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Alida Gulfi Jean-Luc Heeb Dolores Angela Castelli Dransart Elisabeth Gutjahr

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Professor Alida Gulfi, Professor Jean-Luc Heeb, Professor Dolores Angela Castelli Dransart and Professor Elisabeth Gutjahr, all are based at School of Social Work Fribourg (HETS-FR), University of Applied Sciences and Arts Western Switzerland (HES-SO), Givisiez, Switzerland.

Abstract

Purpose – *The purpose of this paper is to analyze and describe the profiles of mental health professionals and their relationship to professional reactions and changes in working practice following a patient suicide.*
Design/methodology/approach – *Data from 713 mental health professionals working in various institutional settings and in private practice in French-speaking Switzerland were collected by written questionnaires.*
Findings – *Four distinct profiles with low to moderate professional reactions and changes in working practice were identified by cluster analysis. The type and intensity of relationship between professional and patient, and psychological and/or social support following the patient suicide were the most discriminant factors of the four profiles.*
Originality/value – *The findings contribute to the understanding of professional consequences of patient suicide on mental health professionals.*

Keywords *Cluster analysis, Changes in working practice, Mental health professionals, Patient suicide, Professional reactions, Profiles*

Paper type *Research paper*

Introduction

Research indicates that mental health professionals working with patients suffering from mental health disorders are likely to experience completed patient suicide during their career (Chemtob *et al.*, 1989; Jacobson *et al.*, 2004; Takahashi *et al.*, 2011). The suicide of a patient can be a stressful and painful experience and often engenders a variety of personal and professional consequences. The most common personal responses are shock, sadness, helplessness and stress reactions (Castelli Dransart *et al.*, 2014; Ellis and Patel, 2012). On a professional level, emotional, cognitive and behavioral difficulties can include questioning one's professional identity, experiencing feelings of failure and incompetence, developing a fear of working with suicidal patients or anxiety about public or legal outcomes (Campbell and Fahy, 2002; Collins, 2003; Ellis and Patel, 2012; Farberow, 2005; Gulfi *et al.*, 2010; James, 2005). The loss of a patient by suicide is also known to engender both positive (i.e. sensitization to the issue of suicide, greater consultation with colleagues or supervisors) and negative (i.e. over-cautious practices when working with at-risk patients) changes in working practice (Campbell and Fahy, 2002; Ellis and Patel, 2012; Farberow, 2005; Henry *et al.*, 2003). It can also negatively influence

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how the staff of medical and social institutions (disturbed relationships between colleagues, communication problems within hierarchy) (James, 2005; Joyce and Wallbridge, 2003) and their management (turnover, absenteeism, burn out) function (Pommereau, 2004).

The severity of professional consequences following a patient suicide is highly variable and depends on several factors, mainly the relationship with the patient, professional's characteristics and the support received. Thus, a close relationship with the patient has been shown to be associated with increased professional reactions and changes in working practice (Campbell and Fahy, 2002; Ellis and Patel, 2012; Gulfi *et al.*, 2010; Hendin *et al.*, 2004; Henry *et al.*, 2003). The length of the relationship, however, is less predictive of the professional impact: some studies reported greater consequences (Ellis and Patel, 2012; Grad, 1996), whereas Gulfi *et al.* (2010) found a negative correlation with changes in working practice. Findings regarding the role of professional's characteristics, such as gender and experience, are also inconclusive. Some studies found that the patient suicide had greater repercussions on professional life among women compared to men (Gaffney *et al.*, 2009; Grad and Michel, 2005; Grad *et al.*, 1997; Gulfi *et al.*, 2010; Henry *et al.*, 2008), as well as among less experienced compared to more experienced professionals (Gulfi *et al.*, 2010; McAdams and Foster, 2000). However, other authors reported no differences with regard to gender (McAdams and Foster, 2000) and years of practice (Grad *et al.*, 1997). Finally, literature in the field highlights the importance of support: reduced professional reactions have been observed among mental health professionals who acknowledged sufficient support to manage the aftermath of patient suicide (Gulfi *et al.*, 2010; Henry *et al.*, 2003) or who felt more integrated in professional networks (Ruskin *et al.*, 2004).

