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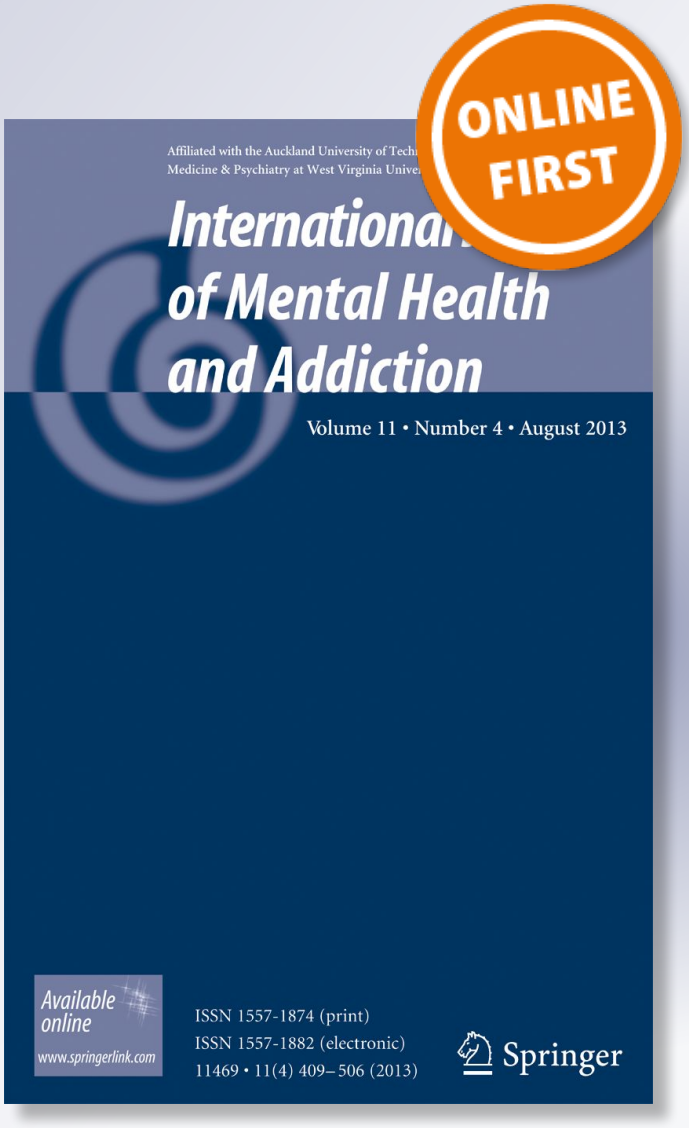

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ORIGINAL ARTICLE

The Experience and Meaning of Problematic 'G' (GHB/GBL) Use in an Irish Context: an Interpretative Phenomenological Analysis

Niamh Joyce[1,2] · **Pádraig MacNeela**[1] · **Kiran Sarma**[1] · **Graham Ryall**[3] · **Eamon Keenan**[2]

Abstract The problematic use of psychoactive substances has adverse consequences for people's lives and requires on-going investigation of experiences of onset, course and resolution in order to better inform theoretical understanding, particularly with regard to the use of club drugs and novel psychoactive substances. In turn, this may influence treatment approaches. GHB/GBL, frequently termed 'G', is one such substance, with problematic use resulting in increased presentations at A&E departments and at substance dependence clinics across Europe. The aim of the present study was to explore problematic G use as experienced by people who had presented for treatment, in Ireland, using interpretative phenomenological analysis (IPA). IPA was selected in recognition of the lack of previous research on the experience of problematic use of G and in the context of an evolving understanding of what constitutes problematic substance use. A purposive and homogenous sample of seven people, five gay males and two straight females, who had presented for treatment for 'G' substance use disorder to a community-based

✉ Niamh Joyce

Pádraig MacNeela
Padraig.macneela@nuigalway.ie

Kiran Sarma
kiran.sarma@nuigalway.ie

Graham Ryall
Graham@rcdt.ie

Eamon Keenan
ekeenan@hse.ie

[1] School of Psychology, National University of Ireland, Galway, University Rd., Galway, Ireland

[2] National Drug Treatment Centre, McCarthy Centre, 30-31 Pearse St., Dublin 2, Ireland

[3] Rialto Community Drug Team, 468 South Circular Road, Dublin 8, Ireland

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drug team, participated in semi-structured interviews. Three superordinate themes reflecting the participants chronological development of problematic 'G' use and early recovery were fully developed and presented—(1) early use: "I was part of that gang that took G"; (2) daily use: "It's like insidious; it just weaves into your everyday life"; and (3) early recovery: "my priorities are changing". This study supports the interactive role of community, self-identity, personal vulnerability and substance effects in the development, maintenance and recovery from problematic G use. Findings are discussed in the context of gay community health, the role of chemsex in problematic substance use and the need for public health providers to engage with novel psychoactive substance use and the health and well-being effects of chemsex.

Keywords Addiction · Problematic substance use · GHB · GBL · Interpretative phenomenological analysis (IPA)

Problematic substance use, also termed a substance use disorder (APA 2013; WHO 1992) or addiction (West and Brown 2013) or harmful use over time (Anderson et al. 2015), is a complex problem, with no wholly agreed understanding of what it constitutes, how it arises, what its course will be or how to treat it (Gell et al. 2016; West and Brown 2013). Knowledge of the course of problematic use varies depending on the substance, with greater knowledge of the alcohol, tobacco, cocaine and heroin addiction syndromes, than newer club drugs and novel psychoactive substances that have exponentially increased in use in recent years (Abdulrahim and Bowden-Jones 2015; West and Brown 2013; Winstock and Mitcheson 2012).

