Experiences and Coping mechanisms of young doctors following the death of a patient: A qualitative study.

Compiled by: Dr L'oreal Leslay Snyders

Student Number: SNYLOR001

Supervisor: Dr Abdul Isaacs

Submitted to the University of Cape Town

In partial fulfilment of the requirements for the degree

MFamMed

Faculty of Health Sciences
University of Cape Town

RESEARCH:

To the doctors who participated in this study, I acknowledge your commitment and precious time invested to afford me the support towards accessing relevant information for this research. Thank you very much for prioritizing my needs.

Abstract

Background: The death of a patient can be a stressful event for doctors, but not many studies have been conducted in South Africa. The rationale for this study is to see whether our participants (junior doctors) would have similar experiences and coping mechanisms as described in the literature. A better understanding of these stressful experiences could guide management to better assist future doctors. This study included doctors with five years or less experience since qualification and included interns, medical officers and registrars working at a District Hospital in the Cape Metro Region i.e. Mitchell's Plain District Hospital.

Aim: The aim of the study is to describe the experiences and coping mechanisms of doctors after the death of a patient and to assess the effects on their personal, emotional and family life.

Methods: An exploratory or phenomenological descriptive qualitative study was conducted using semi-structured one-on-one interviews conducted by the primary investigator. Fifteen doctors employed at a District Hospital were included, each with less than five years work experience.

Results: The core theme identified was that dealing with death is stressful for young doctors. The themes contributing to the stress included: Inexperience of doctors; sudden unexpected deaths of patients; poor coping mechanisms used; and lack of support structures. This had negative effects on their family and personal life.

Conclusion: The study found that the stress of patients' deaths negatively affects young doctors and it is recommended that debriefing sessions be available and better coping mechanisms taught. This may prevent future anxiety disorders, depression and less burnout amongst young doctors. Future studies are needed to assess the effectiveness of debriefing sessions once implemented at Mitchell's Plain District Hospital.

TITLE: Experiences and Coping mechanisms of young doctors following the death of a patient: A qualitative study.

Introduction, background and motivation

Medical students are taught many things in the course of becoming a doctor, but not much time is spent on dealing with death. (1) Although in the second year as part of the anatomy class, students were given a cadaver to dissect, that was just a way to learn about human anatomy. (1) As Gawande also mentions, textbooks have almost nothing on dying or on how this process unfolds before students, and on how patients experience the end of their lives and how it affects those around them. (1) It is assumed that the purpose of medical school is to teach students how to save lives, not how to tend to their death. (1)

Dealing with death is difficult, yet it is something young doctors experience frequently. (2,3)

The fact that doctors know the patient holistically and sees the patient as a person; makes it more difficult to deal with their death. (3,4) It may help the doctor if they are able to make sure that the patient dies with dignity. (3,4,5)

Doctors often don't have more than a few minutes after the death of a patient before seeing the next patient. (6) The reason why interns as a subset of doctors was chosen for this study, is because they are the most junior doctors but tend to certify and declare most of the deaths at hospitals, compared to the seniors like the medical officers, registrars and consultants. The fact that there are no debriefing sessions; may affect the doctors personally, their family lives and also may affect them in the long term. (2).

Overview and literature review

In reviewing the literature, not many studies on the experiences and coping mechanisms of doctors after the death of a patient were found. As Redinbaugh et al (2003), stated, "the literature on doctors' experiences in caring for the dying is sparse and mostly anecdotal." (4) Aase et al (2008) also mentions in their article, 'Physicians' vulnerability facing life and death has been underestimated.' (7) Redinbaugh et al (2003) again mentions, "many of these stories reflect the sadness, guilt, and stress caused by caring for dying patients."(4) These emotions are reiterated in multiple journal articles. (3,5,8,6,9).

In South Africa, there are even fewer studies found on this topic. (9,10).

Most of the studies; definitely had some link of doctors not coping with deaths of patients, and causing burnout, as well as other psychiatric disorders and suicide. (10,11,12,13). Redinbaugh et al (2003) mentioned, "Such stress has been linked to professional burnout and may put doctors at risk of psychiatric disorders." (4).

Baider et al (2001) mentions, "the psychological distress derives largely from the identification with suffering, the presence of death and the specter of failure."(8) This same article also said, "Many of these symptoms double as features of burnout." (8)

Jackson et al (2005) agrees with the above statements, as mentioned in their article that "Clinicians who care for dying patients experience significant levels of stress."(5) It also states, that "Although caring for patients who die is an intrinsic part of being a physician, health care providers work in a medical culture where death is often viewed as physician's failure."(5) They also mention, that the negative consequences of coping with the stress of caring for the dying is said to be burnout and having little emotional reactions to the death of a patient.(5) Therefore burnout is mentioned in some of the articles, as well as mental illness like anxiety and depression. (4,6,9,10)

Gunasingam et al (2015), defines burnout, as "a syndrome that encompasses three dimensions: emotional exhaustion, depersonalization and reduced personal accomplishment; also mentioned in the article is, that burnout seems to be significantly higher in women than in men.(14) Redinbaugh et al (2003), also mentions in their article, that they found that female doctors reported more symptoms of grief than male doctors; as well as the longer the relationship the doctor has with the patient, the emotions at the death of the patient is much more.(4).

Most of the articles describe common themes that arose, which include emotions like anger, helplessness, guilt as well as pain. (2,3,4,6,9) There are also recurrent thoughts of the incident and blame. (2,3,4,6,9) As well as perceived incompetence; detachment from emotions and religion; also the work environment; coping with the family of the deceased and facing mortality. (2,3,4,6,9).

Some of the articles; do mention physical or psychosomatic symptoms like headache; fatigue; insomnia; anxiety and conflicts arising between colleagues as well as family. (6,14).

It is mentioned that the more senior doctors seem to have better coping mechanisms than the junior doctors. (4).

Coping mechanisms can either be positive or negative for the doctors' health. Most of the articles mentioned talking with colleagues, friends and family as well as to just continue to work and using humor. (4,6,8,14). There is also mention of not being alone and belonging to a community makes one feel better. (5,7).

Recommendations that seem to be highlighted in many of the articles, includes debriefing sessions as a source of emotional and social support. (2,8,14). Another recommendation that came through was the need for doctors to have enhanced training in communication skills and communicating death to the patient and their families, as well as training in bereavement counseling. (9,15).

This study complies with all the principles of the Helsinki Declaration of 2013, including care after research. (16)

As indicated in the literature review above, the death of a patient can be a stressful event for doctors, but not many studies have been conducted in South Africa. The rationale for this study is to see whether our participants (junior doctors) would have similar experiences and coping mechanisms as described in the literature. A better understanding of these stressful experiences could guide management to better assist future doctors.

Aim and objectives of the study

Aim

The aim of the study is to describe the experiences and coping mechanisms of doctors after the death of a patient and to assess the effects on their personal, emotional and family life.

Objectives

1. Explore doctors' experiences of the death of a patient.
2. Describe doctors' coping mechanisms used.
3. Describe doctors' ideas/perceptions about what could make the experience better for them.

Study design, study setting, methodology, sampling and data analysis

Study design

An exploratory or phenomenological descriptive qualitative study was conducted as the aim of the research was to focus on the experiences of doctors and to gain insights regarding an event. (17,18). There were no pre-selection of study variables or commitment to any theoretical view of the topic investigated. Semi-structured one-on-one interviews were conducted by the primary investigator. This method of data collection was chosen, rather than focus groups, as the information obtained may have been too personal to share in a group. The interviews were conducted in a consulting room at Mitchell's Plain District hospital and averaged between twenty to thirty minutes at most.

Study Setting

The study took place at a District Hospital in the Cape Metro Region i.e. Mitchell's Plain District Hospital. The hospital has 230 beds and services rendered include an emergency unit; general outpatient clinics; medical adult ward; obstetrics; pediatrics; and surgical adult ward. This district covers a large drainage area which is mostly of lower socioeconomic status, which therefore results in overcrowding; malnutrition; tuberculosis and HIV (infectious diseases); also, chronic lifestyle diseases. There is also a lot of violence from gangs in the area.

Selection of Study Population

This included doctors with three years or less experience since qualification and included interns, medical officers and registrars working at a District Hospital in the Cape Metro Region i.e. Mitchell's Plain District Hospital.

Sampling:

Inclusion Criteria

This included only interns, medical officers and registrars (with less than five years work experience) who were employed at the District Hospital in any of the clinical disciplines. They must have experienced the death of a patient in the past twelve months.

Participants were able and willing, to communicate well in English. They fully understood the nature of the study and were able to give informed consent to participate**.**

Exclusion Criteria

Doctors who were more senior than stated above or have not experienced the death of a patient recently. Other health related professionals working at the District hospital were also excluded.

Recruitment

Recruitment was done by the investigator; either personally or via their consultants. The time period of recruitment and interviews was initially set for three months, but because of the Covid 19 Pandemic, interviews were over a six-month period, from 20th February 2020 to 8th July 2020.

Homogenous sampling as a purposive sampling technique was used as the research question addressed, was specific to a particular group i.e. junior doctors. (17,19)

The interviews were conducted at the hospital in an unoccupied consulting room. The interviews were between 20 to 30 minutes in duration and was conducted by the investigator. It was estimated that about 10 to 12 interviews, one per participant, would be needed. The principle investigator recruited 20 participants, 5 of whom declined. The reasons given were no time, too busy with work, or unable to speak about emotions. These reasons were given mostly by male doctors.

Interviews were conducted until saturation of information was reached. The principle investigator ended up doing 15 interviews.

Data collection and management

An interview template (see Addendum 1) served as a guide to facilitate more open discussion and to ensure that topics listed were covered.

The interview questions were piloted on 2 doctors (not included in the study), and in this process, the principal investigator became comfortable with the interview process and also added more questions to the set template. The principal investigator added the question of any negative coping mechanisms like alcohol use etc. Also added was a question on the effects on their mental health i.e. anxiety, major depressive episode or even burnout. The last question added was any recommendations on coping strategies that worked for them. The template was altered by adding the above 3 more questions to it. (see Addendum 1)

All interviews were recorded on audiotape and transcribed verbatim. Topics were identified and coded inductively from the text and then grouped together into coherent categories.

Data Analysis

Meticulous records were kept of the interviews and each step of the analysis. This was kept on a password protected laptop in a lockable cupboard. In addition, the principal researcher was supervised in the analytical process of the framework method by a supervisor with experience in qualitative research. The steps used in the framework method were:

Step 1: Transcription of the interviews.

Step 2: Familiarization with the interviews done.

Step 3: Coding which was highlighting important phrases in the interviews.

Step 4: Developing a working analytical framework. Here the codes were grouped together into categories. All categories were examined to see if they could be combined into themes that did justice to the experience of the interviewees and which made sense of their experience.

Step 5: Applying the analytical framework, which was indexing subsequent transcripts using the existing categories.

Stage 6: Charting data into a framework matrix – this step was done in this study.

Stage 7: Interpreting the data.

No software was used in this process.

Reflexivity or Researcher's Role

The researcher has always been aware of their role in this research, therefore using reflexivity by constantly reflecting and being self-aware, while doing the interviews. Acknowledging their own preconceptions and assumptions of this particular study. Which will result in impartial analysis and be more effective in concluding the results of the participants.

Assumptions refers to what the researchers believe about a topic. In this study, the assumption was that debriefing may be useful. No debriefing sessions in hospital causes poor coping mechanisms or causes burnout among junior doctors. It was also assumed that the responses from participants were honest and truthful.

Ethical considerations and reporting of results

Ethical oversight for the study was obtained from the Ethics and Research Committee, Faculty of Health Sciences of the University of Cape Town. Approval for the study was obtained from the Provincial Research Committee, director of the Sub-Structure as well as from the Clinical Manager of Mitchell's Plain District Hospital. There was no conflict of interest for the research investigator.