Despite evidence about the influence of single risk or protective factors on professional practice after a patient suicide, the professionals' profiles as they relate to professional consequences have not been addressed to date. Hence, a comprehensive view addressing the professionals' profiles (i.e. the interplay of characteristics that constitutes an individual profile) and their relationship with professional repercussions is still lacking. Looking at profiles implies simultaneously considering a set of characteristics, focussing their interrelations, rather than their single effects. A central issue is to examine whether a few number of profiles can be identified, i.e. whether risk and protective factors can be subsumed into some clear-cut patterns. A major benefit of such a comprehensive view is to contribute to more targeted preventive measures, as risks can be addressed on the basis of a profile rather than on an isolated factor.

Literature on the professional repercussions of patient suicide on mental health professionals is mainly descriptive or based on regression analysis. As a consequence, findings concentrate either on the overall quantification of professional reactions and changes in working practice or on factor-by-factor analysis. While descriptive studies provide insight into professional reactions and changes in working practice according to factors such as gender, relationship with the patient or support, regression analyses indicate how gender, patient relationship and support contribute to explaining the overall variation of professional consequences. In both cases, analyses rely on a factorial design: the overall mean is broken down into subgroup means. Subgroups defined by factors or combinations of factors are, however, not sufficient to address individual profiles. Due to sample size, factorial designs are often limited to a variable by variable examination of professional consequences and they thus fail to capture how factors interrelate, i.e. how characteristics such as gender, relationship with the patient and support received combine. For instance, how do being a woman, having a close professional relationship and insufficient support relate to each other? Do these characteristics combine in a unique way or in different profiles? And how do these profiles relate to professional consequences following a patient suicide?

To address individual profiles, classification techniques – hierarchical and non-hierarchical cluster analysis – will be used in the present paper. The objectives of this paper are: first, to subsume the various individual profiles of mental health professionals into a few contrasting and homogenous subgroups, i.e. typical profiles; second, to examine how the degree of professional reactions and changes in working practice is associated with these typical profiles; and third, to characterize these typical profiles according to a small set of discriminating variables in order to provide a basis for more targeted preventive measures.

Method

Sampling and procedure

Data came from two samples from a research project conducted by the authors in French-speaking Switzerland on the personal and professional consequences of patient suicide on mental health professionals.

The first sample was comprised of professionals working with populations at risk of suicide within mental health and social care institutions (psychiatric hospitals and outpatient psychiatric services, social and medical services, residential homes for people with mental health or addiction disorders, homes for the elderly and prisons) in the cantons of Fribourg, Geneva and Vaud. A two-stage sampling procedure was used. In a first stage, using public directories as a base, a brief written questionnaire was sent to 767 institutions, in order to identify those having lost a patient to suicide in the five years prior to the survey. Out of the 521 institutions that completed the questionnaire (response rate of 67.9 percent), 152 (29.2 percent) reported a patient suicide, and a subset of 140 institutions agreed to participate in the second phase of research. In a second stage, 5,123 self-administered written questionnaires were sent to these institutions, to be filled in by psychiatrists, nurses, nursing auxiliaries, psychologists, professionals in educational psychology and social workers. To improve the response rate, local referents were trained in more complex organizational settings (such as major hospitals) to provide their colleagues with information about the study and to motivate them to take part; they acted as mediators between the research group and eligible participants. Of the 1,211 (23.6 percent) professionals who returned the questionnaire, 704 (58.1 percent) had experienced at least one patient suicide. Of these participants, 119 were excluded because they did not complete two main study scales (i.e. four or more missing items on either the Long-Term Emotional Impact Scale or the Professional Practices Impact Scale). Thus, the final sample included 585 professionals working in institutional settings.

The second sample concerned psychiatrists and psychologists working in private practice in the cantons of Fribourg, Geneva, Jura, Neuchâtel, Valais[1] and Vaud. All 769 psychiatrists and 765 psychologists who were members of psychiatric and psychological professional societies at the time of the study were asked to fill in the self-administered written questionnaire (adapted to the private practices). A total of 415 therapists completed the questionnaire (response rate of 27.0 percent); 158 (38.1 percent) had been confronted with a patient suicide. Similarly to the institutional sample, 30 therapists were excluded because they had incomplete data on the above mentioned scales. A final sample of 128 therapists was achieved.