One psychoactive substance that has come to the attention of health authorities in Ireland is 'G', gamma-hydroxybutyrate (GHB) and its analogue, gamma-butyrolactone (GBL). There have been increased presentations noted in European surveys of illicit drug use (Dines et al. 2015), and 12% of drug-related emergency presentations, across 10 European countries in 2014, were for GHB/GBL (EMCDDA 2015, p. 61). GHB was rated as the ninth most harmful psychoactive substance by both UK and European experts, with an increasing awareness of its addictive nature and risk of harm to others (Nutt et al. 2010; van Amsterdam et al. 2015b). Pharmaceutical GHB, in the form of sodium oxybate, sold as Xyrem (trademark), is a treatment for narcolepsy and alcohol withdrawal, and there are few reports of abuse in this form (Busardo and Jones 2015; Busardo et al. 2015). While GHB is a restricted substance, precursor substances, GBL and 1,4-butanediol (1,4BD), are not, with GBL available for purchase online as a cleaning chemical. This is converted to GHB on ingestion with faster acting but identical psychoactive effects (Busardo and Jones 2015; Wood et al. 2008). GBL use may now be more common due to the restrictions on GHB (van Amsterdam et al. 2015a; Wood et al. 2008).

GBL, converted on ingestion to GHB, at low doses, gives feelings of euphoria, relaxation and pro-sexual feelings (Wood et al. 2008). It has a very steep dose-effect curve, whereby a small increase in dose can result in severe symptoms such as respiratory depression and loss of consciousness (Corkery et al. 2015). Physical dependence develops quickly, after 7 days of continuous use, with feelings of dependence accompanied by experiences of anxiety, insomnia and paranoia and severe symptoms including agitation, delirium and seizures (Brunt et al. 2014; Schep et al. 2012). There is no known antidote for the treatment of GHB intoxication or agreed protocol for the medical management of GHB withdrawal (Busardo and Jones 2015),

and both GHB intoxication and GHB withdrawal can be fatal (Corkery et al. 2015; Zvosec et al. 2011). There has been successful treatment of withdrawal with high-dose benzodiazepines (Brunt et al. 2014), or using pharmaceutical GHB (de Weert-van Oene et al. 2013). However, there is case series evidence that following detoxification, many return to use (Brunt et al. 2014; de Weert-van Oene et al. 2013).

Drug surveys have consistently found higher G use rates in people socialising on the gay club scene, primarily gay males but also other LGBT and straight people (Bourne et al. 2014; EMIS Network 2013; Halkitis et al. 2007; Measham et al. 2011). G, along with other substances, has been used for 'chemsex', the practice of purposively taking substances to enhance and extend sex with one or more people (Bourne et al. 2014). There is concern that the effects of G, specifically disinhibition and unconsciousness, as part of 'chemsex', may reduce safe sex practices, increasing the risk of sexually transmitted diseases (Bourne et al. 2015; Daskalopoulou et al. 2014a, b; Hennessy 2015). This has led to calls for a new approach to addiction and sexual health service provision for men who sleep with men (MSM), and particularly those who have 'sex under the influence of drugs' (SUID) (BMJ 2015; Bracchi et al. 2015; Giorgetti et al. 2017; Stuart 2013; Winstock 2015).

While chemsex may pose a threat to MSM health, it may be part of two broader issues: firstly, higher rates of problematic substance use in the gay population (Buffin et al. 2011; Holt 2014; Marshal et al. 2008). Comparison between UK national and LGB (lesbian, gay, bisexual) drug use survey data in 2011 found both significantly higher use and problematic use rates by LGB people and significant barriers to accessing care (Buffin et al. 2011) with evidence that internalised homophobia and perceived stigma are associated with increased problematic club drug use for gay males (Lea et al. 2014); and secondly, lack of knowledge of the effects, patterns of initiation and use, and treatment protocols for novel psychoactive substances such as GBL by addiction and healthcare professionals (EMCDDA 2016).

New patterns of substance abuse, such as in the form of chemsex, or due to the availability of new psychoactive substances, require that addiction theories which encompass many biopsychosocial variables continue to be developed (Gell et al. 2016; Stoll and Anderson 2015; West and Brown 2013). Researchers have recommended greater use of qualitative methodologies, which may allow the development of new insights into the development and course of problematic use (Gell et al. 2014; Orford 2008; Vangeli and West 2012; West and Brown 2013). One qualitative method that has been used to explore aspects of addictive behaviours is interpretative phenomenological analysis (IPA) (Hill and Leeming 2014; Jackson-Roe et al. 2015; Rodriguez and Smith 2014; Shinebourne and Smith 2009; Smith et al. 2009). The focus of IPA research on the individual's expressed experience attempts to ensure that findings accurately reflect the essential nature of addictive behaviours. IPA's inclusion of the concept of the hermeneutic circle, the concept that individual experience informs, and is informed by, the experience and views of the wider community, allows for findings to be considered in the light of existing addiction theory and knowledge (Smith et al. 2009).

The aims of the current study are to (i) identify features of the experience for the individual of problematic use of 'G'; (ii) and that these features will result in a description of a pattern of onset and course of problematic G use and the effect of use on the life of the person; and (iii) that these findings may also inform our theoretical understanding of addiction.

Method

Ethical Approval

This study was approved by the National University of Ireland, Galway, Research Ethics Committee and by the Ethics Committee of the National Drug Treatment Centre.

Study Design

This study was designed and conducted according to the guidelines of interpretative phenomenological analysis (Smith et al. 2009). Guidelines on qualitative research design, validity and reliability also informed the study design (Elliott et al. 1999; Yardley 2000). IPA allows for the expressions of the participants' perspective of the narrative events, and a reflection on this by the researcher, which together is supportive of developing our understanding of specific communities' difficulties with specific substances (Jackson-Roe et al. 2015; Rodriguez and Smith 2014; Watson and Parke 2011).