Non-maleficence/Beneficence

Due to the nature of in-depth interviews and the sensitivity of the topic chosen, as well as the vulnerability of the doctors, there was a risk of the participants becoming zxsdadistressed.

The investigator was aware of this possibility and actively looked out for signs of distress. If this occurred during the interview, it was immediately stopped and, if necessary, an appropriate referral organized to contain the participant's emotions.

The referral to ICAS/ Metropolitan (Staff support) was an option for the participants as well as an initial session with the hospital's psychologist.

Confidentiality was maintained, as no names were used to identify the doctors who participated in the study.

The participants might have felt obligated to participate, or to continue even if distressed, because of a sense of trying to assist research. The participants might reveal more than they might have felt comfortable with and might have felt that it is more therapeutic as opposed to a research encounter.

To make it clear at the beginning of the interview the investigator informed the participant that the investigator will be in the role of researcher and not a clinician.

No payments were made to the participants, but inconvenience was minimized by doing the interviews in the participants' free time and at a suitable venue.

In addition; the principle of reciprocity was respected by keeping participants informed about the research's progress and by providing feedback to them via email. The results of the research study will be shared with the participants, the facility (Mitchell's Plain District Hospital), Sub-Structure and possibly publication in a peer-reviewed journal.

Autonomy

Autonomy involved respect for the person. Fully informed consent was obtained. (See Addendum 2) It was made clear to the participants that they had the right to freely decide whether or not to participate in the research study and had the right to withdraw at any time without penalty.

A comprehensive information sheet explaining the study was issued to participants. (See Addendum 3)

Justice

This involved avoiding the exploitation of the participants by recognizing their potential vulnerability to continue working in the same environment and acknowledging their contribution to the study as described above.

Results

From the interviews, the core theme that stood out was that dealing with death is stressful for young doctors.

The themes included the specific contributing factors to the core theme.

- Theme 1 – Doctors second guessing their actions that leads to guilt
- Theme 2 – Sudden unexpected deaths of patients
- Theme 3 – Coping mechanisms used and Support structures
- Theme 4 – The effects on personal and family life:(The thought of one's own mortality after dealing with so many deaths; mental health affected)
- Theme 5 – The effects on their work
- Theme 6 – Recommendations suggested, including debriefing sessions

The subtheme included under theme 3 - coping mechanisms: positive and negative.

Before discussing the themes, below are the demographics of the participants:

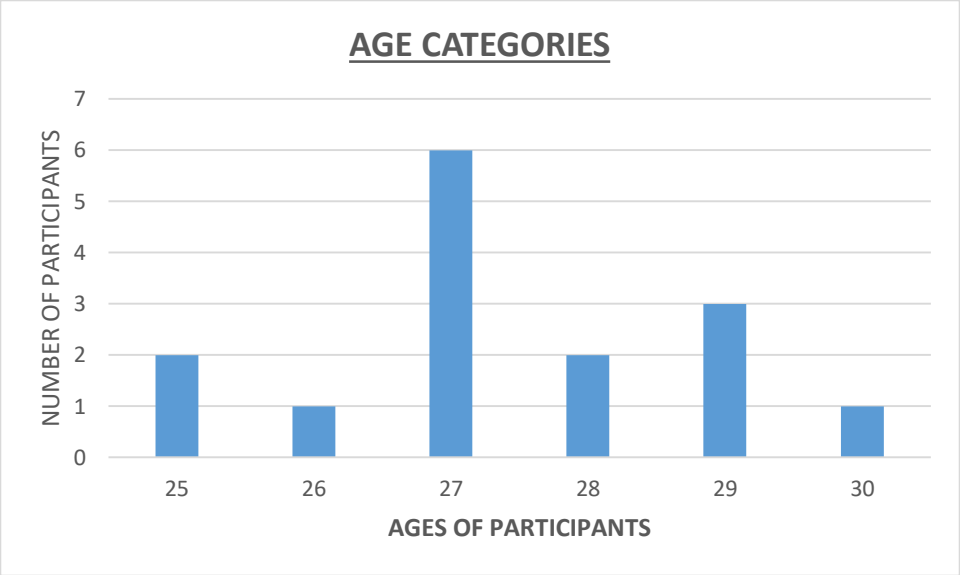

Figure 1: Age distribution of participants

The above bar graph illustrates that 2 of the participants were 25 years old, while one was 26 years old. Six of the participants, being the majority were 27 years of age. Then 2 of the participants were 28 years old, and three of the participants were 29 years old. Lastly 1 participant was 30 years old.

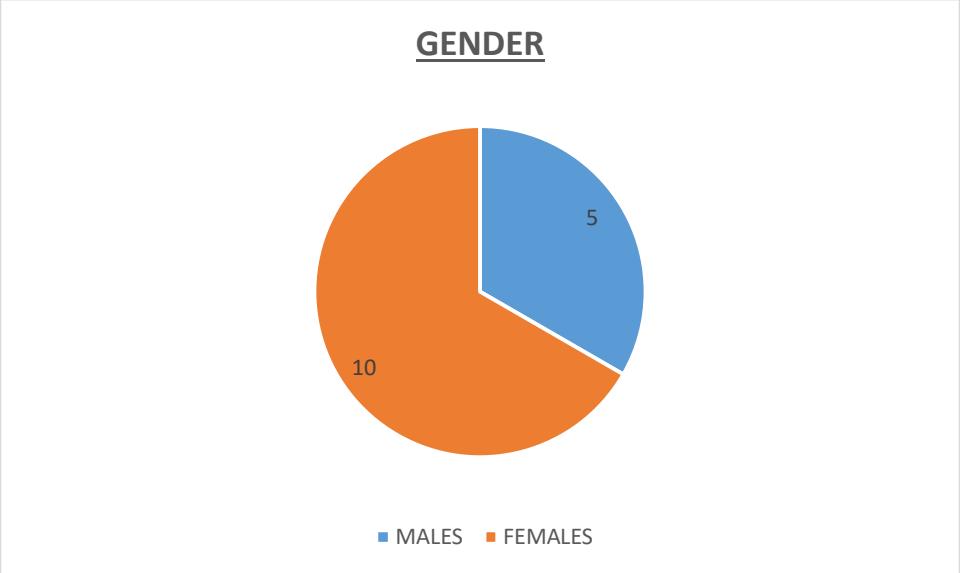

Figure 2: Gender distribution

The above pie chart shows that 10 were females in this study and 5 were male.

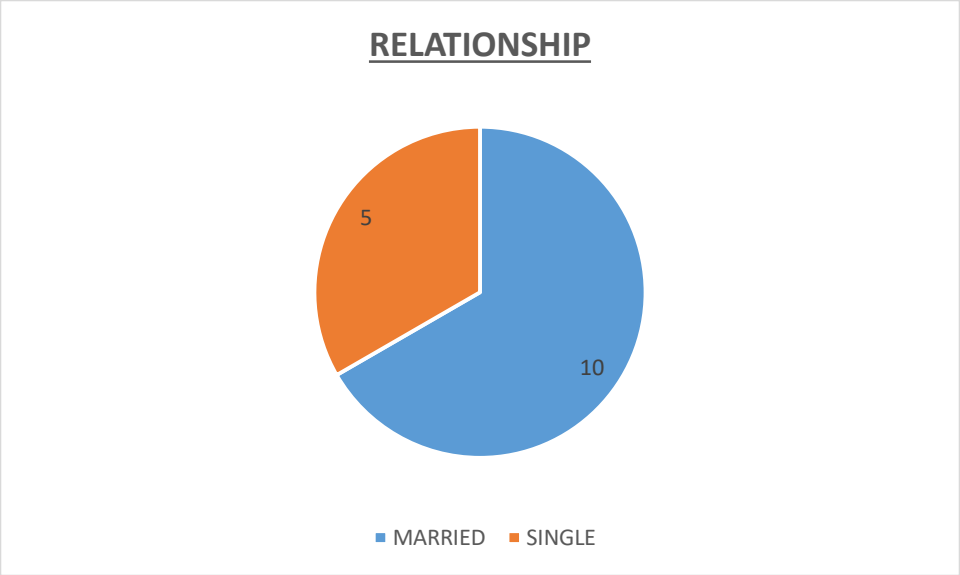

Figure 3: Marital status

The above pie chart shows that majority of the participants were married, 10 of them. The 5 were single. It was interesting to see that the married participants had more support and therefore better coping mechanisms than the single participants.

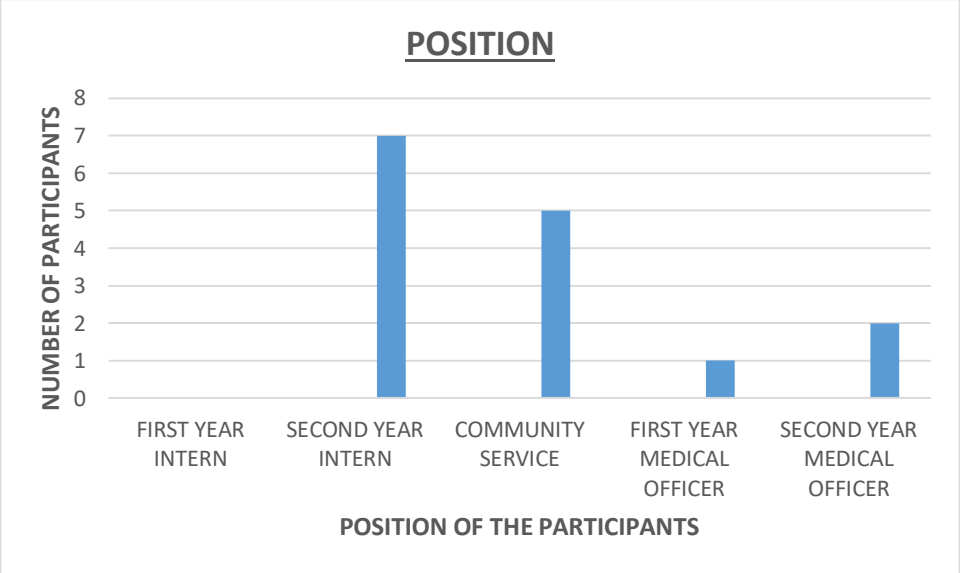

Figure 4: Category of staff

The above bar graph depicts the doctors' positions, with majority of the participants being second year interns which were seven. Then five of them being community service medical doctors. One participant was a first-year medical officer and lastly 2 participants were second year medical officers.

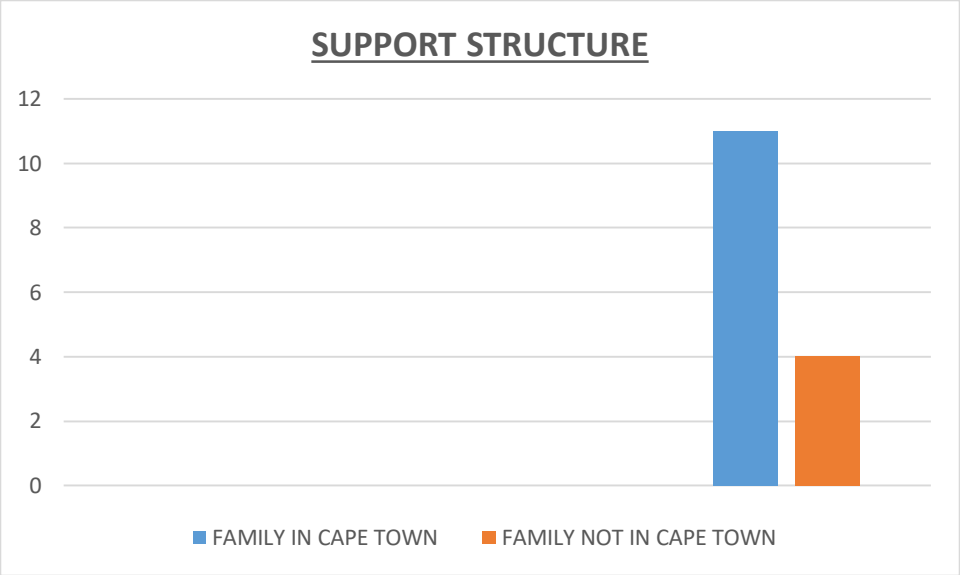

Figure 5: Support structures

The above graph illustrates that majority of the participants being eleven of them had family living close by in Cape Town. While four had no family in Cape Town. Having family in close proximity could be a support structure that helps with one's coping mechanisms and emotions.

