-led support groups at venues located across Denmark. The support by NASB is provided free of charge as the services of the NGO are covered through public subsidies and donations. All counsellors have participated in an extended training program and NASB is the only organization of its type in Denmark.

Aim

The aim of the current study was to examine the characteristics of users of the NASB service for survivors of suicide, the timing of use in relation to the date of their bereavement, and geographic location. It was also analyzed whether help-seeking rates varied with respect to geographical proximity to a counselling venue.

Material and methods

Since 2012, NASB has systematically collected data on all users on a pre-printed questionnaire and

entered this information in an electronic database. The database contains information on all users, including personal id number, date of contact, type of exposure to suicidal behavior (i.e. suicide or suicide attempt), relation to person with suicidal behavior, date of exposure as well as personal details, such as sex, age at exposure, age at contact, and zip code. Records were individual-based and the personal id number, a unique identification number introduced in Denmark in 1968 (Erlangsen & Fedyszyn, 2015), ensured that there were no duplicate records. In addition, data on inhabitants by municipality and by calendar year as well as numbers of suicide deaths by region were obtained from Statistics Denmark (Statistics Denmark, 2020).

Study members

All users who contacted NASB during 2012-2018 were included as potential study members. Persons for whom information on date of contact or type of exposure to suicidal behavior was missing were excluded. Furthermore, people who contacted NASB after exclusively having been exposed to a suicide attempt of someone close were excluded as this group was not the focus of the study. People who reported having been exposed to both suicide and suicide attempts were considered as survivors of suicide and included.

Support to people bereaved by suicide

NASB provided face-to-face counselling followed by participation in counsellor-led support groups. Usually, the initial contact consisted of one or two sessions face-to-face counselling, followed by an offer to attend a guided support group. Support groups were organized according to the persons relationship with the deceased, e.g. parents, children or partners and were counsellor-led (Erlangsen &

Fleischer, 2017). Once established, the support group was closed to new members after the first meeting. Meetings were typically held twice monthly. Each group had 6-10 participants and two counsellors and met over 7-10 sessions. Details of the support has been described elsewhere (Erlangsen & Fleischer, 2017). NASB required that volunteers had a degree from social or healthcare sciences and attended a mentored training program before becoming counsellors. The NGO advertises their support services on their webpage, Facebook, and in a pamphlet. Users could be referred by others who were familiar with NASB's services, such as general practitioners, psychologists, staff at hospitals, social workers from the municipality, or self-referred. While NASB offers support to both people who lost someone to suicide and people who experienced a suicide attempt of someone close to them, the current study exclusively examined the group of users who had lost someone to suicide.

Face-to-face counselling took place at NASB venues or in the user's home, while support groups were run in geographically select venues. The main base of NASB was in Odense on the central island of Denmark but the NGO did, over time, expand to other cities. During the follow-up period, support groups were offered in three of Denmark's five regions (cities and period): Region Southern Denmark (Odense: 2012-2018, Svendborg: 2014, Aabenraa: 2015-2016, Kolding: 2016-2017); Capital Region of Denmark (Copenhagen: 2014-2018), Region of Central Jutland (Aarhus: 2014-2018, Horsens: 2016).

Statistical analyses

We examined whether male and female users differed with respect to year and month of contact, region, age at contact, and age at bereavement for males and females. Descriptive analyses

were conducted to assess the relationship of services users with the deceased, the number of suicide losses, and time between loss and initial contact. Based on national figures for suicide deaths, we calculated the number of users per suicide death by region.

Using data on the number of users as well as national data on inhabitants in each municipality during 2012-2018, we calculated rates of user contacts per 100,000 inhabitants by municipality and calendar year. These were plotted to illustrate the geographical distribution of service use. Furthermore, the spatial distance from each municipality in Denmark (n=94) to the nearest NASB venue (n=1-7) was summarized as the shortest driving distance, obtained through Google maps (www.maps.google.com), while accounting for the number of operating venues in each calendar year. For instance, in 2012 NASP only operated from one venue, in Odense, hence the driving distance from each single municipality in Denmark to Odense was calculated. As a sensitivity analyses, in our estimations of service use, we restricted the sample to those attending counseling during 2015-2018 where a larger number of venues were open.