Participant Recruitment

All persons who had attended a community drug team for support for problematic G use were invited to participate in the research study. The community drug team provided support and counselling to the cohort and the National Drug Treatment Centre provided medical care. As of November 2015, nine people had presented to the community drug team and the service counsellor provided them with an information page in relation to the study. Two of the nine were unable to participate due to attending a detoxification facility and an emergency hospitalisation respectively during the data collection period.

Participant Details

Seven people agreed to participate: five males, two females, all white European, and all living in Dublin, Ireland. All of the men identified as gay and the women as straight. Four participants had completed an inpatient medical detox, and three had reduced use with outpatient medical support provided for by the National Drug Treatment Centre. All participants were currently attending counselling in the Community Drug Team for their G use (see Table 1).

Table 1 Participants' demographic details and self-reported recent substance use

Participant	Age	Last used G	Last used other illicit drugs	Participant's description of substances currently used	Last used alcohol
Luke	36	6 > 1 month	Past month	Ecstasy, weed, cocaine	Past week
Deirdre	45	6 > 1 month	Past month	Amphetamines	Past month
Tim	39	Past week	Past week	Weed, ecstasy, cocaine, (crystal meth—occasionally)	Past week
John	36	> 1 year	Never	None	Past month
Charles	31	Past week	Past week	Ecstasy, cocaine, amphetamines, GHB, crystal meth	Past week
Pauline	29	6 > 1 month	Past month	Ketamine, coke, pills	Past week
Keith	39	6 > 1 month	6 > 1 month ago	MDMA, marijuana, cocaine, speed	Past week

Homogeneity of the Sample

In line with IPA guidance, the sample was purposively selected, inviting only those engaged in addiction recovery treatment for 'G' use. Participants experienced this problematic use in the same geographical area, were of similar age and reported socialising as part of the gay night club scene. While five participants were gay males and two straight females, this study did not consider that gender and orientation detracted from a common experience of the phenomena. In a review of IPA exemplary studies, mixed gender samples reported that some variability in the experience of phenomena (adult chronic acne, chronic fatigue syndrome, multiple sclerosis, heart disease) by gender was noted, but not held to detract from sample homogeneity, and sexual orientation was not reported on, highlighting that a range of health concerns are not differentiated by gender or sexual orientation (Smith 2011).

Data Collection

A semi-structured interview schedule was devised, asking open-ended questions of participants about their experiences of G use. All interviews took place in the community drug team centre, informed consent was obtained and interviews were approximately 1 h, audio recorded and then transcribed verbatim.

Data Analysis

The four steps outlined in Smith et al. (2009) for IPA were followed. Emerging themes attempt to capture both the lived experience and the psychological interpretation of that experience, an interpretation that was articulated by either the participant or the researcher, drawing both on the specific comment and the comment in the context of the whole transcript (Smith et al. 2009). Several recommended strategies were used to identify and develop superordinate themes, including 'contextualization' (Smith et al. 2009, p. 98) where emergent themes that identified the changing nature of the relationship with 'G' were identified, giving a narrative arc to the course of problematic use for the group.

Reflective Statement

The study design, interaction with participants and analysis of the data are likely influenced by the first author's experience working in addiction treatment services, some which have an abstinence, 12-step model and others which have a harm reduction, pharmacological management model. The first author was conscious that her view that heavy psychoactive substance use can be detrimental to health and well-being is not necessarily the view of others.

Results

Three superordinate themes resulted from the analysis—(1) early use: "I was part of that gang that took G"; (2) daily use: "It's like insidious; it just weaves into your everyday life"; and (3) early recovery: "my priorities are changing". These themes reflected the participants' narrative arc of their changing relationship with G and the quality and meaning of that relationship for them and an interpretative reflection by the researcher. The overall results are summarised in

Fig. 1. Only the second superordinate theme is reported on here, reflecting the current theoretical focus on understanding the transition from risky to harmful use noted by researchers.

First Superordinate Theme—Early Use: "I Was Part of That Gang That Took G" (Luke)

Participants described using G at weekends, as having a lot of fun, with G fitting with their lifestyle, a safe drug, and a drug that allowed them to be the person they wanted to be. G use then extended to daily life, through using G as a coping strategy in more and more situations, and managing withdrawal effects by taking more G, gradually moving the position of the drug in the participants' lives into an essential part of daily living.

Belonging: "*Meeting New People, Making Great Friends*" *(Luke)*

All participants described first coming in contact with G through socialising on the 'gay scene'. Illicit drugs were described as being very much a part of their social activity, through

Early use: "I was part of that gang that took G",

Belonging: 'Meeting new people, making great friends'

G suited me: 'was myself as much on it'

Transition to daily use: "I was doing more and more G"

Daily use: 'It's like insidious; it just weaves into your everyday life"

Physical effects of substance masking emotional experience: "I'd became emotionally flat-lined"

G and sex, "bit of a dynamite mixture"

Changing identity: "I'm not who I was"

Changing sense of belonging: "isolation became even more of an issue"

Early Recovery: "my priorities are changing".

Stopping G use: "because you want to"

A new community? "it's killing off the gay scene actually"

Returning to me? "but I find myself having to kind of face reality a little bit more than I did"

Ambivalence in recovery: "I wouldn't say struggling"

Fig. 1 Summary of superordinate and subordinate themes

clubbing, house parties and, for some, sex parties. Most participants saw themselves as really enjoying partying and drug use was a big part of that enjoyment. Their descriptions of early G use indicated that they trusted the peers they used G with, were comfortable to take an offered substance, feeling protected by others in the group and feeling part of the group.

> I was having lots of, uhm, crazy weekends you know, [ ] end up partying until the next day and be like-, there'd be you know, different drugs going around. This was before G, but there would still have been ecstasy and cocaine and speed and other things like that. (Tim)

The sense of fun and strong sense of group affiliation, along with prior drug experience, meant there was little prior reflection on the risks of taking G.