Hence, pooling the institutional and private practice data yielded a final sample of 713 mental health professionals who had all completed the same instruments.

Instruments

Data were collected by means of a standardized self-administrated written questionnaire including 60 questions and nine scales (adapted from Henry *et al.*, 2004). The following groups of questions were used in the present study: first, professional reactions and changes in working practice after a patient suicide; and second, characteristics which may differentiate individuals in subgroups with regard to professional consequences experienced following a patient suicide.

Two scales were used to measure the effect of patient suicide with regard to professional reactions and changes in working practice. Respondents had to complete the scales' items both retrospectively, with reference to the first month after patient suicide, and with regard to the time at which the survey was completed. Professionals who had experienced more than one suicide were asked to focus on the most recent one.

The Long-Term Emotional Impact Scale was used to assess possible reactions to and feelings about patient suicide (e.g. increased sensitivity to signs of suicidal risk, increased anxiety when working with suicidal patients/clients, increased concern over the competence to work with suicidal patients/clients) (Horn, 1995; Kleespies *et al.*, 1993). For each item, respondents were asked to rate the impact on a five-point scale ranging from 1 (no impact) to 5 (very strong impact). The scale, in its original form, is comprised of ten items. However, for the purposes of the present

study, the item "Diminished sense that therapy was effective" was left out, as it was not applicable to nurses, nursing auxiliaries, social workers and professionals in educational psychology. Internal consistency was high across time (first month after patient suicide: $\alpha = 0.89$, at the time of the investigation: $\alpha = 0.83$). This finding is consistent with Horn's (1995) research, where Cronbach's α was 0.85 at the time of the survey. The Professional Practices Impact Scale measures the consequences of patient suicide on working practice (Henry *et al.*, 2004). It consists of nine potential professional changes which are the most commonly discussed in the literature (e.g. increased interest in the phenomenon of suicide, increased attention and sensitivity to legal matters of working practice). For each item, participants indicated whether they noticed a change in their working practice (yes) or not (no).

Characteristics to differentiate professionals into subgroups were selected from a literature review on factors that contribute most to professional reactions and changes in working practice following patient suicide: participants' characteristics (gender, age, length of professional experience, number of suicides experienced during the career), relationship with the patient (length, closeness to the patient, feeling responsible for the patient, still in contact with the patient at the time of suicide), circumstances of suicide (expected patient suicide, previous suicide attempts), psychological and/or social support (needed, sought, received), work setting (institutions vs private practice) and theoretical or clinical training prior to patient suicide.

Statistical analyses

All statistical analyses (sample description, classification of participants into subgroups and characterization of the evidenced subgroups) were performed using SPSS version 19.0 (SPSS, 2010). The sample was described by uni- and bi-variate statistics. Based on their characteristics mental health professionals were classified into a small number of internally homogeneous and externally heterogeneous subgroups by cluster analysis. Thus, professionals with similar characteristics were clustered into the same subgroup, while the different subgroups were expected to account for variations in individual profiles.

To achieve cluster analysis, hierarchical and non-hierarchical techniques were combined (Milligan and Sokal, 1980). In the first step, the sample was divided into subgroups by hierarchical clustering (Euclidian distance, Ward's method). Both statistical (variance explained, dendrogram) and practical criterion (subgroup size) were considered to determine the number of subgroups. In the second step, a non-hierarchical analysis (*k*-means) was conducted to refine the initial partition evidenced by hierarchical clustering. To ensure comparison between variables, the characteristics used in the cluster analyses were either dummy-coded or rescaled. Variations of the data order and cross-validation (comparison of the separate clustering of the randomly split sample) were used to test the stability of the classification.