Core Theme – Dealing with death is stressful for young doctors

After analyzing the data, it was obvious that the core theme was that dealing with death is stressful for young doctors. Death is difficult to deal with for all humans, yet as a young doctor, one is exposed to dealing with a lot of death at a young age, which can affect doctors in various ways, one of them being stress. No prior teachings on how to deal with death was done in medical school or during junior years of being a doctor.

This emerged strongly from the interviews.

"Initially you feel overwhelmed and disheartened. So, it's little bit better when someone comes in dead but if someone dies while you trying to manage them it's a lot harder to cope. Especially speaking to the family after someone dies. That process I find quite overwhelming." (Participant 9 – community service medical officer)

"There was one that really did stand out for me. It was actually a young guy,28 years old at the time. It was during my internship at the hospital. I was on call for internal medicine. I was called before to come to the ward and see another patient, but I noticed this patient. He was quite sick, vomiting profusely. I went to him, gave him a couple of things like ondansetron. That was one of the worst nights. In that night I had 5 resuscitations. That same night I had 5, one after the other, after the other. Of which the other 4 were expected deaths, I thought they would die but we still initiated resuscitation because everyone still didn't have the do not resuscitate forms (DNR). But this one wasn't basically an expected death because he was young, and he was still in work-up.

That was very traumatic for me, it was a young guy. Could have been something that's preventable but what would it be that we would prevent. I didn't know what exactly was wrong with him or where do I need to tackle. Being alone, being young, being inexperienced in that it's hard, it's difficult. It was very much traumatic for me. It took me a while to just step down and be like it's okay these things do happen." (Participant 10 – community service medical officer).

"Okay let's see, oh yes. One thing that I can think of is a patient who was 30 weeks pregnant. She came in with eclampsia, she didn't die at my hospital. We sent her to another facility, and she passed away there. It was sad obviously and then the feelings you get afterwards; the questions you get. You ask yourself; did I manage the patient correctly. Did I refer in time; you know all those things. So basically, I was asking myself those questions, you know there's always a part of you that tries to find fault in what you did wrong. Basically, just feels horrible and a guilt feeling, even when you don't have anything to feel guilty about. You just feel bad basically for what happened and how it felt." (Participant 11 – community service medical officer).

"Most of the anxiety I feel regarding a death would be whether I did something preventable. When I worked at this facility, I had a lot of patients. We have a lot of deaths and its more expected deaths. The ones that we've been looking after those are expected. Anxiety comes when something was missed or could have done differently." (Participant 15 – community service medical officer).

As mentioned before, the themes and subthemes that emerged were specific contributing factors to this stress.

Themes

- ## Theme 1 – Doctors second guessing their actions that leads to guilt

  What this study showed is that all the doctors seem unprepared to deal with death at this stage of their careers. They all had vivid memories of their first experience of a patient dying. They all second guessed their actions of trying to save their patients, and blamed themselves for the death of their patients.

  "Soon after the death, it was going through my mind. What did I miss, what could I have done differently, was it my fault? Could he have been sent to a different hospital (secondary hospital)? Those were just the things that went through my mind initially. Was it my fault?" (Participant 8 – community service medical officer).

  "Initially you feel overwhelmed and disheartened. So, it's little bit better when someone comes in dead but if someone dies while you trying to manage them it's a lot harder to cope. Especially speaking to the family after someone dies. That process I find quite overwhelming." (Participant 9 – community service medical officer).

  "So, I don't know why this comes to mind, but I'm just thinking about my internship experience. It was probably one of the first deaths. It was literally you on your 1st or 2nd call and you get a call saying you need to come certify a death. You don't know anything about the patient, you don't know the patient. You get called up and it's like okay what must I do? It's a very weird experience. The nurses just show you the room the patient is in, you don't know, you don't have any recall of this person. You've never seen this person and you have to go certify their death. It's very cold, very numb, you don't have much connection. Just here's the body certify it. It's just a dead body lying there. I don't know why that came to my mind first. I think it's because it's one of my first experiences with a dead body. A dead patient." (Participant 12 – 1st year medical officer)

"I think it does in the sense that you are questioning everything you are doing for the patient, is this appropriate, is this in the guidelines. You more cautious even if it's not your fault the patient dies, you are more cautious. You are checking yourself quite simply. That happens during the rest of the call or weeks after. You just thinking are you doing things appropriately." (Participant 8 – community service officer).

- **Theme 2 – Sudden unexpected deaths of patients**

It was also showed that unexpected deaths were more difficult to cope with, compared to expected deaths. Most of the participants agreed with this as shown in the following snippets.

"Wow, when I was in pediatrics there was a two-month old baby that came into the pediatrics E.C (emergency unit) the only intern covering pediatrics at the time, actually I was the only doctor in the pediatrics E.C (emergency unit). So, I immediately pressed the panic button and then I commenced CPR (compressions). The baby looked completely pale, sunken eyes, sunken fontanelle. Two seconds later the resuscitation team came. The consultant said I must stop doing resuscitation because there's nothing much we can do for the baby. There was no debriefing. Prior to that I was actually clerking a patient, so I immediately went back to clerking that patient. But I felt so emotional about it. It was unexpected and I was alone for the first couple of seconds and I felt like was there anything else I could do for this baby. I wanted time to process this." (Participant 1 – 2nd year intern).

The above quote also shows the need for debriefing.

"Ward deaths are usually expected; I haven't had an unexpected death in the ward. So that one is usually okay because as a team you basically mentally prepare each other before the time, when you have a discussion on the ward round. And there's always counseling of the family and all that. Then in EC (emergency unit) that can sometimes be a bit difficult especially if it's young patients, especially if it clearly looks unexpected. You know with an older person you don't always know the full story so at first glance you don't know what's the underlying conditions or anything like that but if it's like a 22-year-old guy that has been shot or especially trauma related stuff, young people and trauma that's really difficult." (Participant 2 – 2nd year intern).

"It was essentially an unexpected death. Basically, a patient who came in with a low Glasgow Coma Scale (GCS). Appeared to be having a ST elevation myocardial infarction (STEMI), was given streptokinase. Then decompensated and passed away." (Participant 6 – 2nd year medical officer).

"There was this one patient. I think the diagnosis was not really sure. Thereafter I was thinking about it and felt a bit bad, because we didn't find out what's wrong with her before she died. It was an unexpected death." (Participant 7 – 2nd year intern).

"I think my experiences has been mixed, I have had good and bad experiences. I think with majority of them, has been expected deaths. So, I think with those deaths I've been quite alright, I have been prepared for them. So, when they passed on, I wasn't really shocked by it. The unexpected deaths, I have two that I can think of. The experiences have not been great to be honest. The first one was a guy that came in that was stabbed in the chest. He was completely fine, speaking to us. Then the next moment there was a drop in his Glasgow coma scale (GCS), and he had a massive pericardial tamponade, that we didn't know of. I was busy seeing another patient, my primary patient. When they called, when they rang the emergency bell I went. Afterwards I just remember I was so shocked. The guy was younger than I was, he was 24 years old. I was 25 years old. His death was quite a surprise and his resuscitation quite lengthy as well. Afterwards I remember just going back to my patient and tried to carry on like nothing happened. Which was probably not the ideal thing. The second one was a younger boy, he was 16 or 15. Also in internal medicine, he also died unexpectedly." (Participant 14 – 2nd year intern).

"Really 3 different experiences we had. The first experience would be someone from our firm. So, a patient that is known to us, it's either expected or unexpected. The vast majority of our cases are expected deaths, and, in those cases, we will be expecting it prior to the death and expected counseling for majority of those cases. So, phoning family prior to the death. I would say the death process is not an unpleasant process, for the majority of those. It's relatively simple; when the patient died, we would usually phone the next of kin and ask them to come in and disclose the death.

The second one would be one that's known to the firm and we would have an unexpected death. Those deaths are usually more stressful especially if they happen after hours when we are not around.

Our third scenario is a patient that is not known to the firm. So, it would be a patient at nighttime. So, when we are working after hours they just died from another firm. With those cases we need to go to them to access whether they are going to be for maximum care or not. Usually they are not. Decided prior and if they would, you would resuscitate that patient fully.

Cases that aren't expected deaths are also, when we do full resuscitation with the patient. Those aren't very stressful scenarios. For me at least, because I don't have the feeling that I done anything wrong. Once someone dies it's really easy to resuscitate them. Just resuscitate them. So, I don't really feel anxiety with those patients." (Participant 15 – community service medical officer).

The above quote from one of the participants shows some contradictory information that the particular participant is not always stressed by death.

- **Theme 3 – Coping mechanisms and support structures**
    - **Positive coping mechanisms**

There were positive coping mechanisms for most participants which included: talking to their partner, talking to their family, either in the medical field or not. Talking to colleagues and then to seniors. Then reflecting on the experience. Also, spirituality was a big coping mechanism with prayer and meditation.

"The way I try to cope is I just talk to people. My wife is one of the biggest forms of coping that I have, I talk to her. I just find it helpful to talk to someone. It helps a lot just talking to someone." (Participant 1 – 2nd year intern).

The above quote is also a support for debriefing.

"Usually I'll tell my partner about it and talk about it a little 5 minutes,10 minutes then I feel better. My partner listens and that makes me feel better. I usually talk about it when I have that feeling, whether I have it later the day or 2 days later. It doesn't really involve details on what happened because his not in the medical field. So, it's usually like this young boy and he was in his school clothes and his mom came and oh you see it's so sad. It does make me think of the people that's left behind because you can't think of a person in their death cause to them they dead whether you believe that they going to a better place or no place at all either way it doesn't matter but its thinking of whose left behind and that's difficult." (Participant 2 – 2nd year intern).

"So initially my coping mechanisms were poor, and I felt that I must take every patient with me. Now when I literally walk out or drive out the gates, I have to leave the hospital here. I can't take it home with me. When I get home, I'll talk to my boyfriend like 15 minutes and then well air everything out that I felt that was maybe bothering me. Then that's done for the day. Don't bring it up again unless it's like there for a meeting or morbidity and mortality meeting. So, I would say getting home, reflecting on the day myself and then talking to my person about maximum 15 minutes." (Participant 4 – 2nd year intern).

"Apart from thinking about it at nauseum. I was bouncing it off some of my colleagues, spoke to people got different opinions. The other way I coped was by researching. In terms of what is out there in terms of information. What to do in a situation, where a patient presented in that way. Was it as black and white as others might of thought? No, no, no, because of ABC you don't do this. So, then I found that through further research, speaking to others helped me cope." (Participant 6 – 2nd year medical officer).

"I think getting more information and speaking to other doctors, more senior than me." (Participant 7 – 2nd year intern).

"I think just talking about it with family members, I also spoke about it with a senior who was on and she said the same thing. There wasn't anything you could have done differently. Speaking about it to people that you know." (Participant 8 – community service medical officer).