> Yes, but I was part of that gang that took G. So I wasn't one to stand there and cast judgement on anyone or to-, do you know what I mean? It was- it was just normal, you went out at the weekends and all your mates took it and you took it and most people at the party were taking it. So you never really talked about it like that. (Luke)

The fun people were having, the normalisation of drug use in the group, along with Luke's description of not wishing to 'cast judgement' contributed to an acceptance of their own and their social group's drug use. Pauline's description indicates how a shared interest in illicit drug use was linked with a strong sense of affiliation to a group, which can further close off any questioning of the group's behaviour, including drug-taking behaviour:

> But my friends were all the same yeah, I hang around with a lot of gay people so, they all do the same, so that's just the gay scene really, it's drugs.

While Pauline's personal view that the gay scene was strongly associated with drugs may not be the experience of others, the sense of being part of the 'gay scene' as distinct from a wider straight community likely further bonded the group.

G Suited Me: "*Was Myself as Much on It*" *(Keith)*

Participants reported enjoying the euphoric, relaxed, confident feeling G gave, and how it worked better for them than other drugs. G appeared to compliment their lifestyle, giving them energy for both work and play, and it was reported that the effects of 'G' were not visible to others, allowing participants to go to the shops while using or to use in work.

> I would have used it [G] with pills and then I found that eh, I – if I took it without taking pills, eh, that I felt better you know, and that I didn't need the pills anymore. That I had the same kind of euphoria and was myself as much on it. (Keith)

At this point in the experience, G was generally seen as being safer and more life enhancing than other drugs. Keith's description of being able to be himself on G points to the risk of developing problematic use if a psychoactive substance gives the sense of being a true self or enhancing life. This sense of being 'myself as much on it' indicates a lack of ease with his 'self', that he had an idealised self in mind, which his non-drug affected self did not live up to. Similarly, Tim's experience of G appeared to allow him to experience being an idealised, more uni-dimesional self, who could cope with both social and work situations, temporarily resolving feelings of self doubt.

> It would give you confidence first of all, I wouldn't be the most confident person socially and, especially if I was [doing night entertainment work], which I did a lot like [ ] if you did like have a little shot of G, it kind of helped you to click into their buzz or even- even just socially, to just talk to people and you know, just feel more relaxed basically. (Tim)

Transition to Daily Use: "I Was Doing more and more G" (Charles)

Participants described experiencing the typical adult range of chronic or acute life crises, relationship problems, work stresses, bereavement and illness. These resulted in feelings of not coping, and G use (which had been life enhancing) escalated into daily use as a coping method.

> There was a lot of uncertainty in my relationship and I noticed that when I would take G, things that would bother me before or would make me anxious seemed to kind of dissipate. So, I'd be a lot more relaxed and I wouldn't have this feeling like oh it's the end of the world if this happens. [ ] I think the more issues I found that I was having at the time, then I started to take it daily so. (John)

From John's description the anxiolytic effects of G, referenced by all participants, are evident. His descriptions of using G on a daily basis gives the sense of G being a refuge for him. Others spoke in similar terms, whereby they were buffered from a multitude of stressors, including their own 'uncertainty' and feelings of feared loss ("the end of the world", John).

> I was devastated because it- it- it's just not what I expected to hear. I had two weeks off work that time because I'd [reason] and I just went into a kind of like, ah, self-destruct mode. I had G there and I think for trying to deal with my emotions and everything for the two weeks at home I was taking it the whole time and that's when I became addicted. (Luke)

Luke presents a rationale for the development of his addiction to 'G', seeing the transition from social to problematic use as occurring as a result of intense use over a short period, in response to a traumatic experience. While he describes G use as "to deal with my emotions", the psychoactive effects of G is consistent with the avoidance of emotions as described by John, but in Luke's case a full immersion within G for a 2-week period. Aside from the management of life events, the ability to use G in an undetectable manner in daily life, while working, combined with its accessibility, also appeared to be a factor in the development of problematic use. Several participants described a transition to daily use as due to the anxiety they experienced managing work. And once G use was on a daily and hourly basis for over a week, participants described the physiological effects of a strong sense of craving and dependence,

> It was extending it, extending it, sometimes I would be bringing [G] to work on Wednesday and then, eh, I would just – I would realize that I didn't really stop all week (Charles)

Deirdre initially differed in her view of onset, stating her sense of addiction followed a 2-week period of non-stop partying and G use, and mentioned no specific crises, appearing to attribute her subsequent feeling of dependence and continued daily use to the physiological

effects of G alone. But later she reflected on whether she may have been struggling with unacknowledged depression at that time.

> I don't know whether this depression that I have is -, I don't know whether I've always been depressed and I just never like recovered from anything long enough to kind of realise it. (Deirdre)

Second Superordinate Theme—Daily Use: "It's like Insidious; It just Weaves into Your Everyday Life" (Tim)

All participants described using G daily for over a year, and for some over 2 to 3 years. Participants perceived this daily use as having gradually crept into their daily life with negative effects on their physical and emotional well-being, their sense of their own identity and their sense of belonging to their community.

Physical Effects of Substance Masking Emotional Experience: I'd Become Emotionally Flat-lined (Deirdre)

This theme was composed of the complex relationship between the physical effects of G and the participant's experience of their emotions.

> When it was heavy daily use I didn't feel any of the, the euphoric or any, any of those kind of effects. [ ] I didn't get any of the good – All it did when I was taking it all the time was make me feel less bad. Eh, and it wouldn't have had any, – if for want of a better word, positive effects, any of the euphoric effects or any of the you know, anything like that. It would have just eased my anxiety and the physical symptoms of racing heart and sweats and you know, all that kind of stuff. (Keith)

At this point in the experience, daily G use differed markedly from the fun experience of intermittent use. G had changed from being associated with an enhancement of emotional experience, to having a much more subsistence-living type effect.