Using linear regression analysis, we examined whether driving distance from the users' municipality to the nearest counselling venue was associated with the rate of user contacts per 100,000 inhabitants; hypothesizing that a greater distance would be linked to a lower rate of users. The change in rate of contacts was estimated for an additional increment in spatial distance between municipality of living and nearest NASB venue (measured in km).

The SAS Studio software package was used for the analyses (Institute, 2003). The study has been approved by the Danish Data Protection Agency (P-2020-305).

Results

A total of 1,939 individuals contacted the volunteer organization during 2012-2018 (see Flow diagram in eFigure 1). Users for whom information on date of contact (n=3) or type of exposure (n=9) was missing were excluded. Among the remaining 1,927 (99.4%) individuals, 659 (34.2%) had been exposed to a suicide attempt and they were also excluded; leaving a total of 1,268 (65.8%) users who were exposed to a suicide death.

In all 901 females (71.1%) and 364 (28.7%) males contacted the NGO after a suicide death (information on sex was missing for 3 individuals). Service use increased gradually over time from 82 contacts in 2012 to 261 in 2018 (Table 1). The mean age at time of contact was 43.3 (SD: 18.6; range: 7-99) years, while the mean age at time of exposure to suicide was 39.1 (SD: 18.5; range: 4-93). In all, 65 individuals (5.1%) reported multiple exposures to suicide and a total of 1,321 suicide incidents were reported. During the same period, a total of 4,261 suicide deaths were observed in Denmark, equivalent of 0.3 user per one suicide death.

A peak in the number of contacts was noticed around 4 weeks post loss (Figure 1A). More than a third (n=459, 36.2%) sought support within the first 6 months of their loss and almost half (n=585, 46.1%) did so within the first year. Fewer, 8.9% (n=113), took ≥ 5 years to seek help.

Among the 1,321 suicide incidents, the majority were partners and first-degree relatives, i.e. parent, child, partner or sibling (n=1,033, 78.2%), while other family and non-family accounted for 181 (13.7%) and 49 (3.7%) of users, respectively (Table 2). Survivorship by relation and age group were

examined (Figure 1B). Although an even sex distribution would be expected, two out of three survivors of a parent's (69%) or child's (67%) suicide who sought counselling were females (Figure 1C).

Survivors per suicide death

During the study period, a total of 4,261 suicide deaths occurred in Denmark, equivalent of a national average of 0.30 users per suicide, implying 3 survivors sought counselling per 10 suicide deaths. Restricting the sample to the period of 2015-2018 where the volunteer organization had increased its number of venues, generated a rate of 0.40 users per suicide, implying that 4 survivors sought counselling per 10 suicide deaths. When calculating the rate by region (eFigure 2), the highest proportion was seen in Region of Southern Denmark with 0.61 users per suicide and the lowest in Region of Northern Denmark with 0.06 users per suicide.

Geographical proximity

Survivors of suicide across the entire country contacted the organization for support (eFigure 3). Using national data on number of inhabitants in each municipality, yearly help-seeking rates of ≥ 7 contacts per 100,000 inhabitants were noted in several municipalities (Figure 2). In municipalities situated more remotely from counselling venues, < 0.5 contacts per 100,000 inhabitants took place.

Approximately, 5.5 (CI-95%: 5.0-6.0) people per 100,000 inhabitants sought help each year in those municipalities where there was less than 25 km to the nearest city with a counselling venue (Table 3). During 2015-2018, the contact rate for people living less than 25 km from the nearest counselling venue was 5.8 (CI-95%: 5.3-6.4). With increasing distance, a lower rate was noticed;

among those who lived between 25-49 km or 100-124 km from a counselling venue, respectively, 3.9 (CI-95%: 3.5-4.4) and 1.6 (CI-95%: 1.2-2.0) per 100,000 would seek help. Each additional 10 km of driving distance was associated with a 15% lower rate of use (b: -0.015; CI-95%: -0.027 to -0.003; $p=0.013$).

Discussion

People bereaved from a wide range of relationships sought counselling from a Danish NGO. The majority - three out of four service users – were first-degree relative or partners. Almost half of all users had lost someone to suicide within the past year with a peak in the number of contacts at a month after the loss. While more women than men sought support, this was found to vary by type of relation. For every 10 suicide deaths, 6 survivors would contact the counselling organization in those areas where support was widely available. Unsurprisingly, spatial distance to a counselling venue was found to be inversely associated with usage rates. Help-seeking behavior has, to our knowledge, not previously been assessed in a complete and unselected sample of survivors of suicide.