Results

Sample description

Of the 713 mental health professionals, 38.4 percent were nurses, 28.2 percent psychiatrists, 12.6 percent social workers, 10.0 percent psychologists, 5.5 percent professionals in educational psychology, 2.3 percent nursing auxiliaries and 3.0 percent other professionals. Nearly two-thirds (64.1 percent) were women and their mean age at the time of investigation was 45.4 years (SD = 10.1, range 22-76 years). Most participants (90.3 percent) had more than ten years of professional experience ($M = 18.0$ years, SD = 10.6) and 82.0 percent worked in institutional settings (vs 18.0 percent in private practice). During their career, most professionals had faced more than one patient suicide ($M = 3.7$, SD = 4.2). Time elapsed since the most recent patient suicide was 4.4 years (SD = 5.4) and 27.2 percent had experienced a patient suicide more than five years prior to the study. Of all participants, 40.7 percent reported having received theoretical training and 26.4 percent clinical training in suicide prevention.

Concerning the most recent patient suicide, 34.4 percent of the mental health professionals were aware of a previous suicide attempt by the deceased patient, 54.1 percent knew about suicidal ideation at the time of suicide and 77.1 percent expected the suicide of the patient. The mean

length of the relationship between the professional and the deceased patient was 1.5 years (SD = 2.6) and 60.3 percent of participants were still in contact with him/her at the time of the suicide.

About half of the mental health professionals felt responsible for the deceased patient (49.6 percent) and felt close to him/her (48.0 percent). In the aftermath of the patient suicide, 38.5 percent of participants reported having been in need of social and/or psychological support and 38.8 percent having sought such support. Finally, 75.1 percent reported having received sufficient support to cope with the event.

Professional reactions and changes in working practice

Mental health professionals generally reported low to moderate professional reactions during the month following the patient suicide according to the Long-Term Emotional Impact Scale ($M = 2.44$, SD = 0.88) (Table I). The intensity of professional reactions diminished over time (at the time of the survey: $M = 1.89$, SD = 0.62).

According to the Professional Practices Impact Scale, professional reactions were accompanied by little changes in working practice during the month after patient suicide ($M = 0.36$, SD = 0.23) (Table I). Similarly to the findings on professionals' reactions, changes in working practice were also less important at the time of the survey ($M = 0.30$, SD = 0.22).

Subgroups identified, professional reactions and changes in working practice

A classification of professionals into four subgroups was most suitable according to the hierarchical cluster analysis. Solutions with fewer subgroups aggregate subgroups with dissimilar profiles, while additional splits of the subgroups do not help to find further substantial contrasting profiles. Applying non-hierarchical clustering to the initial solution with four subgroups refined the classification, as 19.4 percent of the participants moved to another subgroup (Table I). Subgroup membership accounts for up to 15.1 percent of the variations in the total score of professional reactions and changes in working practice.

The final classification yields two subgroups with low consequences after patient suicide with regard to both professional reactions and changes in working practice and two subgroups with moderate consequences. About 60 percent of the participants experienced low professional consequences.

Profiles by subgroups

Characteristics of the four subgroups identified are presented in Table II. Each subgroup is described, according to the characteristics in which it differs noticeably from the other

Table I Professional reactions and changes in working practice during the first month after suicide (T1) and at the time of the survey (T2) of the four clusters of professionals

	Professional reactions			*Changes in working practice*			*Size*	
Subgroup	*Mean at T1*	*Mean at T2*	*Mean change T1–T2*	*Mean at T1*	*Mean at T2*	*Mean change T1–T2*	*n*	*%*
1	2.12	1.77	–0.36	0.32	0.28	–0.05	320	44.9
2	2.29	1.77	–0.53	0.28	0.21	–0.07	111	15.6
3	2.75	2.07	–0.67	0.45	0.40	–0.06	112	15.7
4	2.91	2.10	–0.81	0.44	0.36	–0.08	170	23.8
Total	2.44	1.89	–0.54	0.36	0.30	–0.06	713	100.0
Eta[2a]	6.5%	15.1%	9.6%	8.5%	7.5%	0.6%		

Notes: Professional reactions ratings are based on a scale from 1 (no impact) to 5 (very strong impact). For changes in working practice, the mean score of the items was used: "no = no change in practice is noticed" coded as 0 and "yes = a change in practice is noticed" coded as 1. Mean change may differ from values at *T1* and *T2* due to rounding. [a]Share of the total variance of the scores on the impact scales explained by cluster membership (one-way analyses of variance, $p < 0.001$ for all scales)