> Yeah, I -, see another thing that [G] does is like I'd became emotionally flat-lined, do you know what I mean? (Deirdre)

The experience of a deadened emotional response may have reflected the physiological exhaustion of hourly G use, resulting in severely disturbed sleep, the need to hide behaviour from family and experiencing a regularly drug-affected state. Experiences of insomnia, considered one of the more unpleasant symptoms of G use, were reported by all participants and are frequently reported as a motivation for seeking treatment. This 'emotionally flat-lined' state may also indicate that in attempting to avoid painful emotions, all emotional experience may become suppressed. John articulated how the coping mechanism of managing or masking emotions through physical avoidance in the form of G use can escalate to an extreme level.

> John: I broke my leg again. I also fell back on my head and split it open. Woke up in my apartment covered in blood. Never nice uhm, and that happened twice. A lot of physical injuries.
> I: A lot of pain, a lot of physical pain.
> John: Yeah that was easier to deal with completely.

I: What was-, so that was easier to deal with, what was, was hard to deal with?
John: The anger with myself. The loss of self-worth.

Some of John's physical injuries were due to going unconscious or losing muscle control while using G (unconsciousness was experienced by all participants). His injuries sustained due to G use appeared to be something he believed he deserved to suffer, in his anger at himself. Addiction is frequently associated with feelings of low self-worth, and this increases risk of physical and emotional injury, as people feel anger and self-derogation, not compassion or valuing, towards themselves. The physical effects of G extended to near death experiences due to overdosing for several participants,

So they left me there and watched me and then I ended up in hospital nearly dead, in a coma. I was in hospital for [] weeks and I was in a coma for [] days. (Pauline)

Pauline described this frightening experience abruptly, in short sentences, and did not wish to describe how she felt at the time, or reflect too long on the experience. The severity of the physical crises brought about by G use appeared to result in there being no energy to experience emotions at that time and participants later described feelings of no self-worth which may preclude a willingness to experience emotions then and at a later stage.

G and Sex, Bit of a Dynamite Mixture (Tim)

Some participants described using G, along with other substances as part of sex with their partner, or as part of group sex parties. They described how G strongly enhanced the pleasure of sex and significantly reduced inhibitions, allowing them to more freely participate in sex.

It's like when you go a party there's loads of people on G it's like animals, you know, they're kind of animalistic, people just dancing like animals and having sex like animals and it- it- it kind of-, it makes social barriers drop a lot. (Tim)

Along with this, they described how the disinhibiting and pleasurable effects of G reduced their focus on safe sex. Participants expressed shock that something that had been just for fun, namely G use and its use as part of sex, that was so easily available and apparently safe, was having such detrimental effects on their lives.

These (pause) stupid substances that just make sex more enjoyable for a few hours are really destroying people who – , (pause) well drugs are bad anyway of course, but it's really upsetting to see. (John)

While all participants had some familiarity with G as part of sex, several participants did not report G use as part of sex or sex parties as being a significant aspect of their problematic G use and some queried the strength of the sexual effects of G.

Well, eh, for having sex and G, the chemsex was really a small part in my G consumption. (Charles)
But you know, generally we sort of take care of each other and you know, "No, no, no, you don't want to do that." I have seen people take their clothes off. And you kind of just put a blanket over them uhm, or that kind of thing but I was like "What are you doing? You don't want to do that." (Keith)

> [referring to others engaging in sexual activity at a party] You know, it used to really annoy me you know? 'Cause if I like-, saying like "Well we're sitting here and we're not carrying on like that." (Deirdre)

With daily use of G, several participants reported that interest in sex decreased, and they saw this in themselves and others.

> When you – when you first start taking G, it makes you very horny, yeah, but when you're an addict, that part goes away, you lose that. (Luke)
> So people were actively just looking for G. So I remember at the time seeing people who were taking it and knowing – seeing in their actions also, like if you were in a sexual setting, that they would be the ones spending a lot of time by themselves, but just continuing to take the drug. That's the reason why they were there. (John)

This appears to indicate that while 'chemsex' may be a part of early G use, the combining of G and sex diminished as problematic, daily use increased.

Beyond the disinhibiting effects, the combination of G and sex also causes harm in other ways, as part of sexual assault and infectious disease transmission. Two participants stated that others had sex with them when they were unconscious in a sexual setting. They were unsure whether to call this rape. Others reported being videoed while they were unconscious:

> Yeah, definitely and the risk of passing out with it increases and I remember waking up and he was, [pause].Well yeah he was having sex with me while I was sleeping, without protection. (John)
> So I wouldn't call it rape but, but then again I would. I don't know, I'm a bit confused because I was asleep. So it's like having sex with a dead body d'you know what I mean? (Pauline)
> Like one of the guys there, I've been friends with him for ten years and he allowed for that to happen in his home, and I wasn't happy about that at all. (Deirdre)

Participants did not state how they felt about these rapes; they focused on whether the other person had used protection. They were guarded in how they shared this information, hesitating to give details and then stating bluntly and briefly the physical specifics of what occurred. Pauline's description of 'a dead body' describes both her physical inability to respond, but also possibly an emotional inability to respond to the traumatic experience of her rights being disregarded.