The many relations for whom users sought counselling supports the notion that a wide range of people are deeply affected by a suicide loss (Feigelman et al., 2018). It has been suggested that people who felt very close to the deceased were more severely impacted than those who perceived to be less close, independently of type of relation (Cerel et al., 2013). Nevertheless, we found that a large proportion of users had lost a first-degree relative or partner, which is in line with findings from survey data suggesting that family members may be particularly strongly affected by a suicide (Cerel et al., 2013).

According to the dual process model for coping with a bereavement (Stroebe & Schut, 2010), the impact of a loss may vary although it would generally tend to abate over time. The recovery process has been described as an oscillation where the bereaved at times will confronts the loss and its consequences and at times will avoid it (Stroebe & Schut, 2010). We found that almost half of users sought support within the first year after the loss. This parallels with findings of young adults who had lost to suicide reported that the time immediately after the loss was particularly painful (Pitman, Rantell, Moran, et al., 2017) and users emphasizing the need for access to support immediately after the loss (Hawton et al., 2012).

As in other health-care sectors (Kessler et al., 1981), females out-numbered males in help-seeking behaviors. Similar findings were reported elsewhere (Westerlund, 2018). While the exposure to a partner's or sibling's suicide is likely to occur more often for females, as a result of higher suicide rate among males (Dyvesether et al., 2018), the proportion of females seeking help remained 20-40% higher than what would be expected based on exposure to suicide (see figure 1C). Cultural norms may dictate that males are less likely to talk about emotional reactions and seek help for those than females (Grad et al., 2017). Indeed, counsellors at NASB report that some male participants in the support groups were brought along by their female partners and would otherwise not have joined.

Over the period studied, the organization did not actively disseminate information on their services. The yearly rate of 3.5 -5.5 users per 100,00 inhabitants within 40 miles (50 km) proximity of a counselling venue should therefore be considered as minimum estimates of those who may benefit from the service. There were >0.6 users per suicide death in Southern Denmark, the region where most

counselling venues were situated. With approximately 600 suicide deaths per year in Denmark and little regional variation in the suicide rate (Nordentoft & Erlangsen, 2019; Sundhedsdatastyrelsen, 2017), one may therefore predict that as many as 366 people might seek counselling each year if support was available within a relatively short distance. Nevertheless, it is likely that a more intensified dissemination of the available support from NASB, for instance via police, priest, funeral directors, general practitioners, and hospitals, would result in a higher rate of users. Addressing personal and social barriers for seeking help may also encourage more to survivors of suicide to contact NASB.

In principle, it is not surprising that a longer driving distance was linked to a lower utilization rate of help-seeking. However, it is an important argument for the dialogue with decision-makers regarding securing support for people who have lost to suicide, either through funding of volunteer organisations or online-support options. Qualitative findings have indicated that users of the Danish NGO benefitted from the support (Buus, Caspersen, Hansen, et al., 2014; Buus, Caspersen, Nygaard, et al., 2014), although these findings were restricted to users affected by suicide attempt not those bereaved by suicide. A quantitative evaluation of counsellor-led support for survivors of suicide is lacking. Virtual and telephone counseling could be an alternative and, during the recent COVID-19 pandemic, NASB counselors made experiences with this format. Given the sensitivity of the topic, their impression is that a face-to-face meeting is preferable as a first point of contact.

Clinical implications

It is likely that a large share of suicide survivors need support but does not seek help. The accessibility of support is another critical issue as illustrated in this study. Previous findings have

shown that, although not focused specifically on survivors of suicide, support was linked to improvements in scores of complicated grief and depressive symptoms (Shear et al., 2005; Shear et al., 2016). Also, survivors of suicide have themselves rated specialized support as valuable in qualitative evaluation studies (Ross et al., 2019). Still, effectiveness of the support offered to survivors of suicide is lacking as well as insights into what users might experience as good practices (Hybholt et al., 2019).

The social network may be a helpful resource for survivors of suicide (Pitman, De Souza, et al., 2018) however, some survivors report having experienced avoidance and insensitive comments (Ross et al., 2019). Furthermore, there seems to be diverging opinions among users regarding whether support should be offered actively or uninvited after a suicide bereavement (Drapeau et al., 2016; Hawton et al., 2012).