Table II Mental health professionals' characteristics

Variables	*Subgroup 1*	*Subgroup 2*	*Subgroup 3*	*Subgroup 4*
Participants' characteristics				
Gender (women)	66.9%	45.0%	77.7%	62.4%
Age (years)	43.4	54.4	43.5	44.8
Profession[a]				
Psychiatrist	20.7%	67.6%	5.5%	31.4%
Nurse	45.1%	4.5%	58.2%	34.9%
Social worker	13.2%	5.4%	13.6%	15.4%
Psychologist	7.8%	18.9%	10.9%	7.7%
Other professions	13.2%	10.7%	11.8%	3.6%
Professional experience (years)	17.2	26.2	17.5	17.6
Number of previous suicides	4.3	3.6	3.1	3.0
Work setting				
Private practice	2.5%	79.3%	7.1%	14.1%
Relationship with the patient				
Length of relationship (months)	11.5	35.2	10.5	15.6
Emotional closeness to patient (yes)	36.0%	73.4%	38.9%	76.8%
Responsibility for patient (yes)	36.1%	70.2%	14.7%	84.7%
Being in contact with the patient at the time of death (yes)	45.4%	81.6%	37.9%	89.1%
Circumstances of suicide				
Patient suicide expectation (yes)	23.9%	23.6%	24.3%	19.7%
Previous suicide attempts (yes)	47.2%	42.4%	48.6%	46.7%
Support and training				
Need for support after patient suicide (yes)	0.7%	7.9%	93.2%	93.5%
Sought support after patient suicide (yes)	4.8%	14.0%	79.8%	91.8%
Received sufficient support to cope with the patient suicide (yes)	80.7%	86.5%	42.0%	78.8%
Theoretical training in suicide prevention (yes)	43.2%	40.4%	29.0%	43.9%
Clinical training in suicide prevention (yes)	29.0%	28.1%	18.7%	25.8%
Total	320	111	112	170

Notes: $n = 713$. [a]Other professions (i.e. professionals in educational psychology, nursing auxiliaries and other professionals) were not indicated separately, due to their small group size

subgroups. Differences between subgroups were found for most of the characteristics, except for the number of suicides experienced during a career, expected patient suicide and previous suicide attempts.

The first of the two subgroups with low professional consequences was the most widespread (Subgroup 1; 44.9 percent of the sample). Less than half of the professionals in this subgroup felt responsible for (36.1 percent) or emotionally close to the patient (36.0 percent), possibly because of the low proportion of respondents who were still in contact with the patient at the time of suicide (45.4 percent). Respondents declared that they had received sufficient support after the suicide (80.7 percent), although few of them actively sought it (4.8 percent) and mentioned not feeling a need for such support (0.7 percent). Almost all professionals of this subgroup worked in institutional settings (97.5 percent). On the basis of these characteristics, Subgroup 1 is called low professional consequences subgroup with a weak patient relationship and little need for support.

In the second subgroup with low professional reactions and changes in working practice (Subgroup 2; 15.6 percent of the sample), 81.6 percent of professionals were still in contact with the deceased patient at the time of suicide and the length of their professional relationship was the longest in comparison with the remaining other subgroups (almost three years). Moreover, almost three quarters of the respondents felt close to (73.4 percent) and responsible for (70.2 percent) the deceased patient. A minority of professionals in this subgroup reported having been in need of social and/or psychological support after patient suicide (7.9 percent) or having sought such support (14.0 percent). However, most of the respondents reported having received sufficient support to cope with their patient's death (86.5 percent). Professionals were older ($M = 54.4$ years, SD = 8.5) and had longer professional experience ($M = 26.2$ years, SD = 9.2)

compared to professionals of other subgroups. This subgroup comprised the highest percentage of men (55.0 percent), psychiatrists (67.6 percent) and psychologists (18.9 percent), and professionals working in private practice (79.3 percent). Subgroup 2 is labeled as low professional consequences subgroup with an intense patient relationship and little need for support.

