

# Young People’s Pathways to a Specialist Suicide Prevention Service and the Influence of Caregiver prior Suicidality and Mental Health Treatment

Anna Sidis<sup>1</sup>, Zozan Onay<sup>1</sup>, Frank Deane<sup>1</sup>, and Laura Robinson<sup>1</sup>

<sup>1</sup>University of Wollongong School of Psychology

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## Abstract

**Aim.** Timely help-seeking and pathways to care (PtC) have been linked to positive outcomes in suicidal adolescents. While the importance of formal contacts is recognised, caregivers also play a significant role in these pathways. Caregiver’s familiarity with mental health issues may influence an adolescent’s PtC. This study explores the relationship between a caregiver’s prior suicidality and mental health treatment on their children’s pathways to entering a specialist suicide prevention treatment program. **Method.** Caregivers (  $n = 118$ , 35 males and 83 females) of young individuals (12-25 years) who were admitted into an outpatient suicide prevention service, completed a self-report questionnaire describing their child’s onset of symptoms, help-seeking, PtC and the caregiver’s prior suicidality and mental health treatment. **Results.** Parents were the source most likely to recognise the onset of suicidality, with general practitioners and psychologists the most common first contacts. Significant delays were identified for onset duration averaging 48.0 weeks, and it was observed that shorter delays in treatment were related to fewer number of contacts. Caregiver prior suicidality was associated with longer delays in treatment but had no relationship with onset duration. **Conclusion.** Caregivers and professional contacts are vital agents in improving the PtC of suicidal adolescents. Results highlight the significant delays in treatment and the added complexity of a caregiver’s prior experience of suicidality to these pathways. These complexities warrant further exploration to minimise obstacles that hinder help-seeking and lengthen PtC, as this may improve interventions and outcomes for suicidal adolescents and their caregivers. **Keywords.** Pathways to care; delay in treatment; caregiver familiarity; suicide; adolescent.

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## Authors:

Zozan Onay, Frank P. Deane, Anna Sidis, and Laura Robinson

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## Affiliations:

School of Psychology, University of Wollongong

## Correspondence to:

Dr. Anna Sidis

School of Psychology

University of Wollongong, Northfields Avenue,

Wollongong, NSW, 2522, Australia

Email: asidis@uow.edu.au

## Abstract

**Aim .** Timely help-seeking and pathways to care (PtC) have been linked to positive outcomes in suicidal adolescents. While the importance of formal contacts is recognised, caregivers also play a significant role in these pathways. Caregiver’s familiarity with mental health issues may influence an adolescent’s PtC. This study explores the relationship between a caregiver’s prior suicidality and mental health treatment on their children’s pathways to entering a specialist suicide prevention treatment program.

**Method.** Caregivers ( $n = 118$ , 35 males and 83 females) of young individuals (12-25 years) who were admitted into an outpatient suicide prevention service, completed a self-report questionnaire describing their child’s onset of symptoms, help-seeking, PtC and the caregiver’s prior suicidality and mental health treatment.

**Results.** Parents were the source most likely to recognise the onset of suicidality, with general practitioners and psychologists the most common first contacts. Significant delays were identified for onset duration averaging 48.0 weeks, and it was observed that shorter delays in treatment were related to fewer number of contacts. Caregiver prior suicidality was associated with longer delays in treatment but had no relationship with onset duration.

**Conclusion.** Caregivers and professional contacts are vital agents in improving the PtC of suicidal adolescents. Results highlight the significant delays in treatment and the added complexity of a caregiver’s prior experience of suicidality to these pathways. These complexities warrant further exploration to minimise obstacles that hinder help-seeking and lengthen PtC, as this may improve interventions and outcomes for suicidal adolescents and their caregivers. **Keywords.** Pathways to care; delay in treatment; caregiver familiarity; suicide; adolescent.

## Introduction

Adolescence is characterised by major developmental and psychological shifts, often coinciding with increased suicidal ideation and behaviour (Bridge, Goldstein, & Brent, 2006; Husler, Blakeney, & Werlen, 2005). Globally, it is estimated that one person dies from suicide every 40 seconds, with suicide the second leading cause of death among those aged 15 to 29 years (WHO, 2016). Among Australians aged 15 to 24 years, suicide is the leading cause of death and accounts for over one third of deaths (36%). These statistics are alarming and highlight the high prevalence of suicide in young Australians.