"So, a lot of the times I feel it's really helpful to speak to my husband about it, a doctor as well. We studied together, so he and I been struggling with anxiety for many years. His generally my go to person for help. I am on medication for it. So, I guess that also helps. I find what's very therapeutic is when I do think about it and I try and go through the stages. Where there isn't anything I could have done for the patient, so just to rethink of it like that. Then definitely to speak to my husband about it." (Participant 9 – community service medical officer).

"My coping mechanisms is just to kind of sit back and think about the situation. Stepping out of the situation and just being calm and meditating or pray just to kind of calm me down. I use that quite a lot, at any time I feel down or that things are not going that well. I would rather go sit down and pray or meditate and that actually just gives me a lot of comfort." (Participant 10 – community service medical officer).

- **Negative coping mechanisms (Less constructive ways)**

  The less constructive coping mechanisms included: Most of the participants, either drank a little more alcohol than usual, others ate more junk food on the day. While others felt moody and others tried to suppress the feelings or emotions.

  "No!" (Participant 1 – 2nd year intern).

  "Yes, drinks wine." (Participant 2 – 2nd year intern)

"No, not for me personally, no. I'm just someone who talks about it. I've never used substances in my life, it's never drove me to that point." (Participant 3 – 2nd year medical officer)

"Yes, I do. I don't smoke anything, but I will definitely on a rough day have a glass of wine. It' s almost routine now. It's not to the point where I'm tipsy on my toes. But over supper, having a meal that I would have a glass of wine, while talking to my person about my day. But it's not the case of I need to get a bottle of tequila or whatever and drown my sorrows." (Participant 4 – 2nd year intern).

"It depends on your relationship with those mentioned entities. But if one often tells himself after a long day, I'm going to have a drink. Then after something like this, you might have several more drinks. You've placed alcohol as a coping mechanism, so I think it depends. Personally, it did sort of alter how I used alcohol in that time. As opposed to using it from enjoyment to I want to forget about this. So, there was an element to that." (Participant 6 – 2nd year medical officer).

"I think I definitely have bad coping mechanisms' self-soothed with food, definitely an emotional eater." (Participant 8 – community service medical officer).

"No, so I'm fortunate enough to not use any substance but maybe there are times when I've been prescribed sleeping tablets. Where my mind is very active, can't say it's always associated with a death. Maybe where my mind is racing a bit more that night id be prone to talk a sleeping tablet." (Participant 9 – community service medical officer).

"Not that I can think of, besides being moody for some time. I don't drink or smoke. Maybe I eat more I'm not sure. Maybe I become moody." (Participant 11 – community service medical officer).

"Probably eating badly would be a bad coping mechanism. I can't think of any other destructive coping mechanisms." (Participant 12 – 1st year medical officer).

"No, I don't know, maybe I sleep more to numb the feelings." (Participant 13 – 2nd year intern).

Support Structures

The support structure seems to help majority of the participants, by just talking to them. This makes them feel much better. The support structures in this study included colleagues; seniors example consultants; family which included partners; as well as parents and siblings.

- **Colleagues/ Seniors etc.**

  "I was bouncing it off some of my colleagues, spoke to people got different opinions" (Participant 6 – 2nd year medical officer).

  "I think getting more information and speaking to other doctors, more senior than me." (Participant 7 – 2nd year intern).

  "I also spoke about it with a senior who was on and she said the same thing." (Participant 8 – community service medical officer).

  "Talk about it at home and at work." (Participant 11 – community service medical officer).

  "When you are feeling quite stressed about something like that, you speak to your colleagues then it helps. What I've found that helps if I'm stressed about something that happened. If I done something wrong or missed something, I actually go to speak to the head of department. They quite approachable. Tell them just listen, I think this was missed here. You feel better once you just explained a death." (Participant 15 – community service medical officer).

- **Family**

"The way I try to cope is I just talk to people. My wife is one of the biggest forms of coping that I have, I talk to her. I just find it helpful to talk to someone. It helps a lot just talking to someone." (Participant 1 – 2nd year intern)

"Usually I'll tell my partner about it and talk about it a little 5 minutes, 10 minutes then I feel better. My partner listens and that makes me feel better. I usually talk about it when I have that feeling, whether I have it later the day or 2 days later. So, it's usually like this young boy and he was in his school clothes and his mom came and oh you see it's so sad .so like that is what the story is and what I'll talk about. It does make me think of the people that's left behind because you can't think of a person in their death cause to them they dead whether you believe that they going to a better place or no place at all either way it doesn't matter but its thinking of whose left behind and that's difficult." (Participant 2 – 2nd year intern).

"I spoke to my husband, a doctor to. I could speak to him in terms of the medical things, like did I miss something or was there something I could have done differently." (Participant 3 – 2nd year medical officer).

"I think just talking about it with family members." (Participant 8 – community service medical officer).

- **Theme 4 – The effects on personal and family life (the thought of one's own mortality after dealing with so many deaths; mental health affected).**

Effects on personal life and family life affected fifty percent of the participants, while the other fifty percent disagreed. Majority of the participants felt like they were 'blunted, cold hearted etc.'

"No, I don't think so!" (Participant 1 – 2nd year intern).

"I don't think so; I think in the grander scheme of things because I am really new at being a doctor. It's like a year and a bit. Everything Is new and I think that the way I look at things is a bit different. If someone's really stressed and worried that someone's going to die or something like that, I notice that. I have an example so someone at my church was diagnosed with cancer the other day .when I was student if that same person was diagnosed with cancer it would probably make me cry but this time it didn't .I was like okay this is what's going to happen blah blah blah and I don't know if it's coming from general maturity cause I know older people are like better at stuff or if I'm hard .I don't think I'm cold ,I am different and I don't know if in like 10 years' time I have to be like hold up am I stone person. I don't think so. It's not in my personality to be like that but it is something to think about. (Participant 2 – 2nd year intern).

"I think it does, you relate it to your own family. My aunty has epilepsy so if she's going to fit, I'm like oh my goodness is she going to die? You start thinking of the cases. My dad just passed away,3 months ago of cardiac failure and every patient I see, I think of him. You know his case, their case. It's like a similar low blood pressure, cardiac output, congestive cardiac failure. You relate it to your family. Like the cases you see in hospitals. (Participant 3 – 2nd year medical officer).

"I'm going to say yes because I've heard quite a few family members tell me I'm cold, when a loved one dies, and I don't have the reaction that everyone else is having. Crying and sobbing, trying to wake up the dead person. I'm just like maybe if they were admitted to the hospital the doctors and nurses tried their best. This is ultimately the thing that caused them to die and they now out of pain and that's how I chose to see it. They not so comfortable with that, I think it's because they don't deal with death as often as we do. Yes, it has affected me. There are times when I'm like that was little bit harsh or you were a bit crude. Could you have been gentler? So, I feel it has given me a thicker skin. That's not necessarily appropriate." (Participant 4 – 2nd year intern).

“I can’t really say. Like I say I don’t speak about it and I try to block out work from family. My family life is really busy, so I don’t have time to think about work. (Participant 5 – 2nd year intern).

“Yeah, in terms of I have become more isolated. So, the only way to keep in contact with my family is via phone or texting. In those times when I’m in my own head. Then that takes a backseat. That how it affects me. At least when I’m at home I’m alone in anycase.so it’s not like a direct effect. But maybe they can’t get a hold of me for the next 2 days because I’m not keen to talk.” (Participant 6 – 2nd year medical officer).

“Yes, I would say so. In the sense of its 2 months down the line and I still think about it. I don’t think it’s not a problem everyday but if it is something you look back on and it was quite a significant death then on that day you probably a bit more agitated or short.” (Participant 9 – community service medical officer).

“I don’t take work home; I prefer not to. If I am stressed for any reason, I’ll rather be into myself or beg colleagues to go home. But I actually really don’t like involving them in work life. Because I mean the life, we live here is quite hectic and everyone doesn’t really understand that. Me I’m not comfortable doing that. I would speak to my husband about normal general situations because his also a doctor but other than that, like my parents, I won’t involve them. I don’t feel comfortable in giving them that aspect as to what my reality is. Somebody can understand it then that’s okay which my husband does and that’s okay. His in the field, he knows what’s going on. He supports me on that. I don’t speak to my parents or siblings about that because It’s a bit too gruesome for them. To know the intricate details about it. Yes, somebody died and the process of what you do, what your role is. It’s difficult to explain to somebody who’s not experienced in it. I don’t want to involve them.” (Participant 10 – community service medical officer).

“Definitely, I’m the kind of person that would come home sad and angry and need to be comforted. So, it does to a certain extent. Especially when it just feels like you useless or you feel like you don’t even want to be a doctor anymore. You feel really bad. You come home and just want to withdraw from the world. So, in that regard yes but that’s just something that can be talked about and you fine afterwards.” (Participant 11 – community service medical officer).

Thought of own mortality, while dealing with death so much.

The thought of their own mortality seemed not to affect the majority of the participants, as they have not had the time to think or process it yet. A few of the participants had thought about it, especially when younger patients pass on.

"Yes, I mean you get reminded that life is short, and anything can happen any time." (Participant 1 – 2nd year intern).

"I haven't thought of my own mortality but I think it's because the patients are so different to me so I don't easily relate to them but I will say that when I do see people that die or that are like going to die and they remind me of a family member that's the same age or for example there was a lady that was my mom's age and she was really sick and I was seeing her at like 2h30 in the morning and I was part of the decision to say we are not going to resuscitate her and this is part of her natural causes Then it does make me think like that's so crazy like that could of been my mom but it's not. My mom does not have those conditions, but it makes me think that that lady has a child somewhere that's like my age that is going to have to deal with a death of a mother. I do think that's really intense and hard and cases like that would affect me more than something that's completely unrelatable like a 28-year-old gangster man. It doesn't relate to me or my life It affects me because its someone but does not make me think of my own mortality or those around me." (Participant 2 – 2nd year intern).

"Not really!" (Participant 3 – 2nd year medical officer)

"It does because we deal with so many young people that come in. Stabbed, shot, car accident, assaulted, raped and a lot of them are in the twenties, thirties age range. You literally sit there and think this could be me. We had one lady where her car was thrown with a rock on the R300, the same road we take to work every day. At 19 o clock at night. That could be us when we are working from 07h00-19h00 you know. Could be your car, could be you that's rushed into the emergency unit with a GCS of 3 and now the machines must be put off type of thing. I feel that I'm closer to death than the next person because you see how quickly things can go wrong. I do think about it a lot; I feel it's like a constant companion right behind me." (Participant 4 – 2nd year intern).

"Mostly young patients, I put myself in that situation but not really." (Participant 5 – 2nd year intern).

"No not necessarily. It doesn't make me think of my own mortality." (Participant 6 – 2nd year medical officer).

"No!" (Participant 7 – 2nd year intern).

“You not really able to, you push yourself. There isn’t another option. You are the person that’s on for the night. Even though emotionally withdrawn, you cope, and you push it down and you deal with it later.” (Participant 8 – community service medical officer).

“Yes, definitely. For instance, if it’s someone that’s young that dies.” (Participant 9 – community service medical officer).

“Definitely, I do think so, because the workplace becomes quite stressful. You know the environment after a death becomes quite hostile sometimes. Some colleagues feel a certain way then some feel like they did something wrong, like the system is failing us. That stress affects the whole working environment, it affects the doctors, the staff, everyone. It creates a stressful environment, where people are speaking about depressing things. They are insulting the system.” (Participant 11 – community service medical officer)

Mental health affected.

Eighty percent of the participants admitted that dealing with death affected their mental health. They explained that anxiety gets worse as well as a few of them admitted to a depression episode and also burnout.