The third subgroup was characterized by moderate professional consequences (Subgroup 3; 15.7 percent of the sample). Professionals in this subgroup worked for the shortest period with the deceased patient (less than one year) and were the least numerous still in contact with him/her at the time of suicide (37.9 percent). About one-third felt emotionally close to the patient (38.9 percent) and only a minority felt responsible for him/her (14.7 percent). Following patient suicide, only 42.0 percent of professionals in this subgroup reported having received sufficient support to cope with the event, although most said they were in need of it (93.2 percent) and sought such support (79.8 percent). Moreover, these professionals reported having received less theoretical (29.0 percent) and clinical (18.7 percent) training in suicide prevention than their colleagues of other subgroups. Finally, 77.7 percent were women (highest percentage) and 58.2 percent nurses (highest percentage). Professionals working in institutional settings were overrepresented (92.1 percent). Subgroup 3 is referred to as moderate professional consequences subgroup with a weak patient relationship and insufficient support.

The subgroup with the highest professional consequences (Subgroup 4; 23.8 percent of the sample) was characterized by a greater intensity within the professional relationship: 84.7 percent of the professionals felt responsible for and 76.8 percent felt close to the deceased patient. Also, most professionals in this subgroup were still in contact with the patient at the time of death (89.1 percent). This subgroup comprised the most professionals (93.5 percent) who declared they were in need of social and/or psychological support after the patient's suicide. An almost equally sized share of them reported having sought (91.8 percent) such support. The support received was qualified as sufficient for 78.8 percent of professionals in this subgroup. Subgroup 4 is named moderate professional consequences subgroup with an intense patient relationship and a strong need for support.

Discussion

This study addressed profiles of mental health professionals and how they relate to professional reactions and changes in working practice following patient suicide.

Cluster analysis evidenced four distinct profiles based on individual, professional and patient relationship characteristics of the mental health professionals concerned. These profiles were closely related to the consequences of patient suicide on professional reactions and practice. Two profiles presented low professional reactions and changes in working practice (60 percent of participants), while the professional consequences in the other two profiles were moderate (40 percent), both during the month following the patient suicide and at the time of investigation. Consequences within the low to moderate range are consistent with previous research (Chemtob *et al.*, 1988a, b; Courtenay and Stephens, 2001; Henry *et al.*, 2004).

The four profiles were most strongly distinguished by the relationship between professional and patient and by the support received following a patient suicide, which confirms the substantive role of these predictors when addressing the consequences of the loss of a patient by suicide. It should be noted that only small differences were found between the four profiles as regards the number of suicides experienced during their career, expected patient suicide and previous suicide attempts. Principal characteristics of professional reactions and changes in working practice of each profile are briefly discussed hereafter. The low professional consequences subgroup with a weak patient relationship and little need for support represents the most common profile. While incorporating 45 percent of the sample, it may be representative of findings from previous research which examined factors separately. It is differentiated from the other three profiles by the absence of risk factors in terms of closeness to the patient and lack of support.

In line with literature in the field, the brevity (Ellis and Patel, 2012; Grad, 1996) and low intensity (Campbell and Fahy, 2002; Ellis and Patel, 2012; Hendin *et al.*, 2004; Henry *et al.*, 2003) of their

relationship with the deceased patient, not feeling a need for psychological and/or social support after the patient suicide, nor seeking it, and having received sufficient support are associated with low professional consequences (Ellis and Patel, 2012; Ting *et al.*, 2008). Professionals in this subgroup can be seen to benefit from adequate coping strategies after patient suicide, given a weak relationship with the patient. Also, most professionals in this subgroup worked as part of a team within an institutional setting and thus potentially draw on more varied sources of support (peer, supervision, administrative support).