Although suicidal thoughts and comorbid problems should serve as an internal signal to seek help, suicidal adolescents frequently withhold their distress from adults or professional services (McCarty, et al., 2011; Pisani, Schmeelk-Cone, Gunzler, & Petrova, 2012). As a result, less than a third of suicidal adolescents receive treatment at the time of their death/attempt, despite 80% to 90% presenting with a diagnosable psychological disorder (Gould, et al., 2003; Sheppard, Deane, & Ciarrochi, 2018; Wu, Liu, Fan, & Fuller, 2010). For adolescents at risk of suicide, communicating their distress and suicidal ideation with others may lead to life saving interventions (Pisani et al., 2012).

Despite the prevalence of mental illness among young people, many remain untreated or experience multiple help-seeking contacts before receiving appropriate care (MacDonald, Fahnman-Adelman, Anderson, & Iyer, 2018). Appropriate help-seeking and pathways to care (PtC) are essential for prevention and early intervention in suicidal adolescents . However, research on the PtC for adolescents with suicide ideation is limited. Most research on PtC has focused on help-seeking in response to hypothetical suicide ideation , or first-episode psychosis .

Appropriate PtC for suicidal adolescents can reduce the impact of mental health problems and the incidence of relapse or recurrence (Allen & McKenzie, 2015). In two Australian studies, one with university students (Deane, Wilson, & Ciarrochi, 2001) and another with high school students (Wilson, Deane, & Ciarrochi,

2005a), it was found that an increase in suicidal ideation significantly predicted lower intentions to seek help from formal (e.g. mental health professional, general practitioner, helpline) and informal (e.g. friends, family, parents) contacts in both clinical and non-clinical samples. This phenomenon has been referred to as “help-negation” and this along with low rates of help-seeking in suicidal individuals, highlights the need to better understand the processes involved in help seeking. One rarely explored opportunity is to expand knowledge about PtC for those who are successful in seeking help. Greater insights into PtC would allow suicide prevention services to better identify strategies (e.g., health literacy, referral strategies etc) to target appropriate links in the pathways to care.

Although the importance of formal contacts has been recognised in the help seeking process, often families, friends and caregivers play a significant role in the pathways to professional services, and act as primary contacts on the PtC for adolescents (Fridgen, et al., 2013; McGorry, 2007; Rickwood, et al., 2007). Families have been found to be highly involved in the PtC of adolescents and have been identified as the most common first contact for help (Del Vecchio, et al., 2015; Fridgen, et al., 2013). They also recommend further help-seeking contacts (Chadda, Agarwal, Singh, & Raheja, 2001), or directly initiate contact with help sources (Ehmann, et al., 2014; Giasuddin, et al., 2012).

An adult caregiver’s familiarity with mental health issues, particularly personal experience of mental health problems and psychological treatment, may influence the nature of an adolescent’s PtC and increase their likelihood of seeking help (Lutgens, Malla, Joobar, & Iyer, 2015; Schmeelk-Cone, Pisani, Petrova, & Wyman, 2012; Sullivan, Marshall, & Schonert-Reichl, 2002). However, research on caregiver’s familiarity with mental illness and PtC for their children has been mostly limited to first-episode psychosis and with conflicting findings. For example, Chen et al. (2005) found caregiver experience of mental illness was associated with shorter delays to treatment, whereas Norman et al. (2007) reported the reverse relationship and Lutgens et al. (2015) reported that caregiver familiarity did not affect the delay in treatment of psychosis. The disparity in findings has been attributed to different service contexts and sample characteristics.

In the context of suicide, it is possible that family members with a personal history of suicide or mental health problems may have; a higher sensitivity to symptoms of suicidality, more positive attitudes towards help seeking, and be more familiar with appropriate contacts. It has been suggested that familiarity through personal experience may offer caregivers greater sensitivity to and preparedness to navigate these complexities, the ability to better recognise early signs of psychological distress, and encourage more effective help-seeking (Chen, et al. 2005; Lutgens, et al., 2015; Sullivan, et al., 2002). However, these potential benefits have not yet been empirically tested. Even when caregivers recognise the need for help, some report that it is often difficult to access support (Stewart, et al., 2018). Thus, an understanding of the relationship between caregiver’s personal experiences of suicidality and prior mental health treatment and how these might be related to their young person’s PtC in the context of seeking help for suicidal behaviours is needed.