Changing Identity: I Am not Who I Was (Pauline)

In recollecting this phase of the G experience, the participants described changes in a sense of who they were, feeling that their behaviour did not reflect their values, or their sense of the kind of person they were. They described loss of family, community and work roles. They spoke about behaving in new ways that did not reflect who they wished to be, feeling that they had a new identity that was not really them. John spoke about changing from enjoying the fullness of life to bringing trouble to his family and feeling worthless:

> I'd never given my family any reason to worry, you know I'd done well, and I'm enjoying my life and loving my life and then all of a sudden, I was the one that was

> bringing them all these issues, giving them things that they never had to deal with before in their lives, and it was just (pause) a huge – it was just a constant feeling of having no worth. (John)

For Pauline, the change was in her character and relationship with others, from being someone who could relate to others to someone who was shut off from others:

> Uhm, I'm selfish, I was selfish on the drug, very, very selfish. Horrible. Horrible because I'm not that person and I never was that person, I'm a very generous person, I'm a very caring person and at the time I didn't care, I really didn't care. (Pauline)

Deirdre described losing her sense of being an easy going and social person as daily G use affected her mental health

> I think I'd taken most drugs, illegal drugs and legal drugs under the sun like for a buzz do you know what I mean? And G is the one that affected me the worst psychologically, it was a constant battle pushing this, what I knew was paranoia coming into me head and trying to -, like constant, constantly battling between fact and fiction, do you know what I mean? (Deirdre)

Although participants differed in the characteristics they lost during problematic G use, in each case, these were traits that gave them a sense of esteem; for John, his joy in fully living life and achieving; Pauline's sense of caring for others; and Deirdre's ability to be relaxed and sociable. The new identities that emerged were 'horrible' and participants emphasised how pervasive these new states were, describing the negative experience as 'constant' as this point in the G experience. Participants described noticing how their peers changed on G too, not being the person they were:

> It just changed him as a person. And it happened to me too. I just wasn't myself. Then my other two friends, well it's like you know when I – you're trying to talk to them and they're just not there. (Pauline)

Changing Sense of Belonging: "Isolation Became even more of an Issue" (John)

Participants described gradually isolating themselves from the communities they had been part of, for example the gay community, their families, friends and work colleagues. Here Deirdre describes the extent of isolation due to G use:

> I stopped answering my phone, I wouldn't text people back, I left my job, basically, I became so withdrawn, so locked into myself, I just found it hard to leave the house sometimes, like ignore the phone, wouldn't answer the door you know?

Participants described seeing others experience a similar isolation and withdrawal from the group. Tim's language shows a sense of retreat (going into a shell, drawing away from life) and negativity ("didn't want"):

> One of my friends they - they was kind of the first person I saw to have a problem with [G]. they just – they kind of like slowly – they went away – ah, drew into themselves, crawled into their shell like, didn't want to talk to anybody, didn't want to go anywhere, didn't want to do anything.

Reasons for isolating included a preference to use G alone, protecting the self from others' judgements or disappointment, and a rejection of others linked to a rejection of themselves:

> So those effects were very, very difficult to deal with and isolation became even more of an issue because I felt I was embarrassed about myself. You know embarrassed about what I had done, embarrassed that I was causing my family issues because of it uhm and that was worse. (John)

This isolation also occurred as others rejected those whose G use had become chronic:

> When I look back at the time before I ended up the way I was, he was worse than me. Like he was ending up in hospital every weekend. Uhm, I couldn't trust him, there was things [that happened]. I couldn't trust him, I couldn't believe him, I couldn't look at him. (Pauline)

The pattern of G use developing into a dysfunctional state of isolation stood in contrast to the collegial environment of early G use. This isolation likely extended the period of problematic use, as difficulties were hidden from supportive others, and increased the risk of serious injury from falls or overdoses.

Third Superordinate Theme—Early Recovery: "My Priorities Are Changing" (Keith)

The third superordinate theme comprised participants' experiences of reducing or stopping G use and their uncertainty in how they thought about their community, themselves and their relationship with G.

Stopping G Use: "Because You Want to" (John)

Participants all indicated that during the long period of dependent use they were aware of addiction support services and made several attempts to stop using G. Several participants described making contact with the community drug team through friends who recommended the service

> a friend of mine knew [counsellor] and she actually booked an appointment for me. (Charles)

Participants described considering recovery due to exhaustion, physically from lack of sleep, but also feeling worn down and without options.

> I was just so tired of it all. I wanted it gone, it was destroying my life, basically. (Luke)

The debilitating effect of lack of proper sleep for months meant Tim and Keith who had valued G use for fun and for everyday life management were willing to contemplate giving up G

> I took it (valium) and I had a great night's sleep and then the next morning I was like, "Do you know what I'm going to try." (give up G) (Tim)

Pauline had been considering stopping G use and was waitlisted for detoxification when she overdosed and was hospitalised

> I'm kind of glad in a way that it did happen [crisis hospitalisation]. It might sound harsh, but if it didn't happen I'd still be waiting to go into rehab now like, I probably would have only had treatment in Beaumont [recently]. So I wouldn't have lasted until then. Uhm, but I was saved and thank god. (Pauline)

Participants noted that a medically supervised detoxification from G had a long waiting period of approximately 6 months, resulting in continued use of G. Luke and Charles had an inpatient medical detox, Pauline and Deirdre had crisis hospitalisations that resulted in detox and Tim and Keith described reducing G use through use of alcohol and benzodiazepines. John, who was the longest in recovery from G, articulated what he felt had resulted in him stopping using G, after several years of use, repeated hospitalisations and working with other addiction services

> I know the last time I took G I was referred to here (Community drug team). And I came here thinking, "If I know that every time I take G something stupid and something bad happens, why do I keep taking it?" Why? What is it? And I was hoping for-, I kept thinking there was some complex reason. And then my first day with [counsellor] I asked him that question and he was like, "Because you want to." and I kind of had a lightbulb moment, it sounds very cliché, but I had a lightbulb moment, "Okay, this is where I start to have personal responsibility for my actions." and so that's how my recovery started.

A New Community?—"It's Killing Off the Gay Scene Actually" (Deirdre)

Participants appeared to consider that their relationship with friends had changed from one of pursuing fun together, to being concerned about their welfare, lack of knowledge of G addiction and attitudes to safe sex. Acting out of concern for the well-being of their community may represent a new way of connecting with others.