Strengths and limitations

Systematically collected data from a complete sample of survivors of suicide were strengths of this study. Data were recorded by the counsellors of the NGO for each single user and the unique personal id number ensured that there were no double recordings. In addition, only few missing data were noted. The sensitivity analyses support the robustness of the calculated help-seeking rates.

Limitations should be acknowledged. Being a descriptive assessment, it was beyond the scope of this study to assess effectiveness of the provided counselling. As survivors of suicide may have sought support from other NGOs, private or public health provides, the analyses cannot give a comprehensive overview of help-seeking behaviors. The data collection was based on self-reports and counsellors had few options of verifying the provided information. We were unable to account for

clusters of help-seeking, i.e. several persons seeking help in relation to the same suicide death, so the proportion of all suicide survivors who received support, i.e. the reach of the NGO, may be over-estimated. Questions regarding previous exposures to suicide deaths was not an explicit part of the systematic data collection and these should therefore be considered as minimum numbers. Also, the geographical analyses do not account for the underlying incidence of suicide deaths as these data were not collected in the database. As no information was available regarding the actual venue, the spatial distance to the nearest NASP venue was used as a conservative estimate.

In sum, survivors of suicide contacted a Danish NGO providing counsellor-led support after suicides of a wide range of relations although most were exposed to a suicide of a partner or first-degree relative. Remarkably more females than males sought support and almost half contacted the NGO and within the first year of the loss. Geographically, users came from all regions of the country, but most lived within a shorter driving distance from counselling venues. Based on regional data, as many as 6 users might contact counselling services per 10 suicide deaths.

Funding details

This study was funded by the Partnership for Suicide Prevention by the Danish Health Authority. D.G. is supported by the NIHR Biomedical Research Centre at University Hospitals Bristol and Weston NHS Foundation Trust. The views expressed in this Article are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

Data availability statement

Due to data protection regulations, data from this study cannot be made available.

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Table 1. Characteristics of study sample.

	Females n (%)	Males n (%)	Total ² n (%)
Users	901 (100.0)	364 (100.0)	1268 (100.0)
Year of contact			
2012	64 (7.1)	18 (4.9)	82 (6.5)
2013	74 (8.2)	25 (6.9)	99 (7.8)
2014	103 (11.4)	40 (11.0)	143 (11.3)
2015	134 (14.9)	58 (15.9)	194 (15.3)
2016	153 (17.0)	70 (19.2)	224 (17.7)
2017	185 (20.5)	80 (22.0)	265 (20.9)
2018	188 (20.9)	73 (20.1)	261 (20.6)
Region of residence			
Capital	222 (24.6)	78 (21.4)	301 (23.7)
Zealand	61 (6.8)	26 (7.1)	87 (6.9)
South-Denmark	413 (45.8)	181 (49.7)	595 (46.9)
Mid-Jutland	168 (18.6)	57 (15.7)	225 (17.7)
North-Jutland	16 (1.8)	8 (2.2)	24 (1.9)
Missing	21 (2.3)	14 (3.8)	36 (2.8)
Age at contact with NASB			
≤19	74 (8.2)	54 (14.8)	128 (10.1)
20-29	170 (18.9)	65 (17.9)	235 (18.5)
30-39	139 (15.4)	46 (12.6)	185 (14.6)
40-49	158 (17.5)	60 (16.5)	218 (17.2)
50-59	159 (17.6)	55 (15.1)	214 (16.9)
60-69	106 (11.8)	35 (9.6)	141 (11.1)
70-79	58 (6.4)	33 (9.1)	91 (7.2)
≥80	24 (2.7)	4 (1.1)	28 (2.2)
Missing	13 (1.4)	12 (3.3)	28 (2.2)
Age at suicide bereavement¹			
1-9	14 (1.6)	14 (3.8)	28 (2.2)
10-19	118 (13.1)	65 (17.9)	183 (14.4)
20-29	183 (20.3)	57 (15.7)	240 (18.9)
30-39	125 (13.9)	48 (13.2)	173 (13.6)

40-49	165 (18.3)	60 (16.5)	225 (17.7)
50-59	146 (16.2)	52 (14.3)	198 (15.6)
60-69	93 (10.3)	41 (11.3)	134 (10.6)
70-79	29 (3.2)	13 (3.6)	42 (3.3)
≥80	15 (1.7)	3 (0.8)	18 (1.4)
Missing	13 (1.4)	11 (3.0)	27 (2.1)