More specifically, we explore the relationship of these caregiver variables and delay in the young person’s help seeking journey from initial identification of a problem through to attending a specialist suicide prevention service. This study aims to describe the: (i) duration between the onset of presenting problem and seeking professional help for suicidal youth, (ii) duration between the onset of presenting problem and accessing a SP service for suicidal youth, (iii) number of steps in pathways to accessing a SP service for suicidal youth, (iv) primary contacts and initial contacts involved in the PtC for suicidal youth, and determine (v) whether caregiver’s personal experience of suicidality and mental health treatment is associated with PtC for suicidal youth.

## Method

### Participants

This study accessed data from the Suicide Prevention Research Databank held by Grand Pacific Health. Grand Pacific Health is an Australian primary healthcare organisation that operates a specialist youth SP service that provides intensive psychological treatment for youth at risk of suicide, including those who have engaged in self-harm or who are experiencing suicidal thoughts. Individuals admitted into this program were

between the ages of 12 and 25 years.

Participants of this study included parents/caregivers ( $n = 118$ , 35 males and 83 females) of young individuals (30 male and 88 female) admitted into the SP service. The average age of the young people was 15.47 (SD=2.17) years.

Ethical review and approval were obtained from the University of Wollongong Human Research Ethics Committee and the Grand Pacific Health (HE 2016/090).

### Procedure

As a part of admission procedures caregivers of patients were invited to attend a single group information session aimed at describing what the SP program involves, practical ways of improving communication with their child and sources of support for caregivers experiencing mental health difficulties themselves. During these information sessions caregivers were also invited to complete a questionnaire which asked them to describe their child’s onset of symptoms, help-seeking and PtC, and the level of familiarity and experience that the caregiver had with treatments for psychological problems, suicidal ideation and suicidal behaviour.

### Measures

**Onset duration.** The length of time (in weeks) between the onset of the presenting problem and data collection at entry to SP service was provided by caregivers and assessed using the following item:

*“How long ago was the first time you thought your child was at risk of suicide or self-harm?”*

**Help-seeking delay.** Caregivers also provided the length of time (in weeks) between the onset of the presenting problem and seeking professional help using the following item: *“How long was the period from when you first noticed there was a problem until you began to seek professional help?”*

**Treatment delay.** Treatment delay was determined by calculating the duration between help-seeking to accessing the SP service. Figure 1 shows a diagrammatic representation of these intervals.

### A B

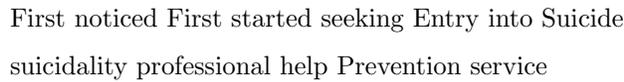
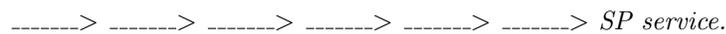


Figure 1. Representation of intervals.

Note. A+B = Onset to entry to suicide prevention service “*Onset duration*”; A = Problem identification to professional help seeking initiation “*Help seeking delay*”; B = Professional help seeking initiation to SP service entry, “*Treatment delay*”

**Contacts.** The sequence and types of contacts involved in the individual participants’ PtC was obtained using the following item; *“Please write in order who first alerted you to the problem, who you first contacted for help, and the other people you had seen prior to your child accessing the suicide prevention service.”* Parents responded using the following sequenced trajectory item;



**Caregiver Familiarity** . This was assessed using two factors: i) *caregiver’s experience of prior mental health treatment* ; and ii) *caregiver’s experience of prior suicidality* .

*Caregiver’s experience of prior mental health treatment.* This was assessed by two items: 1) *“Have you ever received psychological treatment in the past?”* 2) *“Have you ever been prescribed medication for a psychological problem in the past?”*(both Yes/No responses). Respondents who responded yes to either item were coded 1(yes) and all others 0 (no).

