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Rolling Dice – creative ways of engaging students with problem-based learning

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Introduction

This project began with a friend asking me a favour. Would I run a session on risk and decision-making for his Approved Mental Health Professional [AMHP] students. I considered the following questions from the PDSA Model (Speroff and O'Connor 2004):

1. **What did I want to achieve?** A learning activity that would be fun and engaging but is also time-efficient in its preparation.
2. **How would I know it was effective?** Student feedback and observing the class.
3. **What changes could I make that will result in this improvement?** This question is answered below…

Problem-Based Learning and case studies

Problem-based learning would be a good place to start as it see's students working together in groups to solve complex issues (Allen et al. 2011; Loyens et al. 2012). It helps to foster a deeper understanding of issues, develop teamwork, and promote verbal communication skills (Hmelo-Silver 2004). The use of case studies in problem-based learning activities is common, and an effective way of delivering the problem (Romero et al. 2004; Ballantyne and Knowles 2007). A popular method of problem-based learning is the use of case studies (Romero et al. 2004; Ballantyne and Knowles 2007).

Case Study Benefits

Allows students to engage in in-depth explorations of situations and events (Crowe et al. 2011). They help to develop problem-solving skills, critical thinking, and professional judgements (Ertmer and Russell 1995). They also help relate theory with practice in the safety of the classroom (Napier 2010).

Case Study Drawbacks

Case studies can take a long time to write, and I would need to write several of them to be effective for the students to work in small groups (Popil 2011).

Addressing the drawbacks of case studies

Method

I was inspired by Dungeons & Dragons. In this game dice rolls help to determine things like a person's characteristics, items in a room, and the location of certain objects. The number on the die corresponds with information in a table, which is then used in the game. I decided to use this concept to design case studies. **I designed some random tables covering topics such as: Age, Relationships, Accommodation, Personality Quirks, Presenting Symptoms, Medication, Current Location, Presenting Symptoms, Hobbies, and Support**. I split the class into small groups, and gave them a set of dice. They used the information generated by the dice rolls to create their own case study. I asked them to assess risks and make a decision based on the information in the case study, and then share their work with the rest of the group.

Results

- The different shaped dice drew the students attention and 'hooked' them into the activity.
- As the students rolled the dice and created their case study, the energy levels in the class seemed to rise.
- There was lots of discussion and sharing of ideas within the groups.
- The students were keen to see what other groups had come up with and how they had addressed different issues.
- Informal feedback from four students indicated they enjoyed this activity. They found it useful to look at different situations and became aware of issues they hadn't considered before.
- It didn't take a great deal of time to design the tables.
- As the case studies are designed on a 'random' basis, they can be used again by students and will result in different scenarios each time.

Conclusion

I have since created more tables for other service-user groups e.g. older people, children & young people, people with learning disabilities, addictions, and carers. I anticipate it could be useful for other disciplines, not just AMHP students. There is no reason why this could not work for nursing, occupational therapy, or physio students, etc. I intend to develop this activity and write a paper in due course.

Sample of Tables

Relationships	D12
Close relationship with one or both parents	1
In an intimate relationship	2
Just broke up from a relationship	3
No friends/family	4
Pet dog	5
Close to colleagues at work	6
Distant relationship with parents	7
New relationship	8
Problems with neighbours	9
Problem with house mates	10
Distant relationship with sibling	11
At risk of homelessness	12

Personality Quirks	D10
Laughs inappropriately	1
Becomes tearful and very easily	2
Hates wearing clothes	3
Repeats themselves, constantly	4
Chain smokes	5
Doesn't speak English	6
Arrogant	7
Hungry	8
Under the influence of drugs/alcohol	9
Sporadically barks like a dog	10

Medication	D4
Stopped taking it	1
Run out	2
Not on any	3
Can't find it	4

Accommodation	D6
Lives with parents	1
Lives alone	2
Lives with partner	3
Homeless	4
Lives in a hostel	5
Flat/house share with friends	6

Presenting symptoms	D20
Grandiose	1
Refusing medication	2
Angry/irritable	3
Pre-Occupied with lighting fires	4
Not eating	5
Confused	6
Auditory hallucinations	7
Visual hallucinations	8
Pressure of speech	9
Distrustful of professionals	10
Believes people are trying to kill them	11
Worried food/water is poisoned	12
Full of energy/can't sit still	13
Only sleeps two hours each night	14
Impulsive	15
Obsessed with weapons	16
Believes partner is the devil	17
Someone has put a chip in their brain	18
Wants to give away all their possessions	19
People are stealing their thoughts	20

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