Number of suicide bereavements

1	850 (94.3)	350 (96.2)	1203 (94.9)
2	46 (5.1)	11 (3.0)	57 (4.5)
3	5 (0.6)	3 (0.8)	8 (0.6)

Time between loss and contact¹

<1 month	107 (11.9)	46 (12.6)	153 (12.1)
2-3 months	143 (15.9)	67 (18.4)	210 (16.6)
4-6 months	73 (8.1)	23 (6.3)	96 (7.6)
7-9 months	52 (5.8)	18 (4.9)	70 (5.5)
10-12 months	42 (4.7)	14 (3.8)	56 (4.4)
1-2 years	93 (10.3)	27 (7.4)	120 (9.5)
2-3 years	50 (5.5)	24 (6.6)	74 (5.8)
3-4 years	14 (1.6)	8 (2.2)	22 (1.7)
4-5 years	12 (1.3)	5 (1.4)	17 (1.3)
5-10 years	43 (4.8)	10 (2.7)	53 (4.2)
>10 years	42 (4.7)	18 (4.9)	60 (4.7)
Missing	230 (25.5)	104 (28.6)	337 (26.6)

¹ If the person had reported having lost to suicide more than once, this information relates to the first exposure.

² Information on sex was missing for 3 users.

Table 2. Relationship of service user to the person who died by suicide.

	Females (n=940)	Males (n=378)	Total ¹ (n=1321)
	n (%)	n (%)	n (%)
Parent	259 (27.6)	118 (32.4)	377 (28.5)
Child	167 (17.8)	83 (22.8)	251 (19.0)
Sibling	151 (16.1)	52 (14.3)	203 (15.4)
Spouse/partner	172 (18.3)	30 (8.2)	202 (15.3)
Other family relative	68 (7.2)	49 (13.5)	117 (8.9)
Ex-partner	58 (6.2)	6 (1.6)	64 (4.8)
Friend	18 (1.9)	12 (3.3)	31 (2.3)
Other	12 (1.3)	6 (1.6)	18 (1.4)
Missing	35 (3.7)	22 (6.0)	58 (4.4)

¹ A total of 1,321 suicide incidents occurred to the 1,268 users of NASP. Information on sex was missing for 3 users who each reported exposure to a suicide.

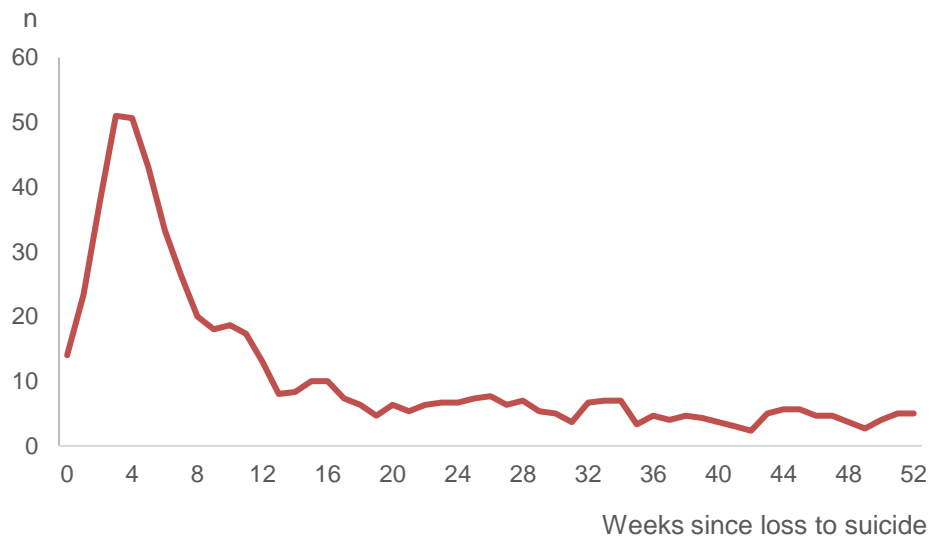
Table 3. Rates of yearly users per 100,000 inhabitants and distance to NASP venue.

	n	Person-years	Rate per 100,000 [95% CI]
<25 km	502	9,160,263	5.5 [5.0-6.0]
25-49 km	281	7,164,421	3.9 [3.5-4.4]
50-99 km	175	6,880,669	2.5 [2.2-2.9]
≥100 km	275	16,478,272	1.7 [1.5-1.9]

¹ Information on municipality (zip code) was missing for 35 individuals (2.8%).