*Caregiver’s experience of prior suicidality* . This was assessed by three items: 1) *“Do you have a history of suicidal ideation/behaviour?”* 2) *“Do you have a history of deliberate self-harm ideation/behaviour?”*

(Yes/No responses), 3) “How many times have you made a suicide attempt (with intent to die)?” Responses for the last item were provided using a Likert scale (‘0 = none’, ‘1 = one’, ‘2 = two’, ‘3 = three’, ‘4 = four or more’). Finally, all items were summed to form one score with higher scores indicating greater parental familiarity. Cronbach’s alpha was .74.

### Analysis

Descriptive statistics were conducted on all measures with frequencies used to examine the most frequent contact, pathway chain, and the frequencies of each contact along the pathway. All variables were assessed for normality, linearity and homoscedasticity. Overall delay in treatment and number of contacts were significantly skewed, and non-parametric statistics were employed. Spearman’s correlations were conducted to examine the relationship between the number of pathway contacts and overall delay in weeks.

Additionally, three multiple regression analyses were conducted in SPSS (IBM Corp., 2022) one for each dependent variable: 1) onset duration; 2) treatment delay duration; and 3) help-seeking delay. For all regressions the following variables were included: caregiver familiarity (Caregiver MH treatment and Caregiver suicidality), the age of young person, young person’s gender and caregiver gender. Next moderation was conducted for each moderator separately (age and gender) for each of the dependent variables using PROCESS for SPSS (Hayes, 2013).

Prior to interpreting the results of the regression, several assumptions were evaluated, and results indicated that normality, linearity, homoscedasticity of residuals, multicollinearity and assessment for multivariate outliers supported assumptions of the analyses. Descriptive analysis (Table 2) revealed outliers. Therefore, a sensitivity analysis was conducted to determine whether results were affected by including, excluding or adjusting the highest time durations (outlier) in the regression findings. The results showed similar patterns of predictors and statistical significance irrespective of inclusion or exclusion of outliers for the time duration variables. Thus, we report the results of the regression with all duration scores as reported and unchanged (i.e., including outliers).

### Results

#### Descriptive Data

The mean number of steps in the pathway to the specialist suicide service was 2.90 contacts ( $SD = 1.33$ ). The most frequent sequence of contacts for the first three pathway steps was young person > doctor/GP > psychologist (9% of sample had this sequence). When the young person contact was not included, the most frequent sequence of contacts for the first three pathway steps was parent > doctor/GP > emergency services/psychiatrist (8% had this sequence). The most frequent initial contact was the young person, followed by the parent. The most common professional contact was with a GP/Doctor followed by Psychologist. The mean number of weeks between the onset of presenting problem to seeking professional help (help-seeking delay) was 16.5 weeks ( $SD=1.5$ , range 1 to 208). Treatment delay, that is the time between seeking professional help to accessing the SP service, averaged 37.7 weeks ( $SD=11.0$ ; range 1 to 512). The duration between onset of presenting problems to accessing SP, that is onset duration had a mean of 48.0 weeks ( $SD=16.0$ , range 1 to 512). Further descriptive statistics of the frequency of each contact along the pathway are shown in Table 1.

Table 1 *Frequencies and percentages of contacts within each steps of pathway to care.*

Type of Contact	Steps on Pathway	Steps on Pathway	Steps on Pathway	Steps on Pathway
	Contact 1 ( $N = 118$ ) % ( $n$ )	Contact 2 ( $N = 103$ ) % ( $n$ )	Contact 3 ( $N = 67$ ) % ( $n$ )	Contact 4 ( $N = 51$ ) % ( $n$ )
Young person	Young person	24.6 (29)	1.9 (2)	1.5 (1)
Family	Family	5.9 (7)	1.9 (2)	1.5 (1)
Parent	Parent	23.7 (28)	8.7 (9)	1.5 (1)
School	School	11.9 (14)	3.9 (4)	0 (0)
GP/Doctor	GP/Doctor	10.2 (12)	37.9 (39)	29.9 (20)