In contrast with previous studies (Campbell and Fahy, 2002; Ellis and Patel, 2012; Grad, 1996; Hendin *et al.*, 2004; Henry *et al.*, 2003), professionals in the low professional consequences subgroup with an intense patient relationship and little need for support reported low professional reactions and changes in working practice though they had a long and intense therapeutic relationship with the deceased patient. Sufficient support, little need for psychological and/or social support or effort to seek it may have helped these professionals in managing the aftermath of patient suicide. Compared with the other profiles, these professionals were older and had longer experience, which is probably related to the private practice as their predominant work setting. Some evidence suggests that these two factors may attenuate professional consequences (Gulfi *et al.*, 2010; Hendin *et al.*, 2004; McAdams and Foster, 2000). Also, this subgroup differs from the other three in representing the highest percentage of men, psychiatrists and professionals working in private practice.

Unlike some previous studies (Campbell and Fahy, 2002; Ellis and Patel, 2012; Grad, 1996; Hendin *et al.*, 2004; Henry *et al.*, 2003), professionals in the moderate professional consequences subgroup with a weak patient relationship and insufficient support had the shortest and the least intense relationship with their deceased patient. They can also be differentiated from the other profiles due to the qualification of the support received: although they reported a strong need and having actively sought psychological and/or social support after the event, these professionals were not satisfied with the support received. The lack of support can reasonably explain the greater professional consequences, which is consistent with previous results (Ellis and Patel, 2012; Ting *et al.*, 2008), underlining the importance of support in coping with patient suicide. In addition, professionals of this subgroup reported the least theoretical and clinical training in suicide prevention, two factors which have been identified to be helpful to face patient suicide (Ellis and Dickey, 1998). Professionals in this subgroup are thus likely to demonstrate higher professional repercussions. This profile also differs from the others in representing the highest percentage of women and nurses. These findings are consistent with previous studies (Grad *et al.*, 1997; Gulfi *et al.*, 2010; Henry *et al.*, 2008), which found greater professional reactions and more profound changes in working practice among women compared to men.

In line with literature on the subject, professionals in the moderate professional consequences subgroup with an intense patient relationship and a strong need of support consistently outline two factors which are related to increased professional consequences: they reported the closest relationship with the deceased patient (Campbell and Fahy, 2002; Ellis and Patel, 2012; Grad, 1996; Hendin *et al.*, 2004; Henry *et al.*, 2003) and the highest need for psychological and/or social support to cope with the event and efforts to seek support among all subgroups (Ellis and Patel, 2012; Ting *et al.*, 2008).

A comparison of the profiles found in the present study with relevant literature suggests a reconsideration of the effect of factors influencing the professional consequences of a patient suicide. While some subgroups confirm the cumulative effect of risk factors, others provide evidence for specific patterns of interaction. Indeed, when factors are considered simultaneously, an intense relationship with the patient is not necessarily associated with higher professional consequences. Similarly, a lack of support does not always turn out as a risk factor.

The low professional consequences subgroup with a weak patient relationship and little need for support and moderate professional consequences subgroup with an intense patient relationship and a strong need of support were then consistent with previous research. These profiles, which represent more than two-thirds (44.9 percent, respectively 23.8 percent) of the total sample, corroborate an intense relationship with the patient suicide as a risk factor and support as a

protective factor against higher professional consequences after patient suicide. On the contrary, profiles that differ from previous research, i.e. the low professional consequences subgroup with an intense patient relationship and little need for support and the moderate professional consequences subgroup with a weak patient relationship and insufficient support, concerned a far lower share of professionals (15.6 percent, respectively 15.7 percent). Due to the unequal subgroup sizes, the more numerous subgroups may dominate the assessment of risk factors. When not distinguishing between subgroups as in regression analysis, they cushion the particular situations of the smaller subgroups. Thus, looking at profiles reveals less current configurations of characteristics and consequences.

Some core contributions to the understanding of professional consequences of patient suicide on mental health and professionals can be distinguished. First, the findings underline the importance of the demand for support in helping professionals manage the aftermath of patient suicide. In fact, feeling little need for psychological and/or social support after a patient suicide, and not seeking it throughout, characterize professionals with lower professional consequences. Second, the findings related to the evaluation of the support received are more contrasted: insufficient support to cope with patient suicide is a risk factor only when combined with a strong need for and an effort to seek support. Third, the association of professional consequences with the length and intensity of the relationship with the deceased patient is less clear. A long and close professional relationship predicts higher professional reactions and changes in working practice only in professionals who felt the need for psychological and/or social support after patient suicide and sought it. Age (being older), professional experience (more years of practice), gender (male) and profession (psychiatrist) can also mitigate the effect of a close relationship.