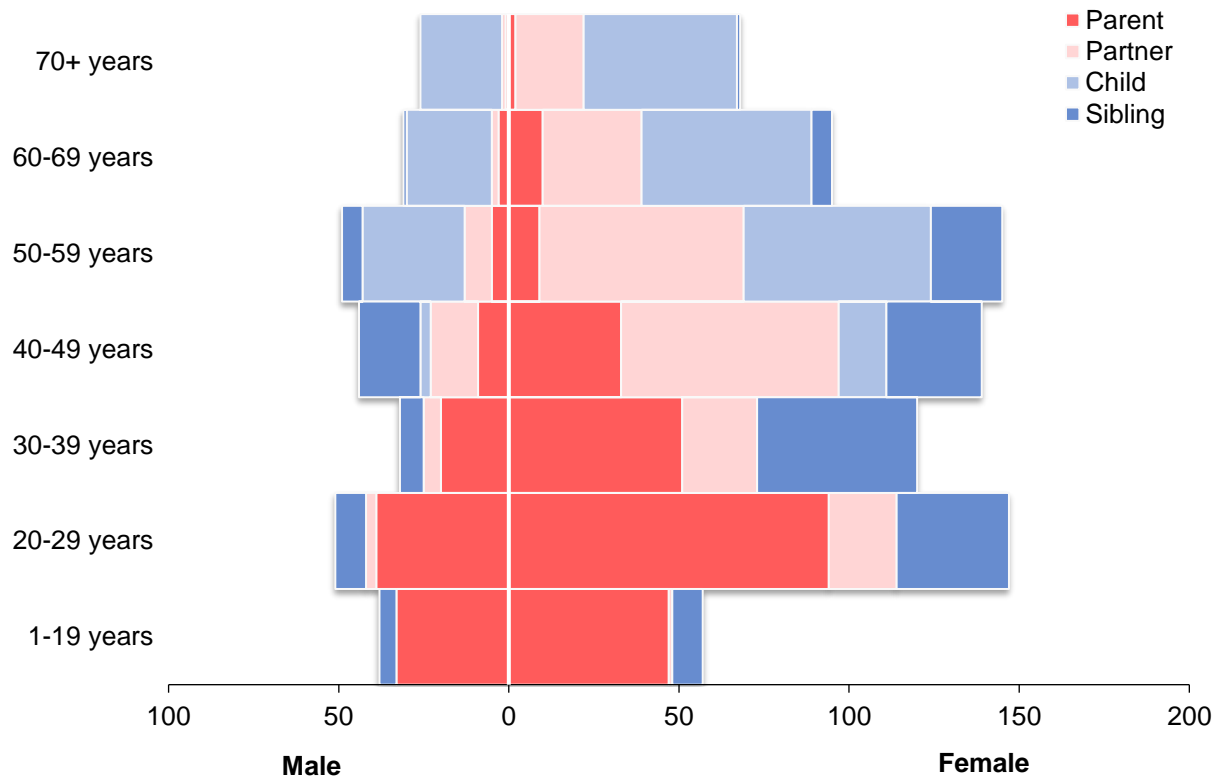
Figure 1

A. *Number of survivors of suicide seeking counselling by number of weeks since the loss.¹*

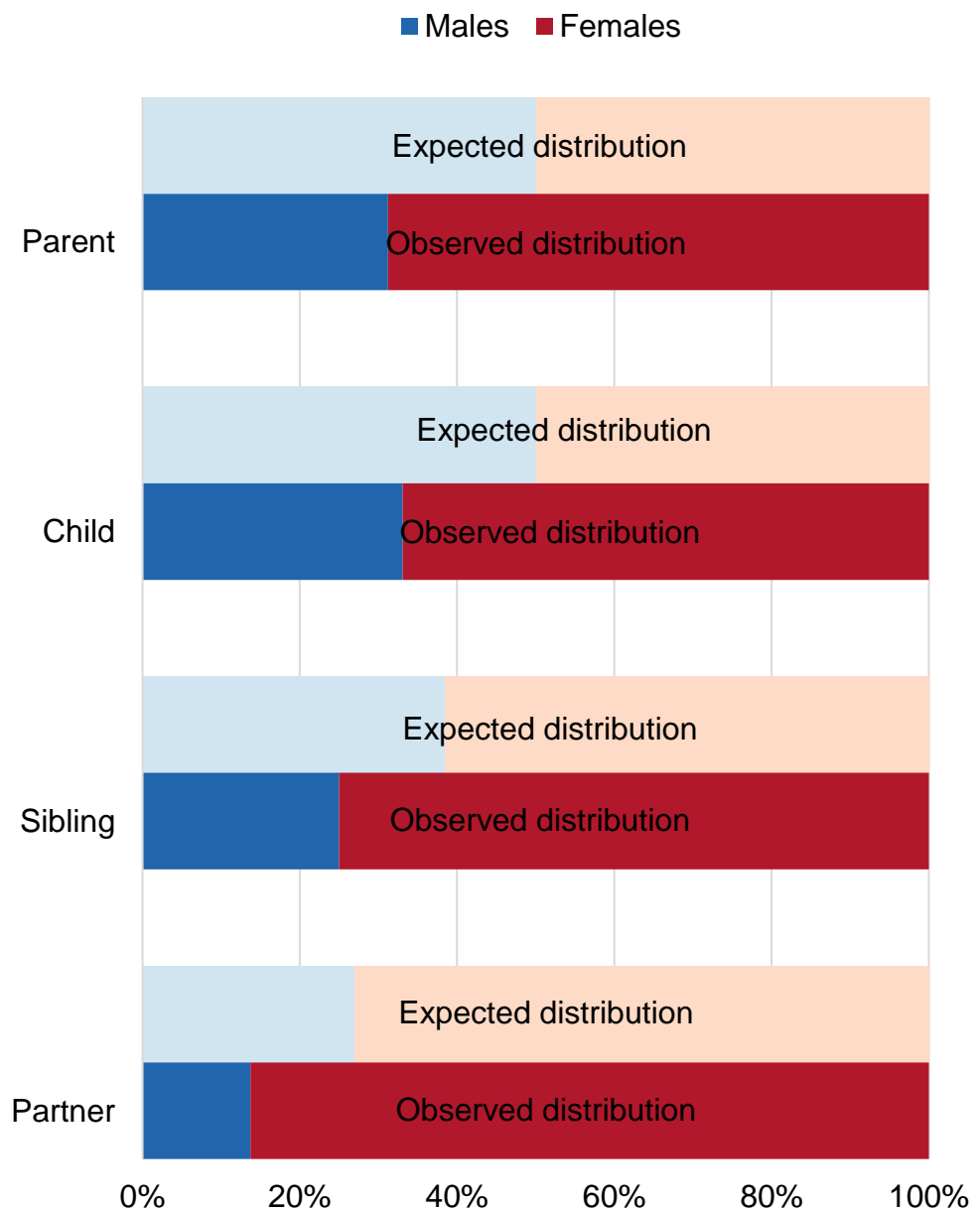


¹ Calculated as a moving average over 3 weeks.

B. Distribution of survivors by suicide seeking counselling with respect to relation and age group



C. Sex distribution by survivors of suicide seeking counselling according to relation that was lost to suicide¹



¹ An equal sex distribution was assumed, for instance, for children who lost parent to suicide; although fathers are more likely to die by suicide the probability of that the child who survives the incident is male is equal to the probability of the child being female. Similarly, an equal sex distribution was assumed among parents who lost a child to suicide, as each child equally is likely to both have a mother and a father. Regarding siblings, in average 2-child families, probabilities of sex distribution would be MM (25%), MF (50%), FF (25%). In the MF combination, female siblings would be more likely to be a survivor; implying a sex ratio as described below for partners in 50% of cases. Hence, out of 100

survivors of sibling's suicide, one would expect 61.5 would be females and 38.5 males in. Regarding partners, during the examined period the sex ratio of suicide in Denmark was 1:2.7 (Sundhedsdatastyrelsen, 2017); implying out of 100 suicide survivors, one would expect 73 to be female and 27 to be male.

Figure 2. Rate of contacts per 100,000 inhabitants per calendar year.

Denmark