> Initially you're addicted to a substance and when people don't really know about it and there's not much help out there, you're kind of clutching at straws and I was very lucky to come across [counsellor] here and to actually get some help and it's – it's just a drug that's not very well known about in regards to how to deal with people that are on it or how to treat it and I just want to give back, so that in the future, people will know how to deal with this particular drug. (Luke)

The sense of fear in Luke's description at the lack of knowledge and help available for problematic G use was experienced by others who felt they were inadequately treated by medical services, with a lack of access to detoxification services, and all hoped that by participating in research they would improve care and services for others.

> I see guys and I'm seeing it in younger guys and younger guys. And just thinking and hoping that okay, it stays as social use and that they leave it behind at the right time and not that they have to come down and look for help with their use. It's truly upsetting. (John)

The lack of knowledge of why social use changes to problem use gave some participants a sense of frustration and fear for others, as they saw those using G socially as vulnerable, yet G use is an accepted part of the community. Concern was expressed that the healthcare

community did not comprehend or engage with the problem of G combined with sex, and the risk of unprotected sex and STDs:

> So I've gone to the clinic a few times and said, "Look I was out at the weekend I went crazy, didn't use a condom." and they were like, "Well you know when you're the active partner you're less likely to." So that doesn't mean like you're 100% safe, but I got this into my head. "Ah sure, it'll be fine." (Tim)

Deirdre expressed frustration that healthcare staff were not sufficiently emphasising the risks of contracting HIV. As healthcare staff attempt to be supportive and reduce stigma, the message of risk of HIV and other conditions may be obfuscated:

> Yes, it's like "Well go out and have unprotected sex" and you know, what she said was everything was curable and it's not. (Deirdre)

Participants were saddened at how G use was ruining what should be a happy time of life, youth and the opportunity to experiment and have fun as a young gay man. John refers to G use working against progress that had been made in the pride, health and well-being of the gay community:

> I can remember when I was younger, when I came to the subject of HIV and AIDS and safe sex, the gay community were really proudly supporting safe sex and it was like, "well no we're not going to be the ones that get blamed and spread it around." Now it's just the complete opposite because when you take G your safe sex practices will go out the window and also because of the medication now that you can get for it, you think okay it's one tablet a day so people think it's not such a big deal, but you're seeing people who are 18 or 19 who are HIV positive and you're thinking – it's becoming not on an epidemic level, but it could be the next epidemic for the gay community. (John)

Returning to Me? "I Find Myself Having to Kind of Face Reality a Little Bit more than I Did" (Tim)

Several participants described re-engaging in previous interests and activities now that they were no longer using G, enhancing their self-worth, or looking for new ways of living. Yet this forward movement was characterised by complexity

> My priorities are changing whereas before it was all about having fun. Now it's about you know, kind of starting to think about the future and do I really want to go on like that you know? What do I want out of life? (Keith)

Having moved away from the intensity of the G experience, Luke was hoping that a return to his regular emotional life will follow a return to his normal daily schedule:

> Of course now I am going back to the workplace I'll be meeting people again and, uhm, I'll be back in a routine again. So hopefully my anxiety will go away then. It comes in dribs and drabs do you know what I mean? So – but I don't want to go down a tablet route or I don't want to take something for it. So I'm going to wait until I get back to work and I get back into my routine and hopefully it will just go away itself naturally. (Luke)

Several participants described now working on coping with difficulties that had been part of the reason for transitioning into problematic G use, as if now that their G use was addressed

they were returning to address personal challenges. Participants spoke of the support of their counsellor and the value of mindfulness and the practice of acceptance in making changes to G use.

> I'd like – I suppose I – I did let things get to me and I was depressed a lot of the time and I was kind of living for the weekends. [] Now I'm kind of, I'm – I'm doing mindfulness here and acupuncture and stuff. So like, what I'm – what I'm hoping to do like is when someone gets in on my head, just, just to – to not let it take over. Just like relax and, "Okay, something bad has happened, deal with it." That's it. (Tim)

Ambivalence in Recovery: "I Would not Say Struggling" (Luke)

Participants expressed ambivalence about their use of G. They described conflicting perspectives on the effects of the drug, when recalling their social use of G, the period of problematic use and their recovery from use. Luke uses the word 'addicted' but becomes uncomfortable when addicted is translated into the more vulnerable but also more tangible description of 'struggling'. Using the word 'addicted', a hackneyed phrase, he may not have to acknowledge the losses that are part of the experience of being 'addicted'.

> Luke: I know exactly when I became addicted and it was almost like self-destruct. I knew it was an addictive drug anyway because I knew people who were addicted.
> I: You'd seen others who were struggling?
> Luke: Not, not struggling, I wouldn't say struggling. Well, they'd be – there'd be a façade, they'd be hiding it, but you'd know and if they were struggling, they wouldn't let you know they were struggling. I'm sure a lot of them were struggling..

Other participants showed ambivalence towards a life without any G use. Tim describes being pulled towards the drug as he saw it as fun and socially enhancing, despite life-threatening experiences, and attempts to use G in a controlled way.

> Well, I would say my – the lesson I've learnt is that G can be fun and it can be – can enhance your social life, but you just have to be so careful with how much you do and my big rule that I've invented, well hopefully it's going to work, is to just like draw a line in the sand, at the end of the weekend don't have any G in your house.

Keith's ambivalence is based on embracing abstinence while at the same time feeling a loss from no longer having the drug in his life:

> Eh, it's a little dull, you know, I do – boredom I suppose is a problem eh, and I do miss it. I do miss the positive with the, you know, the good times that I've had on it.

Tim and Keith find it hard to imagine that life could be fun and stimulating without substance use. Tim, Keith, Charles and Deirdre used G occasionally after stopping daily use. Here Deirdre describes the complexity of moving away from G, that deciding not to use it may not solve an underlying issue of addiction. From her experience, it may be necessary to engage in a wider recovery experience:

> They, they have no awareness of addiction, they all think the only problem that they have was with G. They all came out of detox, they all hit the drink or they all went back partying.