Type of Contact	Steps on Pathway	Steps on Pathway	Steps on Pathway	Steps on Pathway
Friend	Friend	4.2 (5)	4.9 (5)	7.5 (5)
School Counsellor	School Counsellor	9.3 (11)	10.7 (11)	9.0 (6)
Psychologist	Psychologist	5.9 (7)	20.4 (21)	35.8 (24)
Emergency Service	Emergency Service	4.2 (5)	7.8 (8)	7.5 (5)
Other	Other	0 (0)	1.9 (2)	6.0 (4)

### Correlations between Number of Contacts, Time Durations and Caregiver variables

As shown in Table 2 Spearman’s correlation showed a small significant positive relationship between the number of contacts and delay in treatment ( $r_s = .19, p < .05$ ). No significant relationships were found between the number of contacts with onset duration or help seeking delay. A small significant negative relationship was found between number of contacts and caregiver prior mental health treatment ( $r_s = -.22$ ), such that higher caregiver prior mental health treatment was associated with lower numbers of contacts. Help-seeking delay and onset duration had a positive correlation ( $r_s = .69 p < .05$ ).

Table 2. *Correlations between number of contacts, time durations and caregiver familiarity variables*

	1	2	3	4	5	6	7	8
<i>Gender</i>	1							
<i>Caregiver’s gender</i>	.00	1						
<i>Age</i>	-.38**	.01	1					
<i>Number of contacts</i>	.04	.05	-.11	1				
<i>Treatment delay</i>	.03	.02	.18	.19*	1			
<i>Onset duration</i>	.04	.03	.15	.16	.69**	1		
<i>7. Help seeking delay</i>	.04	.05	.14	-.09	-.05	.40**	1	
<i>8. Caregiver prior Suicidality</i>	.08	-.01	-.11	.08	.18	.12	-.01	1
<i>Caregiver prior MH treatment</i>	.02	-.10	.02	-.22*	-.14	-.10	.04	.34**

\*\* $p < .01$ , \* $p < .05$ . For gender 1=male, 2=female

### Predictors of Time Durations.

Table 3 provides the results from the three regressions with each of the three-time duration variables as dependent variables.

**Onset duration** . Results show a significant positive relationship between the number of contacts and onset duration (Table 3). There was also a significant positive association between caregiver prior suicidality and onset duration, as well as between age and onset duration. Finally, there was a significant relationship

between gender and onset duration, with onset duration being significantly longer in females (M= 52.42, SE = 7.54) compared to males (M=21.89, SE=12.10).

**Help-seeking delay** . There were no significant associations between the number of contacts, caregiver suicidality or caregiver prior treatment and help-seeking delay. There were no other significant relationships with help-seeking delay.

**Treatment delay** . Number of contacts, caregiver MH treatment, caregiver suicidality were significantly positively associated with treatment delay (Table 3). There was also a significant positive relationship between age and treatment delay and a significantly negative relationship between gender and treatment delay. Overall delay in treatment was significantly longer for females (M=46.75, SE=7.33) than for males (M=8.17, SE=11.58).

Table 3. *Regression coefficients for parent familiarity and number of contacts for each type of time delay*