Limitations

The present study has some limitations. First, the professionals were, as per the requirement of the ethics committees, volunteers and non-participants could not be identified due to the anonymous questionnaire. Thus, we were not able to estimate how representative the 713 participants are of the population under study. Also, several professionals were excluded from the analysis due to incomplete data on the main scales. Nevertheless, compared with previous research on the impact of patient suicide (Jacobson *et al.*, 2004; Takahashi *et al.*, 2011), the present study benefits from a large sample, which was suitable for investigating subgroups of participants according to their characteristics. Second, recall bias and memory failure may arise due to retrospective measurement of professional reactions and changes in working practice, even though a retrospective design was required by the aim of the study: the time elapsed since the most recent patient suicide was 4.4 years. However, comparable or even greater time intervals are common in studies on the impact of patient suicide (Ruskin *et al.*, 2004; Takahashi *et al.*, 2011). Third, the investigation of the most recent patient suicide, as opposed to the most distressful one or the first one experienced, may also have influenced professional reactions and changes in working practice reported by the participants. Finally, some variability of the results obtained by clustering techniques is still possible. However, the results can be considered as reasonably stable after the tests of validation conducted as well as the clear-cut subgroups identified.

Implications for prevention and postvention

Despite these limitations, the present study showed that some subgroups of participants had more intense professional reactions and changes in working practice. Therefore, concrete initiatives in the education and clinical training of mental health professionals, as well as in appropriate postvention policies and procedures should be developed to help them better manage the aftermath of patient suicide. In order to develop targeted prevention and postvention measures, professionals' profiles should be taken into account. Our study evidenced distinct effects of risk and protective factors due to their interplay. For instance, an intense relationship with the patient does not always mean an increased impact on professional reactions and changes in working practice as the low professional consequences subgroup with an intense patient relationship and little need for support shows. Therefore, measures could be differentiated according to the profession, the gender, the work setting or length of professional experience.

Some attention should also be paid to professionals who need support after patient suicide and seek it. Despite professionals in the moderate professional consequences subgroup with an intense patient relationship and a strong need of support feeling that they received sufficient support, they had moderate reactions and changes in practice, similar to those who indicated that support was insufficient. The former may have benefitted from support which did not help them to adequately cope with such an experience, while the latter had a lack of support. Besides the availability of support, attention to the effectiveness of support at hand is a central issue. Such support may be obtained from various sources, such as supervisors, mentors, peers or significant others, in order to meet the individuals needs of each professional.

Our findings also have important implications for training programs designed for mental health professionals. In fact, the participants indicated that specific theoretical and clinical training in suicide prevention were not very common in educational programs, although appropriate preparation for working with suicidal patients remains paramount in training for suicide risk assessment, intervention and anticipation. Hence, improvement of initiatives for education on issues related to patient suicide could serve as a protective factor by improving the knowledge, attitude and competence of professionals when facing patient suicide.

Conclusion

When examining the consequences of patient suicide on professional reactions and changes in working practice, the profiles of mental health professionals are a central issue. Variations in consequences cannot merely be understood with respect to single risk and protective factors, but rather depend on how these factors combine into profiles. Contrasts between profiles were strongest with regard to the support received after the patient suicide and the relationship with the patient. The need for support was consistently associated with increased professional consequences. An intense relationship with the patient and support perceived as insufficient are not risk factors *per se*, but only when combined with a need for support. Preventing adverse professional consequences of patient suicide should therefore take into account the need for support, especially for those professionals who had a long and close relationship with their patient.

This first exploratory study about the profiles of mental health professionals calls for similar studies to be carried out in other contexts in order to substantiate its findings. Future research should include a more systematic examination of differences between professions and work settings.

Note

1. The Valais Association of Psychologists and Psychotherapists agreed to participate in the study, while the Valais Society of Psychiatry declined.

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Corresponding author

Professor Alida Gulfi can be contacted at: alida.gulfi@hefr.ch