“No!” (Participant 1 – 2nd year intern).

“No, I haven’t experienced that but it’s also because I don’t have mental illness so I think at baseline I’m okay, but I would imagine if someone already has anxiety and they are dealing with this it would be a massive factor. And only makes things worse.” (Participant 2 – 2nd year intern).

“Yes, it definitely does, just because we work in this environment, it’s something we can’t escape. Death is something we have to deal with every day. It’s something you can expect or see every day. It’s something we assumed we just have to cope with. So, it’s definitely not easy. You just become desensitize to it. It’s like you have to continue, move on now, forget about that and see the next patient. It makes you more anxious, more down, makes you tired, mentally tired. I think in the public sector compared to like private, it’s not that they see more success stories, but you see more positives actually happening. Because of the low resources we do have, we can’t really do much for our patients.” (Participant 3 – 2nd year medical officer).

"Yes, oh yes. It definitely gives me anxiety and has worsen my depression. Anxiety especially when I'm on call, where you don't know what to expect. You going to be the first person they going to call because the medical officer is in theater. When you see that phone ring and you don't know who is on the other end, it does give me terrible anxiety. Also, when you had a night where people are just sick and dying and you, kind of feeling you not getting anyone any better. It does worsen the depression. Because you feel like what am I actually doing? Everyone I'm trying to help is just circling the train. Is this actually what I'm supposed to be doing at the end of the day?" (Participant 4 – 2nd year intern).

"I won't say anxiety but maybe borderline depression. I feel sadder but it doesn't stop me from coming to work." (Participant 5 – 2nd year intern).

"Yes, I think it does. It has the potential to become prolonged episodes if one doesn't sort of get the answers that you are seeking. One can end up with a prolonged episode of minor depression or anxiety." (Participant 6 – 2nd year medical officer).

"I think it does. Especially if you a spiritual person, it can affect your mental health. Because it makes you think about death and existence and where do you go. I think it's more spiritual than mental. I think it causes anxiety for the next patient because then you scared. What if I do something wrong? What if I missed something and they die and it's more of I don't want to do any hard to anyone." (Participant 7 – 2nd year intern).

"I would say your mood is quite depressed shortly after, the weeks leading up to it. So, it does affect my mental health. It's something that will plague you for weeks afterward. It shows itself in your mood, you depressed, more withdrawn from friends. I think it does impact you." (Participant 8 – community service medical officer).

"I would say so. It is something that I would think about. If there's a particular tricky case, then I tend to think about it more often than I should. I do think that, that then replays. It does make my anxiety problem worse." (Participant 9 – community service medical officer).

"I think it can lead to burnout, as seen with my colleagues. It doesn't affect me that much. I personally work through my emotions quite quickly. The day after the death of a patient, I feel very emotional and need to work through my emotions. The next day I might feel sad but after that I'm fine." (Participant 13 – 2nd year intern).

- **Theme 5 – The effects on work**

Majority of the participants mentioned that having a patient die on the shift affected mostly the shift or day. Some mentioned the week after and perhaps still get flashbacks months later.

“Yes, immediately in that shift it would obviously affect me. Like without me realizing it, I won’t be as friendly to the next patient or just do my thing with the patient and still go into detail and not explaining anything. No medication to the patient, nothing. Just see the patient and get it over and done with.” (Participant 5 – 2nd year intern).

“It does affect the rest of the shift for sure. It affects how I approach work for the next week or two. Either extra cautious and fearful of making certain decisions whether they the right one or not. Especially if I’m still uncertain about what happened or how things could have been different. So, if a debriefing session happen quite soon after then one is able to pack it up and use it as a learning experience. But if it’s still lingering for 2 weeks, then it’s a lot of uncertainty. It does distract also from giving your full attention in front of you.” (Participant 6 – 2nd year medical officer).

“It depends if it’s a forensics case, it can take up the whole day. Obviously then for the next time, especially if it’s not a mistake. If it’s something that was missed, something you didn’t think of. Then it’s better for the next patient because then you won’t miss anything.” (Participant 7 – 2nd year intern).

“Yes, depending on the case definitely. Once I had someone who was really young that died, and I tried to convince them the day before to go to a hospital and they refused to. So, I went back to work after my shift I was really down and I did struggle to cope at work, to focus at work. I kept on thinking was there something more I could have done prior to their death.” (Participant 9 – community service medical officer).

“Maybe the rest of the day until I go home. Just refresh myself, calm down, get into my own space and then just meditate and calming yourself in that situation. Then when you wake up the next day, your kind of in a better state of mind. Your mind is sort of overwhelmed, continuously thinking what just happened, what you could have done, how things could have been better if you were to do this and that. Yes, you see your patients continuously after that, but your mind is just a little bit more inclined as to what had happened for the day. Then I guess the next day gets better.” (Participant 10 – community service medical officer).

“Well I would say the rest of the week or two weeks. Because then typically I would try to avoid dealing with patients like that for some time. It’s like a protective mechanism, you don’t want to deal with that. You don’t want to encounter it or remember it again. Now there is, this fear, what if, what if you know. Then you try to avoid, so yes it does affect my work for a couple of weeks I’d say. Because you don’t have a choice in this work and being in the same situation. You work and see oh its fine again and carry on.” (Participant 11 – community service medical officer).

"I think it really can affect the rest of your day because you can't just expect to go on as nothing happened, no one cares, no one else knew. There's no support, you just carry on by pushing the numbers. So yes, I think it does affect that day, you do feel a bit down. It's a life at the end of the day. You feel a bit crappy about it, but I think I'm easily able to switch off after that. Speaking to someone which I mostly do, it does help. It doesn't affect my week or month but, on that day, yes." (Participant 12 – 1st year medical officer).

"There's always this thing nurse's vs doctors. Then we feel like a resistance from the nurses, who are blaming the doctors and that just creates a stressful environment. I don't think it's healthy for anyone, it does affect you mentally. Definitely think of my own mortality. Where would I go, realizing how short life is, when something like that happens. How easy you can go. One minute you here the next you gone. You do start thinking about that. When you start thinking about that, you realize am I okay, am I in God's good books. Honestly, for me personally I don't mind dying but I need to be in God's good books, as long I'm there. So that's the first thing my mind jumps to when I think about dying." (Participant 11 – community service medical officer).

- **Theme 6 – Recommendations suggested as well as debriefing**

The ideas or perceptions to make the experience better for younger doctors include the recommendations which follows.

"I think as I mentioned they should debrief with the supervisor; they should talk to someone about it if they feel they can't cope. I'm not sure if the facility has counselling services and it should be made known to everyone if there is counselling services. My dad passed away 10 years ago and I feel like since I've been through such an ordeal that made me better prepared to handle death. I feel like if you been through something traumatic before it makes you better prepared for future events." (Participant 1 – 2nd year intern).

"I think if anything to be mindful of where you at and what's bothering you and then to address it. Everyone is going to address it differently, everyone's going to react differently but to actually just be aware of what you feeling and where you at and not to like shut it out and put it to side because you think oh I'm a doctor this is part of my job and just deal with it. Yes, it is a part of our job, but I also don't think it's normal for humans to face so much death. Like I don't think it's a normal thing. So, my advice would be that people should listen to themselves, actively listen to themselves and it sounds like a very simple thing to do but it's really not. That's why I was saying sometimes 3 days later I would be like oh I'm sad about that death. It's because it's not easy to actually figure out what is this emotion, what thought is this emotion attached to. I think that would be my recommendation because then you can take it from there. No one who knows they really struggling is going to be like okay you what let me pretend I'm not but someone who doesn't know isn't going to get help and then they not going to do well, so I think to be mindful." (Participant 2 – 2nd year intern).

"I always feel that other places have 2 mental wellbeing days. You can use it for anything, you can use it for a family day, an Eid day, just more awareness of mental health. So debriefing sessions really do help. The whole team needs to be there. It's also for learning purposes as well, not for criticism but also for what could I have done better? my strength and weaknesses. Things that needs to be spoken about. We all human, we all make mistakes and its' things like that if you speak to someone else about it, everyone has different opinions and you can actually learn from other people. That also helps. Doctor's hours are just so much, and you keep going and keep going. The workload is just too much. There is no time to download and get everything off. It would be nice if the hospital instituted two mental health days separate to leave days, like in the business world. You can use these two days for anything." (Participant 3 – 2nd year medical officer).

"I would say just talk about it, you not the first person to go through this and you won't be the last. Speak to whoever you feel comfortable with. If you have a good bond with a consultant. Like some interns do, then talk to them. If you feel you want to talk intern to intern or intern to medical officer. Speak to somebody about it because 10 to 1 they've gone through the same thing as you. They are able to provide you with some sense of comfort. Also just allow yourself to be open to criticism. If you know that you didn't do your part, if you know you were slacking at a particular point. You didn't send your patient for an x-ray and they ended up with a pneumothorax, or if you didn't do a trop T and the patient ended up having an acute myocardial infarction. If you knew you were at fault admit you were at fault, also then allow yourself to forgive yourself and learn from that. You need to be open to criticism and you need to talk about it. You don't have to talk about it constantly, if you spoke about it once and got it off your chest and you happy with that then it's okay." (Participant 4 – 2nd year intern).

“I can’t really say because I haven’t figured out my own coping mechanisms yet. So, I can’t really give advice. It’s quite difficult, every situation different.” (Participant 5 – 2nd year intern).

“Coping strategies, I would advise what worked for me. Whether or not I had to find it myself. Definitely speak to other colleagues, definitely get 2nd 3rd or 4th opinions. If possible and if accessible to you get an expert advice about the matter. To know mostly if whether the decisions you made were completely unreasonable or were reasonable. Use that information for future cases.” (Participant 6 – 2nd year medical officer).

“I think you must see your patients as being patients. A very good consultant told us that a patient came in was sick because they were sick before you. You not the person that made them sick, not the person that lead to their death. You are contributing to solve whatever medical condition issue that they have. If you don’t succeed in that then you should learn from that. If you do succeed, you know you tried your best.” (Participant 7 – 2nd year intern).

“It’s probably a cliché but I live close to the beach, just walks on the beach. Any form of exercise I find is very helpful. Just to get out of your head, stop obsessing about it, what had happened. Just to do something in nature.” (Participant 8 – community service medical officer)

Debriefing

All the doctors agreed that debriefing sessions should be a formal set time after the death of a patient.

“Yes, I don’t know how, like the short debrief we do I find helpful. I find that that’s enough for me, but I know that everyone copes differently and what would work for other people. I guess that there are situations where more in-depth debriefing is needed. Maybe there can be a thing like would you like a follow-up debrief and people can say yes or no but so far, I haven’t needed it.” (Participant 2 – 2nd year intern)

“Yes, definitely. It should happen a few days up to a week no longer than that.” (Participant 5 – 2nd year intern).

“Yes, I think immediately after you dealt with the patient. So, for this case we treat the patient in an emergency setting, stabilize and as soon as they moved to the next facility, at that time. To access our decisions that were made at this stage. We didn’t know what the outcome would be. So then as soon as possible as the death probably. That you don’t take it home and think about it over and over again.” (Participant 6 – 2nd year medical officer).

"Yes, after the death should be the first debriefing. Your emotions are raw, it's just fresh. You need someone to go over with what had happened. Because sometimes you black out parts of what happened, and it only comes up later as flashbacks. I think in the initial stages have a debrief, a day after as well so that the night you can think about what you've missed, just so you can talk about it again. I think an initial debriefing and a follow up." (Participant 8 – community service medical officer).