	<b>Onset Duration</b>	<b>Onset Duration</b>	<b>Help seeking delay</b>	<b>Help seeking delay</b>	<b>Treatment Delay</b>	<b>Treatment Delay</b>
	<i>B(SE)</i>	<i>CI [LL, UL]</i>	<i>B(SE)</i>	<i>CI [LL, UL]</i>	<i>B(SE)</i>	<i>CI [LL, UL]</i>
Gender Male	-30.53 (14.07)*	[-57.41, -1.64]	7.76 (7.31) 0 <sup>a</sup>	[-6.74, 22.25]	-37.20	[-64.10, 10.29]
Female	0 <sup>a</sup>				(13.56)** 0 <sup>a</sup>	
Parent gender	-12.88 (13.22)	[-39.09, 13.34]	-6.38 (7.09) 0 <sup>a</sup>	[-20.46, 7.77]	-14.28 (12.79)	[-39.68, 1.11]
Male Female	0 <sup>a</sup>				0 <sup>a</sup>	
Age	21.26 (2.91)***	[15.49, 27.03]	1.94 (1.54)	[-1.12, 5.00]	20.33 (2.74)***	[14.90, 25.77]
Number of contacts	11.63 (4.62)**	[2.46, 20.80]	-1.60 (2.48)	[-6.51, 3.31]	13.13 (4.50)**	[4.19, 22.07]
Caregiver prior MH treatment	9.82 (13.27) 0 <sup>a</sup>	[-16.46, 36.12]	4.99 (6.97) 0 <sup>a</sup>	[-8.84, 18.82]	5.45 (12.95) 0 <sup>a</sup>	[-20.25, 31.16]
Yes						
No						
Caregiver prior suicidality	10.22 (4.80)*	[.69, 19.74]	-.46 (2.43)	[-5.29, 4.36]	11.59 (4.57)*	[2.52, 20.67]
Number of contacts x gender	22.02 (9.76)*	[2.67, 41.37]	.07 (5.19)0	[-10.22, 10.36]	18.88 (9.30)*	[.41, 37.35]
Number of contacts x age	6.16 (1.60)**	[3.00, 9.32]	-.40 (.92)	[-2.23, 1.41]	6.00 (1.48)***	[3.06, 8.93]
Caregiver suicidality x gender	9.10 (12.40)	[-15.49, 33.69]	-2.18 (6.27)	[-14.63, 10.27]	16.32 (11.54)	[-6.61, 39.26]
Caregiver suicidality x age	5.46 (2.63)*	[.244, 10.68]	-.36 (1.37)	[-3.08, 2.36]	7.81 (2.50)*	[2.84, 12.79]

Note. 0<sup>a</sup> = This parameter is set to zero because it is redundant. \*\*\* $p < .001$ ; \*\* $p < .01$  \*  $p < .05$ .

### Post-hoc moderation analyses

In an effort to better understand the effects of number of contacts and caregiver prior suicidality on treatment delay and onset duration we conducted exploratory moderation analyses with gender and age.

There was a significant interaction effect of gender on the relationship between number of contacts and onset duration (Table 3). Conditional effects showed that this relationship was significant and positive for females ( $b=10.09$ ,  $SE=5.37$ ,  $p=.001$ ) but not significant for males ( $b=-3.93$ ,  $SE=8.25$ ,  $p=.64$ ). Thus, for females the greater number of contacts was related to longer onset duration. There was also a significant interaction effect of age on the relationship between number of contacts and duration. Conditional effects showed that this relationship was only significant for older young people (that is, one standard deviation above the mean = 17 years;  $b=17.41$ ,  $SE=4.60$ ,  $p=.002$ ) compared to the mean age of 15 years and the younger age of 13 years. Thus, the relationship between number of contacts and onset duration was strongest for females and older youth. The same pattern of results was found for the relationship between number of contacts and delay in treatment.

Gender also moderated the relationship between number of contacts and delay in treatment. Conditional effects shows that this positive relationship was significant for females ( $b=19.02$ ,  $SE=5.30$ ,  $p<.001$ ) and not for males. Age also moderated the relationship between number of contacts and delay in treatment. Conditional effects showed that this positive relationship was only significant for older young people (that is, one standard deviation above the mean = 17 years;  $b=18.63$ ,  $SE=4.39$ ,  $p<.001$ ) compared to the mean age of 15 years and the younger age of 13 years.

The moderating effect of age on the relationship between caregiver prior suicidality and onset duration was significant. Conditional effects showed that this relationship was significant and positive at the mean age (15 years;  $b=16.35$ ,  $SE=5.58$ ,  $p=.004$ ) and at one standard deviation above the mean age (17 years;  $b=27.28$ ,  $SE=27.28$ ,  $p=.005$ ), however it was not significant at one standard deviation below the mean age (16 years). Gender did not moderate the relationship between caregiver prior suicidality and onset duration.

The moderating effect of age on the relationship between caregiver prior suicidality and treatment delay was significant. Conditional effects showed a significant positive relationship at the mean age (15 years;  $b=21.16$ ,  $SE=5.34$ ,  $p<.001$ ) and at one standard deviation above the mean age (17 years;  $b=36.78$ ,  $SE=9.18$ ,  $p<.001$ ). There was no significant relationship between caregiver suicidality and delay in treatment for younger participants (13 years). Gender did not moderate the relationship between caregiver prior suicidality and treatment delay.