Deirdre had participated in addiction recovery work prior to problematic G use. She felt frustrated that her friends are not considering the need to address how their use of G and other substances was part of a far bigger pattern of behavioural and emotional difficulties.

Discussion

Findings from this study offer a narrative of the participant's relationship with the psychoactive substance 'G', describing three chronological stages in their experience: initiation, problematic use and recovery.

Early Use: "I Was Part of That Gang That Took G"

The expression of close friendship and shared experiences within their social group suggested that membership of their peer group was an influential part of participants' identity and influenced subsequent G use (Moos 2007). Research in Ireland has highlighted experiences of isolation and stigma felt by gay people and that LGBT friendships are key sources of support (Higgins et al. 2016; Mayock et al. 2009). Participants' reported high rates of polydrug use also reflected research on vulnerability to increased drug use in the LGB community (Buffin et al. 2011; Cochran et al. 2004; Halkitis et al. 2007; Sarma 2007). G use followed use of other substances, was offered by friends and was initially used to augment, or recover from other substances, as had been noted in a New York gay male population (Halkitis and Palamar 2008). Findings on LGBT mental health and comorbidity studies on mental health and substance use disorders indicate a trajectory of stressful homophobic events resulting in low mood and anxiety and the subsequent development of problematic substance use (Higgins et al. 2016; Lea et al. 2013; Merikangas et al. 1998). Participants' description of 'G' use in this first theme aligns with the description of Gell et al. (2014) of the 'risky use' of a substance, as use with 'the potential to cause harm' (p. 11). Gell et al. (2014) propose that the transition from 'risky' use to 'harmful' sees a shift in the weight of social factors such as availability and social normative use, to individual factors, such as genetic vulnerability and personality traits. The availability and affordability of 'G' increases the social risk factors of use.

Daily Use: "It's like Insidious; It just Weaves into Your Everyday Life"

Chemsex has been the subject of both academic and general publications (Bourne et al. 2015; Cain 2015; Kirby and Thornber-Dunwell 2013; Knapton 2015; Giorgetti et al. 2017) and participants expressed awareness of this 'hype' (Tim). Two participants specifically expressed valuing G for sex, though it did not appear to be a factor in moving them from risky, party use to daily problematic use, though it was later described by these participants as a risk factor for returning to use in recovery. Other participants acknowledged feelings of increased libido but only in the early stages of 'G' use, that these feelings disappeared with heavy daily use, underlying descriptions of struggling to feel normal and feeling 'emotionally flat-lined' (Deidre). Participants did describe how G use could result in unprotected sex. They contrasted how their group had been very focused on safe sex practices, but that the disinhibitory effects of G, combined with a growing perception that STDs were treatable, meant they had had unprotected sex. The risk of rape while using 'G' was also part of the physical harms described, with incidents of no-consent sex reported. The descriptions of the effects of these

incidents included a sense of disconnection from self and others that can occur as a result of trauma: "When trust is lost, traumatized people feel that they belong more to the dead than to the living" (Herman 2001, p. 52), while previous case series studies on problematic G use have documented job and relationship losses and isolation from others (Bell and Collins 2011; Durgahee et al. 2014), but not the experience of negative identity change, and feelings of shame and worthlessness, described by participants, that were likely key factors underlying those losses.

Early Recovery: "My Priorities Are Changing"

Ambivalence is a recognised feature of problematic substance use (Miller and Rollnick 2002) and the participants' ambivalence regarding total abstinence from G and/or continued polydrug use also reflects one of the challenges in addiction treatment, to advocate for abstinence or harm reduction (Rosenberg and Davis 2014). Addiction as a behavioural and motivation system disorder (West and Brown 2013), rather than strongly influenced by the effects of a particular substance, informs the many treatment models that advocate abstinence from all psychoactive substances in recovery (Gell et al. 2014; Thombs 2006). The alternative model is harm reduction, which informs legal, cultural and therapeutic approaches, seeking to minimise the harms of psychoactive substances, for example needle exchanges, and legalisation, and setting reduced use treatment goals (Marlatt et al. 2012). Irrespective of whether an abstinence or a harm reduction philosophy is adopted, the value of therapeutic support in recovery was evident in this study.

Conclusion

This study provided the first phenomenological report of the experience of problematic use of G. Future research could explore the extent of G and novel psychoactive substance use in Ireland and explore the trajectories into harmful use and the experience of recovery from novel psychoactive substances.

A key consideration arising from this study for public health authorities is the duration of daily use and the difficulties that participants reported in accessing medical support to address physical dependency. Earlier psychoeducation on the effects of G and access to primary care treatment for dependence could have reduced both the duration and some of the negative consequences of problematic G use. Pathways to care did not appear to be evident to this group, who may not meet some of the typical addiction service user profiles, being older, club drug users, socially integrated, employed, experienced illicit drug users, with no involvement in criminality (EMCDDA 2016).

Another important consideration for public health services is the use of psychoactive substances, such as G, as part of sex (Giorgetti et al. 2017). The emergence of 'G' use and the association with 'chemsex' will stretch the resources of sexual health services, addiction services and general medicine (Giorgetti et al. 2017). The sexual health services will require upskilling in the area of substance use and education around harm reduction approaches to addiction. The addiction services, for their part, will have to develop approaches to encourage a new population to access treatment, and studies such as this one will inform the services of the attitudes towards psychoactive substance use in order to refine effective interventions. And sexual trauma services will need to consider how to support the complex trauma needs of

people raped while under the influence of a substance, with comorbid problematic substance use.

Study Limitations

With no qualitative studies of problematic 'G' use and no studies on 'G' use in Ireland, the current study's aim of exploring problematic use was quite broad, which limited the opportunity to more deeply explore different stages or aspects of problematic use, that were identified by the study results. The study design and sample size also mean that generalisation of the findings to a wider population is not appropriate.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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