"Sometimes you just need the one session, but if it something on your mind persistently then follow up. For me it's quite tricky because I do get treatment otherwise. Then there is some sort of debriefing, if not at the workplace at least outside. I think it's a nice option that's maybe struggling and don't have other support. That's not on treatment of anything specific for the anxiety or depression." (Participant 9 – community service medical officer).

"Certain people manage or handles things differently. Some feel more comfortable speaking about it, whereas other people prefer to just deal with it in their own way. It depends on the person. Yes, debriefing does help but it can also spark an emotion or put a doubt in your mind. As if you are being criticized for doing something that you didn't really do. So, some people think that it's good to kind of talk about it, lessens the pressure off your mind. Other people take it in another way and feel guilty about it. It goes both ways. Debriefing is good but it must be within the correct frame of mind. So, you need to take that in consideration and their state of mind before you verbalize things. You don't know how that person is going to react.

Follow up debriefing sessions would be better because your kind of giving that person some time to calm down and sort of get back into their own state of mind. In a more organized manner. You know when you are more relaxed and calmer and more thoughtful in that situation, where you can point out what had actually transpired. We can talk about it more openly and can be freer in terms of your comments on what to say and what happened. You can also say I could have done this better, that better." (Participant 10 – community service medical officer).

This last quote is a useful opposing view for debriefing.

Therefore, in summary:

- Debrief with colleagues
- Debrief with seniors
- Read around the patients' illness and learn from mistakes
- Coping mechanisms; i.e. Take a break like go for a walk etc.
- Exercise
- Meditate and pray

Discussion

This study showed that dealing with patients' death is a stressful event for most young doctors. The specific contributing factors identified in this study included the following as seen in themes:

- Doctors second guessing their actions that leads to guilt
- Sudden unexpected deaths of patients
- Coping mechanisms if less constructive, can increase stress
- Lack of support structure – colleagues; seniors; marriage; family etc.
- Lack of debriefing sessions
- The negative effects on personal and family life is evident
- The negative effects on work
- The recommendations to improve the coping mechanisms of dealing with patients' death

Doctors second guessing their actions that leads to guilt

Masia, R. T., et al. (2010) mentioned in their study that, "Doctors often experience a sense of powerlessness for not being able to affect or alter the final outcome for the patient, i.e. that of death. Medical doctors suffer from guilt, incompetence and feelings of failure as well as feelings of helplessness when a patient dies." (9).

In this study, the participants definitely second guessed their actions of trying to save a patient, after the death of their patient. They felt guilty after their patient died. The literature also stated that junior doctors need a lot of support from seniors, with regard to knowledge and emotional support. The literature also showed that seniors debriefing with junior doctors helped them emotionally.

This again seems to be true in some of the participants of this particular study as seen in the following quotes.

"Soon after the death, it was going through my mind. What did I miss, what could I have done differently, was it my fault? Could he have been sent to a different hospital (secondary hospital)? Those were just the things that went through my mind initially. Was it my fault?" (Participant 8 – community service medical officer).

"Initially you feel overwhelmed and disheartened. So, it's little bit better when someone comes in dead but if someone dies while you trying to manage them it's a lot harder to cope. Especially speaking to the family after someone dies. That process I find quite overwhelming." (Participant 9 – community service medical officer).

“Being alone, being young, being inexperienced in that it’s hard, it’s difficult. It was very much traumatic for me. It took me a while to just step down and be like it’s okay these things do happen.” (Participant 10 – community service medical officer).

Redinbaugh et al (2003) mentioned the following which is interesting and different to this study, “Level of training was not related to emotional reactions, but interns reported needing significantly more emotional support than attending physicians.” (4).

Redinbaugh et al (2003) then mentions the following as well, which is similar to this study as seen in the above quotes of the participants. “Although most junior doctors discussed the patient's death with an attending physician, less than a quarter of interns and residents found senior teaching staff (attending physicians) to be the most helpful source of support.” (4).

Sudden unexpected deaths

Rhodes-Kropf, J., et al. (2005) is also similar to what the participants of this study experienced, as mentioned, “The finality of deaths, particularly sudden deaths, evoked strong emotions.” (2).

In this study the participants found it more difficult to deal with unexpected deaths which is similar to the literature, in the above statement, and also seen in the following quotes:

“Wow, when I was in pediatrics there was a two-month old baby that came into the pediatrics E.C (emergency unit) the only intern covering pediatrics at the time, actually I was the only doctor in the pediatrics E.C (emergency unit). So, I immediately pressed the panic button and then I commenced CPR (compressions). The baby looked completely pale, sunken eyes, sunken fontanelle. Two seconds later the resuscitation team came. The consultant said I must stop doing resuscitation because there’s nothing much we can do for the baby. There was no debriefing. Prior to that I was actually clerking a patient, so I immediately went back to clerking that patient. But I felt so emotional about it. It was unexpected and I was alone for the first couple of seconds and I felt like was there anything else I could do for this baby. I wanted time to process this.” (Participant 1 – 2nd year intern).

“Ward deaths are usually expected; I haven’t had an unexpected death in the ward. So that one is usually okay because as a team you basically mentally prepare each other before the time, when you have a discussion on the ward round. And there’s always counseling of the family and all that. Then in EC (emergency unit) that can sometimes be a bit difficult especially if it’s young patients, especially if it clearly looks unexpected. You know with an older person you don’t always know the full story so at first glance you don’t know what’s the underlying conditions or anything like that but if it’s like a 22-year-old guy that has been shot or especially trauma related stuff, young people and trauma that’s really difficult.” (Participant 2 – 2nd year intern).

Coping Mechanisms

Kasket, E, et al. (2006) mentions, “Review of the academic literature and popular press suggests that physicians have considerable difficulty with issues of death and dying. (20). It also mentions the following, “This is often reductionistically attributed to such factors as insufficient training in communication skills, but death denial, death anxiety, and the emotion-management rules of the profession all play their part.” (20).

Most of the coping mechanisms mentioned in these articles, seem to be similar to the participants in this study. The coping mechanisms mentioned were mostly about self-care, religious and cultural ways to deal with difficult situations as well as learning or increasing one’s knowledge on the specific disease that caused the death of a patient.

Strote, J., et al. (2011) said in their study that, “There is a growing awareness of the effects of patient death on physician well-being, and the importance of cultural and educational changes to improve coping mechanisms.” (6). It is also mentioned that, “Patient death was experienced frequently, with 95 (66%) witnessing a death at least every month.” (6).

Then this next statement seems similar to this study, as most participants had no training on how to deal with a patient’s death.

Strote, J., et al. (2011) mentioned, “No training on coping with patient death had occurred for 35 (24%); 93 (64%) had less than 6 hours of training.” (6). It is also said that the most common coping mechanisms included “talking with colleagues or friends and family, as well as simply continuing to work.” (6).

The participants also mentioned talking to colleagues and family as their coping mechanisms helped them tremendously, as seen in the following statements made by them and also similarly in the literature.

“The way I try to cope is I just talk to people. My wife is one of the biggest forms of coping that I have, I talk to her. I just find it helpful to talk to someone. It helps a lot just talking to someone.” (Participant 1 – 2nd year intern).

“I think getting more information and speaking to other doctors, more senior than me.” (Participant 7 – 2nd year intern).

“I think just talking about it with family members, I also spoke about it with a senior who was on and she said the same thing. There wasn’t anything you could have done differently. Speaking about it to people that you know.” (Participant 8 – community service medical officer).

Van der Bijl, H. and P. Oosthuizen (2007) mentioned the following negative coping mechanisms, “health care behaviour as evidenced by substance use, psychotropic medication use, self-prescribing habits (in doctors), help seeking behaviour as well as negative coping strategies as indicated by the intention to emigrate and / or leave the profession.” (10).

Most of the participants mentioned drinking more alcohol or bad eating habits, but none of the above mentioned in that comment. The following were statements from the participants:

"Yes, drinks wine." (Participant 2 – 2nd year intern)

"Yes, I do. I don't smoke anything, but I will definitely on a rough day have a glass of wine. It' s almost routine now. It's not to the point where I'm tipsy on my toes. But over supper, having a meal that I would have a glass of wine, while talking to my person about my day. But it's not the case of I need to get a bottle of tequila or whatever and drown my sorrows." (Participant 4 – 2nd year intern).

"It depends on your relationship with those mentioned entities. But if one often tells himself after a long day, I'm going to have a drink. Then after something like this, you might have several more drinks. You've placed alcohol as a coping mechanism, so I think it depends. Personally, it did sort of alter how I used alcohol in that time. As opposed to using it from enjoyment to I want to forget about this. So, there was an element to that." (Participant 6 – 2nd year medical officer).

"I think I definitely have bad coping mechanisms' self-soothed with food, definitely an emotional eater." (Participant 8 – community service medical officer).

"No, so I'm fortunate enough to not use any substance but maybe there are times when I've been prescribed sleeping tablets. Where my mind is very active, can't say it's always associated with a death. Maybe where my mind is racing a bit more that night I'd be prone to take a sleeping tablet." (Participant 9 – community service medical officer).

Masia, R. T., et al. (2010) explained, "The following themes emerged: emotional reactions, which included anger, helplessness, guilt and pain; recurrent thoughts about the incident; blame; perceived incompetence; detachment from emotions; religion; death of a pediatric patient; medical training; psychological services; work environment; coping with the family of the deceased; and facing mortality." (9).

All of these were similar emotions felt by the participants interviewed. The detachment of emotions, feeling 'numb' or 'cold' was used by most of the participants, as well as blame, guilt and incompetence or inexperience was mentioned.

Lack of Support Structure – colleagues; seniors; marriage; family etc.

Redinbaugh, E. M., et al. (2003), mentioned, "Although most junior doctors discussed the patient's death with an attending physician, less than a quarter of interns and residents found senior teaching staff (attending physicians) to be the most helpful source of support." (4).

Aase, M., et al. (2008), also explained, “Belonging to a community of their fellows was a presupposition for coping with the loneliness and powerlessness related to their vulnerable professional position.” (7).

Baider, L. and S. Wein (2001), mentions, “Talking to colleagues provides perspective and alternative viewpoints, which helps one take an objective view.” (8).

According to the participants in this particular study, they also mentioned talking to family, colleagues and seniors as their support structure.

A few quotes are as follows:

“The way I try to cope is I just talk to people. My wife is one of the biggest forms of coping that I have, I talk to her. I just find it helpful to talk to someone. It helps a lot just talking to someone.” (Participant 1 – 2nd year intern).

“I think just talking about it with family members, I also spoke about it with a senior who was on and she said the same thing. There wasn’t anything you could have done differently. Speaking about it to people that you know.” (Participant 8 – community service medical officer).

Lack of Debriefing Sessions

Most of the literature showed that debriefing rarely occurs for doctors, and in this particular study it was similar. The doctors requested debriefing sessions to help cope with patients’ death.

Strote, J., et al. (2011) mentioned, “Post death debriefing occurred rarely or never for respondents.” (6).

Isaacs, A. and R. Mash (2004) mentioned in their conclusion of the study, “Debriefing should also be available for staff involved in unsuccessful resuscitation.” (21)
The following are quotes from the participants of this study.

“Yes, any time afterwards. It would be nice to have debriefing sessions because you have informal ones between yourselves but no formal ones. Maybe if it makes it to a morbidity and mortality meeting, then only the case will be discussed. I think within that one week, because if you in a place where there are lots of deaths, then it’s easier if it’s once a week.” (Participant 7 – 2nd year intern).

"Yes, after the death should be the first debriefing. Your emotions are raw, it's just fresh. You need someone to go over with what had happened. Because sometimes you black out parts of what happened, and it only comes up later as flashbacks. I think in the initial stages have a debrief, a day after as well so that the night you can think about what you've missed, just so you can talk about it again. I think an initial debriefing and a follow up." (Participant 8 – community service medical officer).