## Discussion

This study investigated the PtC for suicidal adolescents entering a tertiary suicide prevention service, and the impact of caregiver prior suicidality and mental health treatment on onset duration and treatment delay. Consistent with previous research (e.g., Hodgekins et al., 2017), participants experienced significant delays averaging 48.0 weeks from the onset of problem to obtaining suicide prevention treatment. Results revealed that most commonly there were three contacts in the PtC, with parents and the individual young people themselves most likely to recognise the onset of suicidality. The findings suggested that with regard to professional sources, the majority of young people seek help from their general practitioner, followed by psychologists and emergency services, indicating the important roles health services play in providing suicidal adolescents with treatment and/or onward referral. Additionally, longer treatment delays in reaching the suicide prevention service were related to higher numbers of contacts in the PtC. This suggests that attempts at addressing the young person's difficulties through other sources may delay the overall time it takes to reach the specialist SP service. The current study cannot clarify whether these earlier contacts were appropriate or efficient, in that they promptly referred the young person to the next level of care if they were beyond the expertise of the contact or not making progress. Further, the current study does not account for those young people who were successfully supported by earlier sources of help before requiring referral to the specialist suicide prevention program. The current study only reveals information about those who needed further treatment.

Bivariate correlations indicated that young people whose caregivers had prior mental health treatment had lower numbers of contacts. This would be consistent with a situation where caregivers' knowledge of the service system as a function of having navigated and utilised it themselves might mean that a more direct

route to specialist suicide prevention program results. However, the multiple regressions indicated that the hypothesis that caregiver prior mental health treatment would be associated with shorter onset duration or delays in treatment was not supported. This may be due to the number of contacts being only weakly related to treatment delays. Instead, caregiver prior suicidality appeared to have a negative impact on the treatment delay, such that adolescents whose caregivers reported prior suicidality were more likely to experience longer treatment delays in reaching the SP service. It is unclear why this might be the case and in an effort to better understand these relationships we explored potential interactions with age and gender.

The current study found that the relationships between caregiver prior suicidality and both onset duration and treatment delays were moderated by age of the young person. In short, higher prior caregiver suicidality was related to higher delays but only for older age groups. It is possible that greater parental involvement with younger adolescents who have suicidality evokes greater urgency amongst parents which speeds the referral process.

Prior research has found that as a young person progresses through adolescence, their parents become less prominent and there is a greater need for autonomy and to handle their problems independently (Gould, et al., 2004; Wilson, Deane, & Ciarrochi, 2005a). Reduced parental involvement and greater independence may explain the longer delays in treatment for older adolescents but we can only speculate as to why caregiver prior suicidality is associated with higher treatment delay. It may be that older adolescents are more aware of their caregivers prior suicidality and they may perceive that prior professional help seeking was not helpful for them, so they delay their own treatment. Alternatively, older adolescents may have poorer communication with caregivers who have experienced suicidality which reduces any influence caregivers might have in the help seeking process. There is a need for future research to explore the potential dynamics that may be at play that determines why caregiver prior suicidality might be associated with longer treatment delays in older age groups. In the meantime, general strategies such as increasing young peoples' mental health literacy including that treatment can be helpful may facilitate help-seeking behaviour (Logan & King, 2001; Rickwood, Deane, Wilson, & Ciarrochi, 2005).

Our results suggested that suicidal adolescents whose caregiver has a prior experience of suicidality or self-harm will experience longer durations between contact with other professionals and reaching a specialist suicide prevention service. A similar result was found in a population with psychosis (Norman et al., 2007), where a history of psychotic disorder in family relatives was associated with longer delays in treatment, despite the relative being more likely to recognise the need for help for the unwell individual. In contrast, Chen et al. (2005) looked at family relatives who had received psychiatric treatment, and found that previous family experience of treatment was related to reduced delays in Hong Kong adolescents accessing treatment for psychosis. This disparity may in part be due to the prominent role that families play in the lives of adolescents, even older adolescents in Hong Kong. Given our findings suggest that prior caregiver suicidality may have a negative role on the PtC of suicidal adolescents, future research is needed to clarify why prior experience of suicidality is related to longer delays. It may be that prior experiences are predominantly perceived as being negative or unhelpful which then increases the reluctance of parents to pursue professional services. Studies have found that the perceived helpfulness of prior help-seeking is related to future help-seeking intentions (e.g., Cusack et al., 2006,  $r = .32$ ) and attitudes towards help-seeking .