The Negative Effects on personal and family life is evident

Strote, J., et al. (2011) mentioned the following, "Most Emergency Physicians had experienced physical responses to patient death, the most common being insomnia and fatigue. Common emotional responses included sadness and disappointment." (6).

Baider, L. and S. Wein (2001), also said that doctors tend to experience isolation, loneliness and loss of control at times. (8).

In the article of Baider, L and S. Wein titled 'Reality and fugues in physicians facing death: confrontation, coping and adaptation at bedside.' It was also stressed that doctors experience, 'Sarcasm, anger, blame to the patient or family, authoritarianism and paternalism, shame, humiliation and embarrassment.' (8). It also mentioned psychosomatic complaints by doctors which included, "headache, fatigue, free-floating anxiety and conflicts with colleagues, friends and family." (8).

In this study, most participants mentioned: isolating themselves, being moody around family, not becoming emotionally attached to patients or becoming blunted.

"Yeah, in terms of I've become more isolated. So, the only way to keep in contact with my family is via phone or texting. In those times when I'm in my own head. Then that takes a backseat. That how it affects me. At least when I'm at home I'm alone in anycase.so it's not like a direct effect. But maybe they can't get a hold of me for the next 2 days because I'm not keen to talk." (Participant 6 – 2nd year medical officer).

"Yes, I would say so. In the sense of its 2 months down the line and I still think about it. I don't think it's not a problem everyday but if it is something you look back on and it was quite a significant death then on that day you probably a bit more agitated or short." (Participant 9 – community service medical officer).

The Thought of one's own mortality

Elaine Kasket, et, al. 2006 mentioned the following in the article which is very profound. "Review of the academic literature and popular press suggests that physicians have considerable difficulty with issues of death and dying. This is often reductionistically attributed to such factors as insufficient training in communication skills, but death denial, death anxiety, and the emotion-management rules of the profession all play their part." (20)

It was also mentioned that, “The knowledge and anticipation of death has always been a tricky area for humans, theoretically the only animals with the ability to contemplate their own demise (Becker, 1973). Also, that facing death can enrich our lives by allowing us to live more purposefully and to appreciate what life we have more deeply – Heidegger termed it “Being-towards-death” and argued that it was the key to an authentic existence (Heidegger,1926/1962). The idea of facing death head-on, however, is too difficult for many of us, particularly when it is our own death that we confront; we defend against our anxiety through various forms of denial, sometimes half-realizing what we do and overtly asserting that this is the only way to live.” (20).

About 33% of the participants mentioned that they have thought of their own mortality because of all the patients’ deaths they experience, while the rest of the participants has not thought of it. The following are some of the comments made:

“Yes, I mean you get reminded that life is short, and anything can happen any time.” (Participant 1 – 2nd year intern)

“It does because we deal with so many young people that come in.” (Participant 4 – 2nd year intern)

“No not necessarily. It doesn’t make me think of my own mortality.” (Participant 6 – 2nd year medical officer).

The Negative Effects on Work

Gunasingam, et, al (2015), mentioned that dealing with grief could lead to burnout. “Burnout is prevalent among postgraduate year 1 doctors, and they value the emotional and social support from attending debriefing sessions.” (14).
Kutner, J. S. and K. M. Kilbourn (2009), mentioned that, “physicians must be attentive to their own needs, which include acknowledging feelings of grief and loss and pursuing healthy venues that promote adaptive coping and decrease the risk of detachment and burnout.” (15).

Rossouw, L., et al. (2014), had a study on burnout in doctors in the Cape Metropolitan which showed the following results: “Of 132 doctors included in the analysis, 76% experienced burnout, as indicated by high scores in either the emotional exhaustion or depersonalisation subscales. In addition, 27% of doctors had cut-off scores on the BDI indicating moderate depression, while 3% were identified to have severe depression.
Conclusion: Both burnout and depression are prevalent problems in doctors working at district level and in communities. Resilience appears to be protective and may be a useful target for future intervention.” (22).

In this study the participants mentioned the following contrast in how it affects them at work which could equate to 50 % agreed on each of the following:

"So I think that can happen and you can feel a bit disheartened on your shift but I don't think it changes the way I would treat my patients' think it's more like a personal feeling if it's really hectic death now or like a really difficult case then. It would be in my feelings, but I wouldn't see less patients than before or manage them differently. I definitely don't think that that feeling of disheartening would carry on to the next day." (Participant 2 – 2nd year intern)

"For me personally, looking back on that case. It affected me a couple of weeks after, I wouldn't say a couple of months and years after. I think it's also like the high workload and the pressure. It just depends what happens. It will affect me a week or two after. I'm still able to work, look it does distract my mind, but my physical and clinical skills are still there. I might think of it when I'm by myself, not when I'm busy with a patient or like when I' m alone in a sense." (Participant 3 – 2nd year medical officer).

The Recommendations to Improve the Coping Mechanisms of dealing with patients' death

Strote, J., et al. (2011), also mentioned similar recommendations, "The most common coping mechanisms included talking with colleagues (113; 78%) or friends and family (100; 69%), as well as simply continuing to work (89; 61%). Post death debriefing occurred rarely or never for 93 (64%) of respondents." (6).

The participants mentioned the following recommendations as listed above in the results section:

"I think as I mentioned they should debrief with the supervisor; they should talk to someone about it if they feel they can't cope. I'm not sure if the facility has counselling services and it should be made known to everyone if there is counselling services." (Participant 1 – 2nd year intern).

"I always feel that other places have 2 mental wellbeing days. You can use it for anything, you can use it for a family day, an Eid day, just more awareness of mental health." (Participant 3 – 2nd year medical officer).

"Definitely speak to other colleagues, definitely get 2nd 3rd or 4th opinions. If possible and if accessible to you get an expert advice about the matter. To know mostly if whether the decisions you made were completely unreasonable or were reasonable. Use that information for future cases." (Participant 6 – 2nd year medical officer).

How is the present study similar to the literature?

This present study is similar to the literature with regard to the coping mechanisms explained which includes good supporting structures set in place with colleagues, seniors at the workplace, partners and family as well. It also shows how important debriefing sessions are and that it is often neglected in most workplaces. These are all mentioned in the discussion section.

How is the present study different to the literature?

The difference between this present study and the literature, is that in this study less harsh negative coping mechanisms are used by participants like eating more junk food, insomnia and also drinking slightly more alcohol compared to normal. The literature mentions drug use or addiction, alcohol as well as suicide. This is also discussed in the discussion section.

What does the present study contribute to our knowledge?

This present study confirms that the death of patients' causes stress for young doctors and that debriefing sessions are important as part of the support structure for these doctors.

The more support these young doctors get, the better their coping mechanisms become, and they may have less burnout and other mental disorders like anxiety, depression etc.

Implications for practice

The implications of this present study showed that debriefing sessions should be mandatory for doctors as a group after experiencing a patients' death and also individual debriefing sessions if needed. The implications for junior doctors are that debriefing sessions should be mandatory and this will help with better coping mechanisms as well as being better doctors. The implications for consultants and managers will be that they should be willing to give debriefing sessions to the junior doctors and make time to do this regularly.

Limitations of the Study Design and trustworthiness (Credibility; Transferability; Dependability; Confirmability)

To ensure validity in qualitative research has always been a debate. When it comes to assessing the "trustworthiness" of research, qualitative researchers subscribe to the ideas of Guba (23). He proposed four criteria to be assessed for qualitative research:

a) credibility (in preference to internal validity)
b) transferability (in preference to external validity)
c) dependability (in preference to reliability)
d) confirmability (in preference to objectivity) (24)

Credibility:

The following provisions were made in this study to promote credibility.

- The adoption of appropriate, well-recognized research methods
- The development of an early familiarity with the participants, through the researcher interacting on a daily basis in medical practice with interns, community service doctors and medical officers.

- Ensuring honesty from the participants in this study, through establishing early rapport, making it clear that they could refuse to be interviewed or withdraw at any time, and emphasizing the independent status of the researcher and not as a doctor in this instance.
- After each interview, the researcher reflected on prior interviews and made notes, recognizing personal bias and factors that may influence the interview process and interpretation of the data.
- Examination of previous research findings was used to check congruency of results with those of past studies.

The following provisions, which might have strengthened its credibility, were not made in this study.

- Member checks. This was only done on the first five participants, which should have ideally been done by all the participants, by letting the participants, firstly, check the accuracy of the raw data by asking them to look over transcriptions of their interviews. Only five member checks were done because of time limitations. Then secondly, the emerging themes in the analysis phase should have been checked with the same participants.
- Therefore "member checking /responder validation was done", but triangulation (i.e. other methods of getting info) was not possible with the research design.
- Triangulation should have been used, by using different methods (interviews and focus groups) and also at different sites.
- There should have been more frequent debriefing sessions between the researcher and supervisor.
- The project should have been scrutinized by peers.
- The independent validation of themes by another researcher would have shown more credibility but there were cost constraints.
- The researcher specifically asks about 'bad' coping mechanisms (without asking specifically asking about 'good' mechanisms – this could have unintentionally resulted in respondent bias?

Transferability

All forms of the data in their original form, have been maintained in order to promote the criterion of transferability. The socio-economic characteristics of the study participants were all similar and they all worked in the same hospital, namely Mitchell's Plain District Hospital thus the findings may not be applicable to more diverse settings i.e. at smaller facilities where there are only one or two doctors and thus less support available from colleagues.

Dependability

Guba (23) mentions the close relationship between credibility and dependability. What would have strengthened the dependability in this study, would have been to use triangulation of methods, like focus groups as well as interviews.

Confirmability

There are three factors, that would have strengthened its confirmability – triangulation, an ongoing reflective summary and an audit trail. Triangulation as described above. A "reflective commentary" (24) is a commentary or journal used by the investigator throughout the process of research, which contains the investigator's thought processes in an attempt to reveal his beliefs and assumptions made. Lastly a diagrammatic audit trail would "allow any observer to trace the course of the research step-by-step via the decisions made and procedures described". (24).

Strengths of the Study Design

The qualitative research design used with in-depth interviews offers itself to analyzing and describing a topic which is multi-layered, complex and involves descriptions of emotions and beliefs. This is seen in all the quotes of the participants, which makes this research so rich and colorful.

Trustworthiness of the research: (25)

Credibility of the findings was checked by feeding back the findings to the participants for accuracy of information recorded. Even though the research was conducted at a specific site, it may still be transferable to other populations, as the experience of the common event may be similar. The investigators have checked for potential personal bias when findings were interpreted.

Conclusion

The stress of patients' deaths does affect young doctors and it is paramount that debriefing sessions be recommended to assist them in dealing with this stressful situation. This may prevent future anxiety disorders, depression and also less burnout in young doctors. Future studies are needed to assess the effectiveness of debriefing sessions once implemented at Mitchell's Plain District Hospital.

It is showed that bereavement debriefing is said to be a multifaceted approach supporting health care professionals with informational, clinical and emotional support. (26) Elizabeth, A Keene mentions in this article, 'The opportunity to express one's grief and reflect on the experience of caring for a particular patient and family allows health care professionals to learn to manage their own grief experience to continue to serve the many families who need their expertise and care.'(26) This statement, again argues that debriefing sessions will help junior doctors to work through their grief for their patients who has passed on, and be in a better space to help their other patients.

Zaid Allie mentions in this article, in their study, half of the participants reported bereavement overload. (27) It was also stated that, "Compassion fatigue was prevalent in two-thirds of participants and highest in doctors.'' (27) In this particular study, it also stated that, "the need for education on bereavement overload and the availability of support systems at work was identified.'' (27) The recommendations in this particular study has been similar to this research as they also mentioned, the following, "Thorough and interactive debriefing sessions with a clinical psychologist should be arranged regularly where students can also be screened and scheduled in for an extra session (should they need one). Medical staff and students should be encouraged to develop positive coping mechanisms, not only to handle bereavement better but also to cope better with life. Staff should be encouraged on a regular basis by those in charge, such as hospital management, to participate in counselling or debriefing or express the need thereof." (27)

The implementation of debriefing sessions, should firstly start with educating managers, supervisors and seniors with how to give debriefing sessions, example a set agenda or questions to be asked. Then the debriefing sessions should be mandatory for all junior doctors after the death of a patient, either in a group or individual sessions.

Elaine Kasket, et, al. 2006, said this so elegantly, "The reminder about frailty and the warning not to play God, however, could assume a different meaning and contain an additional caveat for the physician: You are mortal. In doctors' vulnerability to death, and in their primal fear of it, they are on par with any other humans, and yet we tend to treat them like gods or robots. It is only natural for their vision of themselves to fall into line with others' persistent assumptions about them. As long as medical schools, training programs, hospitals, and society treat physicians as though they are immune to the grief and trauma provoked by patient death, physicians will continue to assume a mantle of invulnerability – one that hangs heavily about their shoulders." (20).

References

1. Atul Gawande. (2014,2015). "Being mortal." (1):1 - 214.

2. Rhodes-Kropf, J., et al. (2005). "“This is just too awful; I just can’t believe I experienced that …”: Medical Students’ Reactions to Their “Most Memorable” Patient Death." Academic Medicine **80**(7): 634-640.

3. Zambrano, S. C. and C. A. Barton (2011). "On the Journey with the Dying: How General Practitioners Experience the Death of Their Patients." Death Studies **35**(9): 824-851.

4. Redinbaugh EM, Sullivan AM, Block SD, Gadmer NM, Lakoma M, Mitchell AM, et al. Doctors' emotional reactions to recent death of a patient: cross sectional study of hospital doctors. BMJ. 2003;327(7408):185.

5.Jackson VA, Sullivan AM, Gadmer NM, Seltzer D, Mitchell AM, Lakoma MD, et al. “It was haunting …”: Physicians’ Descriptions of Emotionally Powerful Patient Deaths. Academic Medicine. 2005;80(7):648-56.

6. Strote, J., et al. (2011). "Academic emergency physicians' experiences with patient death." Acad Emerg Med **18**(3): 255-260.

7. Aase M, Nordrehaug JE, Malterud K. "If you cannot tolerate that risk, you should never become a physician": a qualitative study about existential experiences among physicians. Journal of medical ethics. 2008;34(11):767-71.

8. Baider L, Wein S. Reality and fugues in physicians facing death: confrontation, coping, and adaptation at the bedside. Critical reviews in oncology/hematology. 2001;40(2):97-103.

9. Masia, R. T., et al. (2010). "Emotional reactions of medical doctors and students following the loss of their patients at the Dr George Mukhari Hospital emergency unit, South Africa: original research." South African Family Practice **52**(4): 356-363.

10. Van der Bijl, H. and P. Oosthuizen (2007). "Anxiety, depression, health attitudes and coping strategies in doctors and teachers in a Cape Town setting : article." South African Journal of Psychiatry **13**(2): 46-51.

11. The, L. (2017). "Suicide among health-care workers: time to act." The Lancet **389**(10064): 2.

12. West, C. P., et al. (2016). "Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis." The Lancet **388**(10057): 2272-2281.

13. Dahlin, M. (2012). "Burnout in doctors." BMJ **344**.

14.Gunasingam N, Burns K, Edwards J, Dinh M, Walton M. Reducing stress and burnout in junior doctors: the impact of debriefing sessions. Postgraduate Medical Journal. 2015;91(1074):182-7.

15. Kutner, J. S. and K. M. Kilbourn (2009). "Bereavement: addressing challenges faced by advanced cancer patients, their caregivers, and their physicians." Prim Care **36**(4): 825-844.

16. Zion, D., et al. (2000). "The Declaration of Helsinki, CIOMS and the ethics of research on vulnerable populations." Nature Medicine **6**(6): 615-617.

17. Sandelowski, M. (2000). Whatever Happened to Qualitative Description? Research in Nursing & Health 23: 334-340.

18. Kim H, Sefcik JS and Bradway C. (2017). Characteristics of Qualitative Descriptive Studies: A Systematic Review. Research in Nursing & Health Feb; 40(1): 23-42.

19. Laerd Dissertation. Purposive sampling. http://dissertation.laerd.com/purposive-sampling.php

20. Kasket, E, et al. (2006). "<DeathandtheDoctor.pdf>." Researchgate (January): 137 - 150.

21. Isaacs, A. and Mash,R (2004). "An unsuccessful resuscitation: The families' and doctors' experiences of the unexpected death of a patient." South African Family Practice **46**(8): 20-25.

22. Rossouw, L., et al. (2014). "The prevalence of burnout and depression in medical doctors working in the Cape Town Metropolitan Municipality community healthcare clinics and district hospitals of the Provincial Government of the Western Cape: a cross-sectional study." South African Family Practice **55**(6): 567-573.

23. Guba EG. Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal.* 1981: 29; 75-91

24. Shenton AK. Strategies for Ensuring Trustworthiness in Qualitative Research Projects. *Education for Information.* 2004: 22; pg. 72

25. Statistical Solutions. What is Trustworthiness in Qualitative Research? https://www.statisticssolutions.com/what-is-trustworthiness-in-qualitative-research/

26. Elizabeth A. Keene, N. H., Barbara Hall, Cynda Rushton (July-August 2010). "Bereavement Debriefing Sessions: An Intervention to Support Health Care Professionals in Managing Their Grief After the Death of a Patient " Continuing Nursing Education **Vol. 36**(No. 4): 185.

27. Brits3, Z. A. E. l. R. K. M. B. M. Z.-A. R. K. S. G. J. J. P. v. R. H. (2018). "Bereavement overload and its effects on, and related coping mechanisms of health care providers and ward administrators at the National District Hospital in Bloemfontein, Free State." African Journal of Primary Health Care & Family Medicine ISSN: (Online) 2071-2936, (Print) 2071-2928: 1 - 7.

Addendum:

1. **Data Collection Tool/ Interview Guideline**
2. **Consent Form**
3. **Information Sheet**
4. **Distress Protocol**

Addendum 1:

Data Collection Tool:

SOME QUESTIONS USED IN THE INTERVIEW AS A GUIDELINE

1. What is your experience like after the death of a patient?
    a. what happened? Expected vs unexpected death
    b. what were you thinking? At the time and did you think of this later? When?
    c. How were you feeling? Emotions? Physical symptoms?
2. Describe your coping mechanisms used? What do you do?
3. What are your ideas/perceptions that could make the experience better for you?
4. Do you think debriefing sessions should be instituted?
5. Does it affect your personal and family life? How?
6. Does it affect the rest of your workday? Work week? Work month?
7. Does this make you think of your own mortality?

After the pilot study, these questions were added:

8. Does it affect your mental health – anxiety; major depression disorder; burnout etc.?
9. Bad coping mechanisms e.g. alcohol or substances?
10. Recommendations on coping strategies that worked for you?

Addendum 2:

Information Sheet for:

COPING MECHANISIMS OF DOCTORS FOLLOWING THE DEATH OF A PATIENT: A QUALITATIVE STUDY.

Dear Sir/Madam,

Thank you for allowing me to tell you about a study I am conducting at Mitchell's Plain District Hospital.

My name is L'Oreal Snyders and I am currently doing my masters in Family Medicine with the University of Cape Town. As a masters' student I need to conduct research that will improve the care of patients at a district health care level. I have chosen to focus on coping mechanisms of doctors following death of a patient. I would like to better understand how doctors deal with this stressful event and make recommendations on how to assist young doctors in the future.

This information sheet will explain the study to you. Please ask any questions you may have. Please take your time in deciding if you would like to join the study.

Why is this study being done?

To explore the feelings and coping mechanisms of doctors after the death of a patient. To assess if this affects their personal, emotional and family life. To also explore options to assist doctors with coping strategies following a death of a patient.

Why are you being asked to take part?

You are working in a setting where dealing with the death of a patient is not an uncommon event. You would thus have experience of dealing with this and be able to inform me of your experiences.

How many people will take part in the study?

Approximately 15 to 20 doctors will participate in the study.

How long will the study last?

Participant interviews will be done over a 3-month period and the study will be completed after a further 6 months.

Do I have to take part?

No, you don't have to take part, but if you agree to participate, you are still free to withdraw from the interview at any time, without giving a reason.

What will happen if you decide to take part in the study?

If you do agree to participate, you will be asked to sign a consent form, which indicates that you agree to do so. You can take your time to think about participating in the study. The investigator will set up a face-to-face interview with you at your convenience. It should not be longer than 40 minutes in total. Some questions about your experience (what happened; what you were thinking; how you were feeling) after the death of a patient will be asked as well as coping mechanisms you use.

What ideas/perceptions that could make the experience better for you etc. This information sheet is for you to keep.

Benefits of the study

The anticipated benefits are in identifying and sharing improved coping strategies for doctors.

What are the risks <u>and discomforts</u> of this study?

There are a few study risks. Answering some questions might cause some emotional responses. The interview will be stopped when this happens, and the researcher will assess whether to proceed or not.

Will my taking part in this study be kept confidential?

All the information gained in the interviews will be kept strictly confidential. You will not be identified in any way, and your personal information when filling in the consent form will be kept separate from the interview data. A number system for the interviews and not your name will be used. No one outside the study will have access to the information that you share.

Who will see the information that is collected about you during the study?

Only the researchers involved in the study will know which information came from which participant. Quotes used in the results of the study will be anonymous.

What will happen when the study is over?

At the end of the study a report will be sent to the hospital (Mitchell's Plain District Hospital) as well as everyone who participated in the study.

Will you receive any reward (money or food vouchers) for taking part in this study?

Participants will not receive any money or food vouchers for taking part in the study.

Who do I speak to (or contact) if I have any questions about the study?

If you need to talk to anyone regarding this research, you can contact the following people:

Dr L'oreal Snyders, Family Medicine Registrar: Cell: 078 1969711

Dr Abdul Isaacs, Family Physician – Cell: 0718762257

If you have any questions about any ethical issues regarding this study:

UCT Research Ethics Committee

**** contact person to be added

Addendum 3:

Consent Form:

COPING MECHANISIMS OF DOCTORS FOLLOWING THE DEATH OF PATIENTS: A QUALITATIVE STUDY.

1. I confirm that I have read and understand the information sheet and have had the opportunity to ask questions.

2. I understand that my participation in this study is voluntary and I am free to withdraw at any time, without giving reason.

3. I agree to take part in the above study.

Name:_____

Email address for results of study if interested: _____

Signature: _____ Date: _____

Researcher: Signature: _____ Date: _____

Witness: Name: _____

Signature: _____ Date: _____

Addendum 4:

Distress Protocol

The distress protocol for data collection is the following:

- All the participants/doctors will be fully informed about the nature of the issues arising in the interview.
- Any person who appears to become distressed will be offered the opportunity to stop the interview and either abandon it or restart when they are comfortable to do so.
- All information will be treated as confidential except in a situation where the doctor's safety is at risk; example mental health. In this case the information will be acted upon.
- The participant/doctor will be offered support and counseling from the hospital's psychologist of Mitchell's Plain District Hospital: Ms. Roxy Newbert who will do an initial assessment and refer if necessary. Another option that will be offered to the participant/doctor will be to contact ICAS Employee health and wellness program. ICAS contact number: 021 673 6500. This has changed to Metropolitan during the research period, contact number: 0800611093.