Our results revealed that gender was significantly associated with onset duration and treatment delays with females having significantly longer delays than males. Moderation analyses also showed that relationship between number of contacts and treatment delays was significant for females but not males. Thus, the number of contacts appeared to increase delays for females. It is possible that the range of informal supports (e.g., friends/family) that females are willing or able to access is higher than for young males and this contributes to higher numbers of contacts and subsequent delays. In general, women and girls have more positive help seeking attitudes and are more like to seek help, it is possible that for young men they do not reveal their suicidality as early and wait to initiate help seeking only at the point where their suicidality is high and acute. This may result in higher perceived risk and a more direct route to tertiary suicide prevention programs.

Interestingly, caregivers with a prior experience of treatment did not have a significant impact on treatment delay, help-seeking delay or onset duration. We expected that greater familiarity with mental health service systems may be related to shorter delays in getting a young person to help. There are several possibilities for this lack of relationship. As noted above, it may be that prior help seeking was viewed as unhelpful. For example, Ten Have et al. (2010) found that 32% of a large European sample who had previously used mental health services perceived seeking professional help for serious mental health as worse than or equivalent to no help. Perceptions of treatment being unhelpful may nullify any effects of caregiver familiarity on help-seeking behaviour (Velasco, Santa Cruz, Billings, Jimenez, & Rowe, 2020). Future research should seek to assess the perceived helpfulness of prior help-seeking and professional service use, in order to determine the efficacy of treatments applied in the professional sector and to encourage providers to learn from patient's experiences of care.

The results also identified a delay in treatment of over 9 months once engaged within professional/formal contacts. It could be argued that the greatest delay in the pathway to care for suicidal adolescents exists once they have engaged professional contacts. This delay may be a result of multiple processes, such as the lack of clarity professionals may have about the adolescent's problem and what is required. Professional contacts attempting to treat the problem before recognising the need for tertiary referral to a specialist service may contribute to delays in treatment. As adolescents develop mental health problems, it is possible that emerging symptoms are interpreted as typical teenage behaviour, leading to inappropriate services or lack of onward referral. The role of professional services, particularly general practitioners, is well recognised and increased training and knowledge is vital to improve recognition and response to psychological distress (Pfaff, Acres, & McKelvey, 2001; Wilson, Deane, Marshall, & Dalley, 2010). Some initial contacts may also be more desirable to adolescents as they utilise lower intensity treatments. Professionals, such as school counsellors, may help many adolescents resolve the problems that underlie their suicidality, but there may also be a proportion where problems worsen such that suicide risk remains. Under these circumstances there are likely to be longer delays getting to specialist services.

### Limitations

While this study was novel in looking at the PtC in suicidality specifically, there were some limitations. The data in this study was collected retrospectively, therefore the PtC and durations were based on caregivers' self-report and recall accuracy. The reliability of our self-report questionnaire has not been specifically assessed, however the PtC measure has been used in a previous study. Another weakness is the moderate sample size which may limit statistical power. Given the importance of reducing the delays in help seeking and treatment in suicidal adolescents, further research into the PtC and role of caregiver familiarity for this population is warranted with larger sample sizes. Finally, this study was conducted on participants who were referred to a specialised SP service. Thus, not all findings can be directly compared with results from other mental health care systems across countries.

### Conclusion

Parents and primary caregivers play a vital role as an initial contact and often set in motion the help-seeking process to accessing professional services (Rickwood et al., 2007). It is recognised that adolescents in their early to mid-teens still depend on their parents to help them identify the presence of mental health problems and facilitate appropriate help-seeking behaviour. This study highlights the significant delays in treatment experienced by adolescents with suicidal ideation or behaviour, and how their caregiver's prior experience of suicidality is associated with these pathways and delays. Future research should clarify whether caregiver perceived helpfulness of their prior mental health treatment helps explain why prior caregiver suicidality is related to longer treatment delays.

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